Fake It ‘Til You Make It: The Virtual Orchestra in New

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Fake It ‘Til You Make It: The Virtual Orchestra in New Electronic Music

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Abstract: This paper describes a variety of audio technologies under the neologism “the virtual orchestra,” their relationship with neoliberal capitalism, and four electronic music works that utilise these technologies to highlight this relationship. The virtual orchestra comprises digital technologies that emulate orchestral performances, ranging from the ersatz sounds of General MIDI in the 1990s (often used in computer game soundtracks), to orchestral sample libraries, which can be virtually indiscernible from a well-recorded orchestral performance. It is suggested that the virtual orchestra emerged as part of a cultural movement that privileges individualism and control, and that this has precedence in the structure and hierarchies of the symphony orchestra. The four works discussed—by Lana Del Rey, Oneohtrix Point Never, Elysia Crampton, and Steven Warwick—utilise virtual orchestras in unconventional and ambivalent ways that refer to the lived experiences and effects of this condition.

Introduction

The lived experience of neoliberal capitalism is significantly damaging to the most vulnerable people in society, and a variety of technologies play a substantial role. While not all technologies are complicit in advancing neoliberalism to the same degree, it would be a mistake to think that any class of technology was immune to such scrutiny. Music technology is one example that is often overlooked. Digital music technologies, such as the proliferation of digital audio workstations (DAWs), are often uncritically heralded as an example of “democratisation.” This status of democratisation is conferred because such high-quality recording technologies are steadily decreasing in price, supposedly reducing the barriers of access to recording technology where once only those with the most cultural or financial capital were granted access to recording studios and their tape consoles. But access, I would argue, is better understood as a redistribution of labour from collective to individual actors rather than an unquestionably benevolent and universal good. Where recording, mixing, composing, sound design, and orchestration were once distinct disciplines, dispersed between several workers, all these tasks can now be done in the DAW in any order by one person. The electronic musician is thus increasingly expected to take on an interdisciplinary proficiency over all of these, what Alexander Galloway calls “a kind of proletarianization of the mind.”

If Jonathan Sterne is right in defining technology as “a repeatable social, cultural and material process (which is to say that it is all three at once) crystallized into a mechanism or set of related mechanisms,” and “embody[ing] in physical form particular dispositions and tendencies—particular ways of doing things,” then technology can be interpreted as embodying, to various extents, the ethic of neoliberal capitalism. Much work has already been done on this line of inquiry regarding companies like Uber and Airbnb, and in music.
studies, DAWs and synthesisers have been implicated in neoliberal reproduction by writers such as Robin James and Tara Rodgers. Here, I am concerned with a number of audio technologies used to simulate recorded performances on Western European musical instruments, which have been described collectively as “the virtual orchestra.” The ability to successfully mimic the sound of orchestral instruments has long been a significant requirement for digital sound to possess in order to have true value as an expressive and compositional medium. Initially employing analogue synthesis to create loose approximations of instrumental expressivity—consider Wendy Carlos’ 1968 opus Switched-On Bach—the practice became more widespread and replicable with the 1983 advent of the MIDI protocol and its early 1990s specification, General MIDI, which enabled polyphonic, multi-layered orchestral performances. These ersatz orchestral performances formed the sonic palette of computer game soundtracks in the mid-1990s.

Orchestral sample libraries entered the market in the mid-2000s, as hard drive storage and random access memory decreased in price. Orchestral sample libraries are configurations of software sampler that contain many high-quality recordings of individual notes performed on orchestral instruments, with varying articulations and dynamics, which can then be triggered through MIDI sequencing in a DAW. Orchestral sample libraries today are highly sophisticated, and those sold by companies like EastWest, Vienna Symphonic Library, Spitfire Audio, and 8dio, can be hundreds of gigabytes and cost thousands of dollars. When sequenced effectively, sample libraries can uncannily resemble an expertly recorded orchestral performance, being virtually indiscernible to non-expert listeners. Some companies, such as fauxharmonic.com, specialised in creating such simulations in both live performance and recorded works since at least 2006. As of writing, the fauxharmonic.com website appears to be expired, perhaps—and I speculate here—having fallen victim to the decreasing costs of orchestral sample libraries. Today, in scores for film, games, and other media, using sample libraries in lieu of a live orchestra is now standard practice, composed, sequenced, and performed by just one person.

