

Guest Speech

THE MUSIC OF THINGS

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ABSTRACT

The talk will focus on making music through the fundamental exploration of electronic components, solder, wires and electricity itself. This serves as an extension to David Tudor's idea of composing inside electronics. Musical instrument is no longer considered as a complete self-contained entity, but a collection of inter-connectable things. Making, such as DIY (do-it-yourself) electronic instruments, is viewed not as a separate activity - for example, through workshops - but as a processual part of performance. From this premise, new paradigms for performance and composition of electronic music are born. The continuum of instrument, object and thing is also discussed; and particular reference is made to the work of Charlie Chaplin in relation to object transformations and object play. Chaplin's object gags are seen as a way of deconstructing an object through performance. The event *Dark Electronics*, collaboration between Kanta Horio and myself for the Sapporo International Art Festival 2017, is used as a starting point to discuss themes relating to making as a processual part of performance.

1. INTRODUCTION

The idea of a music of things is something I've become increasingly concerned with. This has been for the purpose of defining my own practice as Dirty Electronics and the broader field of DIY electronic music or what I've termed 'maker music' (Richards 2017a). My main interest has been in instrumental music. By this I mean electronic music that is not necessarily studio-based but centres around performance. Institutions like STEIM in the Netherlands and the conference NIME have, to a certain extent, been representative of this interest. I've also, by accident, become involved in interaction design: a natural bedfellow for creating new musical instruments. But these interests have only served as a starting point to develop an aesthetic of a music of things. Some of the key points of this aesthetic have been: exploring the relationship between performance and composition; composing inside electronics as expressed by David Tudor, and by extension instrument as composition; and the deconstruction of musical instrument, or, more accurately, investigating along the continuum from instrument, to object, to thing. This talk will focus on three areas relating to this aesthetic of a music of things: (1) making music through the fundamental exploration of electronic components, solder, wires and electricity itself; (2) instrument as a collection of inter-

connectable things rather than a self-contained entity; (3) making as a processual part of performance. The talk does not offer up a formal conclusion, but presents the discussion as ongoing research. Many of the ideas presented in this talk form the basis of an in preparation co-authored book with Leigh Landy *On the Music of Sounds and the Music of Things*.

2. MAKING MUSIC THROUGH THE FUNDAMENTAL EXPLORATION OF ELECTRONIC COMPONENTS, SOLDER, WIRES AND