This paper investigates subversive uses of the virtual orchestra in recent electronic music practices, most of which arise from the Western experimental electronic music tradition. I argue that digitising and virtualising performance has been driven by impulses associated with neoliberal capitalism, and understood in this way, virtual orchestra aesthetics as deployed by these four artists invite interpretations that politicise their work and situate their work as mocking or resistive to neoliberal politics. The four artists studied here—Lana Del Rey, Oneohtrix Point Never, Elysia Crampton, and Steven Warwick—are chosen for their relative prominence in the recent popular and experimental music canon, and for their diversity of methods in approaching the lived experience of neoliberalism through virtual orchestra tropes.

Historicising the virtual orchestra

The quest for greater individual control, possession, convenience, and efficiency of musical-compositional activity are central cultural forces driving the development and usage of virtual orchestral technologies. For Jody Berland, the simulation of acoustic instruments through digital technologies is one of the latest in a series of cultural trends spanning centuries of automating and rationalising the activities of music. “Music producers,” writes Berland, “adapt to these technologies because they are ‘efficient’: they offer greater control over their work and work environment.” Writing elsewhere on the emergence of the pianola, Berland writes that:

as a widely promoted value of contemporary culture, convenience translates as two
interrelated advances: something that reduces the time it takes to perform a task, and something that permits us to not use our bodies.\textsuperscript{12} Collaboration with other musicians or performers becomes optional if not redundant with virtual orchestral technologies, and the atomisation of music practice from collective to individual actors is one aspect of this rationalisation. In 1948 Pierre Schaeffer dreamed of: an organ of which the stops each correspond to a disc player of which one would furnish the fitted turntable at will ... an enormous instrument capable not only of replacing all existing instruments, but of every conceivable instrument, musical or not.\textsuperscript{13} The instrument Schaeffer imagined is essentially a sampler, and his idea of an \textit{Ur}-instrument controlled by one individual composer-genius pre-empt Berland’s analysis.

For there to be more efficient forms of music-making via technology, the technology had to be able to convincingly emulate the inefficient, that is to say labour-intensive, instruments of the Western canon. This has been a central tenet of computer music and digital signal processing research since its inception.\textsuperscript{14} Convincing emulations were also a commercial imperative for digital instrument builders. Denny Jaeger, working on the sounds for the forthcoming Synclavier II released by New England Digital in 1980, describes how creating “the perfect string sound” elevated the Synclavier to a level that Greg Milner writes truly enabled the musician to “play all the music himself” for the first time.\textsuperscript{15} Meanwhile, the Australian-built Fairlight CMI incorporated orchestral emulations including the infamous “orchestra hit” sound, a widely imitated sample popular throughout 1980s pop, and the production of credible brass sounds by the Yamaha DX7 made it one of the most popular synthesizers of all time.\textsuperscript{16} The increasing possibilities of synthesis and computer music throughout the 1980s entrenched further this articulation of efficiency without sacrificing the authenticity of live performance. While these emulations may pass as ersatz today, they were nonetheless useful approximations that connoted the grandeur of the symphony orchestra.

The development of MIDI, a protocol designed to enable control over several electronic music instruments simultaneously, brought orchestration and arrangement into the digital domain. Controlled with a MIDI sequencer, such as early computer programs like Mark of the Unicorn’s Performer, synthesizers and samplers could be used synchronously to imitate larger ensembles. Ryan Alexander Diduck writes that this ability to easily integrate several instruments together contributes to a culture of individualism in music production which continues to this day: Because entire orchestras could be created with a single keyboard, the majority of popular forms of music produced electronically ... are most likely to be the work of a solo artist. MIDI is arguably in large part responsible for today’s over-abundance of lone (and usually male) electronic music producers ... [and] contributed to a recent culture of auteurist electronica artists.... In many ways, the solo artist has become the whole equation of digital music, and its solution.\textsuperscript{17} This can be understood as a redistribution of labour towards individual, alienated workers. Karl Marx described this as a form of \textit{atomisation}. As Jules Boykoff observes, this is an effect of neoliberalism “whereby collective units (e.g. families, unions, classes) are reduced to individualized units consisting of one person rather than many.”\textsuperscript{18} In the process of atomisation, “we’re encouraged to view ourselves as active, atomized subjects ‘going it alone’ and ‘maximizing our utility’ to improve our lives.” Commercial composers maximise their utility by increasing the kinds of repertoire they are able to work with, including orchestral music, still a popular instrumentation for film, television, and game scores. This
can be done faster and cheaper than hiring a full orchestra and a large recording studio, and the composer’s atomised and competitive status relinquishes their capacity for bargaining power, union rates, and other protections afforded by collectivised labour.

Michael Curtin and Kevin Sanson suggest that atomisation and excessive individual labour is increasingly the norm in media production, but this form of musical labour also has antecedence in the organisation of the symphony orchestra. William Osborne suggests that the symphony orchestra is “culturally isomorphic,” deriving its activities in part from the cultural imperatives of the day. The emergence of the symphony orchestra in the nineteenth century coincided with an intellectual movement of “transcendental idealism that emphasised the primacy of the spiritual and intuitive over the material and empirical,” contributing to the emergence of the archetype of the “artist-prophet,” the valorised individual composer or conductor for whom orchestral musicians were objectified as subjects of total control. The autonomous artist-prophet archetype continued well into the twentieth century, and following Diduck, is a cultural logic contributing to the advent of MIDI. The symphony orchestral tradition, according to Osborne, also has a culturally isomorphic relationship with aristocracy, aesthetic puritanism, and white male European supremacy. While the status of the orchestral musician has become more precarious and less remunerated for their labour, in an Australian context, symphony orchestras continue to receive special privileges in public funding, contributing to much contention and dissent in the arts sector more broadly.

The electronic musical works I analyse below utilise fake orchestral sounds for political effect that are in part responsive to these perceptions. The employment of overtly fake orchestral sounds mocks the aristocratic hegemony that elevates the orchestral canon, while both solidifying and exposing the situation of the solo artist as the primary conduit of music creation (all of the artists analysed here are, notably, solo artists). It gestures toward the experience of the individual composer-musician, alone at their computer and keyboard, spatially alienated from their musician comrades. The virtual orchestra thus makes the lived experience of atomisation among musicians audible, employing what may be a tacky or unpleasant sonic palette in any other context to expose a kind of desolation wrought by atomisation.

Lana Del Rey, Video Games

Lana Del Rey’s 2011 pop song “Video Games” became a surprise cult hit and has come to symbolise the dejected milieu of post-recession youth culture. Her public image, the song’s homespun video, and subsequent interviews have been prolific targets of culture punditry, a notable instance including a 2014 interview where she described feminism as “boring.” Other writers however did not see Del Rey’s ambivalent feminism as regressive. A 2014 supplement published by The New Inquiry called “Ms. America,” devoted exclusively to Del Rey, describes her politics and aesthetics as productive and illuminating of the lived experience of neoliberal capitalism to young Americans. Introducing the supplement, Ayesha Siddiqi writes of how the film clip for Del Rey’s song circles around quintessential Americana cultural signifiers. “An American generation starved for an unfraught image of home,” Siddiqi writes, “can be sated by a pop star whose references are too stale to offend sung in an affect too flat to risk moving us.” Among the many commentaries on Del Rey, the music accompaniment is rarely considered a vehicle in itself for these themes. By bearing in mind while listening to Del Rey the social history of the virtual orchestra, these themes come through as much in the production and accompaniment as in her lyrical or visual aesthetic.
Lyrically, “Video Games” describes Del Rey’s amorous, subservient, and self-destructive relationship with her partner in a subdued and dispassionate manner, painting a picture of an un-liberated young woman, inclined to impress her partner at the expense of her own autonomy. An ostentatious string section with clunky voice leading, tubular bells, harp, and timpani, and a heavily-compressed piano, accompany Del Rey’s unsentimental vocal delivery. During the second chorus, a funereal military-band snare drum joins in. The grand aspirations of the faux-orchestral score evoke a caricature of melodrama, an affect described as “Hollywood Sadcore,” in which “rising strings … collect the detritus of a failed vision of America.” Through associations with the neo-romantic film scores of Max Steiner and the like, Del Rey invites an equivalence to the women protagonists of golden-age film, the portrayals of which were often superficial and premised on the sexualised male gaze. As Carol Flinn has argued, the neo-romantic tradition in film music “has functioned as a sort of conduit to connect listeners—and commentators—to an idealized past, offering them the promise of a retrieval of lost utopian coherence.” Nostalgia as a sociological phenomenon is associated with ennui and apathy for the contemporary moment, but the lost utopia that Flinn suggests is often explicitly constructed to erase feminine self-determination and reaffirm patriarchy.

Del Rey’s music perfectly captures this ambivalence. With its ersatz orchestration, “Video Games” suggests that this flawed, precarious utopia—the American Dream—was fake all along.

Oneohtrix Point Never, *R Plus Seven*

The music of Daniel Lopatin, under the pseudonym Oneohtrix Point Never (OPN), evokes themes around the experience of postmodernity, with several competing caricatures of past sonic environments. His 2013 album *R Plus Seven* incorporates a sound palette reminiscent of early samplers, General MIDI keyboards, and early digital synthesisers, in highly fragmentary structures with countless unpredictable about-faces. In an interview for *Fact Magazine*, Lopatin describes how pop music traditionally presumes that the listener is completely immersed and engaged with the music. In reality, he argues, there are a variety of other forces that influence our listening, from other sounds in the room to “revisiting some embarrassing thing you said two hours ago which creates a dip in concentration.” “What I try to do,” Lopatin says, “in an abstract way is culturally represent” distracted listening: “I’m trying to give a candid account of what I really, actually think that music sounds like.”

Lopatin realises the messy web of signification that is listening to music is socially coded, and these are shown in his choice of instrumentation, that partly exploits ersatz orchestral sounds. In the track “Problem Areas,” he uses double bass samples played too fast and dynamically consistent to be real, brass and saxophone chorales, and a regular feature of OPN’s records, synthetic female choir voices. The brass instruments are overtly alluded to in the video directed by Takeshi Murata, which features deflated, plasticine brass instrument sculptures next to objects like a McDonalds cup or a Coors Light can. These are followed by a series of hyperreal tableaux alluding to precarious situations, such as a chess board being flipped over, a cracked iPhone screen, and a crumpled fixed-gear bike.

The juxtaposition of these hyperreal symbols of late capitalism with scenes of dissolution and destruction suggests an anxiety that is diverse and pervasive, such as the anxieties generated through precarious, atomised labour. In a competitive gig economy, workers are increasingly expected to always be on call, or as Standing writes, “the time someone must put aside for labour exceeds the time in it.” The anxiety around economic circumstances endemic to these workers makes the idealised listening scenarios presumed by traditional popular music an increasingly unreasonable demand. Evoking the materiality of the virtual
orchestra by deliberately making those instruments sound mechanical and fake draws histories of music and capitalism into the orbit of tracks like “Problem Areas,” subjecting them both to critique and parody, paralleling with the vaporwave musical movement ascendant in the early 2010s.33 OPN suggests that the experience of music is never just about the music, and under the condition of neoliberalism, these experiences only grow more scattered and insecure.

**Elysia Crampton, Gold Country Vapor**

Laura Fantone writes that in many conceptions of precarity, “the single, male, urban artist or creative worker [is] idealized as the vanguard of the precariat.”34 These conceptions downplay the more precarious circumstances experienced by women, gender-diverse people, people of colour, and Indigenous people. Elysia Crampton is an Aymaran artist whose practice often juxtaposes signifiers from low brow Americana, Latinx, and Native American cultures. Her 2017 record, *Spots y Escupitajo*, includes among its diverse track-list eight radio spots with excessively dense and adrenal sound design, a track rendered as an extremely low-quality MP3, a poem delivered with vocal processing akin to a high-budget action film trailer, and a comparatively lengthy, plaintive piano piece.35 One track, “Gold Country Vapor,” is almost exclusively made with the sounds of General MIDI, including ersatz clarinets, orchestral hits, the “Choir Aahs” patch, the “Gunshot” patch, and other low-quality sound effects like tyres screeching.

“Gold Country Vapor” evokes a number of critiques of Western cultural and musical hegemony. It brings to mind computer game musics from the mid-1990s—many of which use the same sonic palette—and the lonerist, escapist, and masculine culture therein. It also suggests a caricaturised, Westernised sense of cultural otherness, with its MIDI bongos, parallel fifths, and the male grunts that punctuate the track. It also emphasises the violence of appropriation as revealed through the technological limitations of MIDI. Diduck writes that the cultural prominence of MIDI comes partly from the hegemony of the piano keyboard as the organisational locus on which Western musical practice is built. The piano’s equal temperament became a symbol of European liberalism, in which “each note was considered individual, autonomous, and allotted the same space within the audible spectrum.”36 Crampton’s identity suggests that this liberalism is not as universal as Europeans might claim. “As Aymara,” Crampton writes, “our being is always in a process of becoming—there was never this notion of a static, discrete culture or individuated self. Aymara culture is something that is activated in motion and through being shared, becoming with.”37

In “Gold Country Vapor,” Crampton reproduces the cultural displacement and appropriation experienced by Aymara by foregrounding the flaws of capitalism and colonialism through the use of awkward, phony instruments and the discrete (keyboard-centric) organisational schema that is the General MIDI specification. It defies conventional production standards, suggesting new ways to work with these otherwise stifling technologies to evoke the subjugation of First Nations identity under colonialism.

**Steven Warwick, Nadir**

Steven Warwick’s music, under the moniker Heatsick and more recently under his own name, takes dissociation and spatial awareness as central cues. On his mixtape *Nadir*, Warwick comes to terms with death and the demands of the peripatetic music career, turning to various “non-places” such as the shopping mall and the food court as sites for grieving and contemplation.38 These public-yet-privatised spaces evacuated of any unique identity,
Warwick says, “inform our contemporary landscape more and more. When you grow up with them, you might find them less alienating as you don’t know any difference.” Under late capitalism, the recession of a genuinely public commons disproportionately affects the most precarious in society, and Nadir exposes the cold, privately-operated commons that have emerged in its place. Journalist Thea Ballard writes that “there is little comforting in Nadir’s millennial abjection … [it is] an artefact of total precarity.”

The emphasis on non-places also informs Warwick’s choice of sound palette. On the track “Get It Together,” fake and deadpan flutes and cellos buoy Warwick’s barely-lucid voice. Particularly prominent is the cello attack, stubbornly insistent on its note fading in from nothing, rather than an elegant legato. It all sounds unfinished, like Warwick’s bleary-eyed, half-hearted commitment to get his life together. At an all too brief one minute and forty-seven seconds, and from a release that already asserts itself as deliberately unfinished, it is harrowing in its portrayal of rock-bottom self-reflexivity. Heatwick’s productions are known for a self-deprecating wit; in “Get It Together,” this wit has practically evaporated, leaving the chintzy sterility of an airport lounge or an arcade.

The final track of Nadir, “Millennial Vague,” makes the connection to precarity most blatant. Unnaturally crisp and artificial pizzicato double-bass samples, ironically playing light-hearted arpeggios, are sequenced awkwardly and out of time. They are joined by solitary acoustic guitar notes and a dulcimer. The lyric ends jarringly with the line “Awkward silence / Baby boomers,” before the track makes an unexpected three-point turn, devolving into an inelegant, limping beat. It captures the simultaneous hopelessness and intergenerational anger of today’s precariat.

Conclusion

Anecdotally, the use of sample libraries in such an overt way as the music I have described here is on the rise. This may be descendent from a recent trend of venerating the ersatz sounds of 1980s and 1990s dance music, such as Roland drum machines. This may be attributed to a burgeoning critical interest in the history of electronic music instruments and sound reproduction technologies. The artists I have described here participate in and extend this critical tradition, reclaiming these tools as object lessons for a politics of precarity. There is certainly scope in these interpretations for retrospective appraisal of early General MIDI-based composition. A clear example would be George Lewis’ Voyager suite, or the hundreds of PC game soundtracks that utilised General MIDI. This analysis also has a predominantly Western bias, and I believe vital perspectives on the virtual orchestra can be found in the East Asian creative industries.

While there is little sign of neoliberalism and the atomisation of musical labour decreasing in our contemporary political moment, it is plausible that more musicians will re-appraise and problematize the technologies available to them for political ends. The artists I describe offer contrasting blueprints on which to build such practices.

Endnotes

All URLs accessed April–Dec 2018.

31.
6 Wendy Carlos, Switched-on Bach, LP (New York: Columbia Records, 1968), MS7194.
11 Ibid., p. 31.
21 Ibid., pp. 69–76.
26 Ibid.
28 Ibid., pp. 60–69.
30 John Twells, “‘Everything’s kind of awful to be honest’: Oneohtrix Point Never Talks Re- Appropriation and Growing up a Teenage Tarantino Freak,” FactMag (5 September 2013), http://www.factmag.com/2013/09/05/everythings-kind-of-awful-to-be-honest-oneohtrix-point-never-on-reappropriation-and-growing-up-a-teenage-tarantino-fanatic/.

Standing, p. 58.


Elysia Crampton, Spots y Escupitajo, digital audio release and vinyl (London: The Vinyl Factory, 2017), VF286D.

Diduck, Mad Skills, p. 37.


Elysia Crampton, Spots y Escupitajo, digital audio release and vinyl (London: The Vinyl Factory, 2017), VF286D.

Diduck, Mad Skills, p. 37.


George Lewis, Voyager, CD audio (Tokyo: Avant, 1993), Avant 014.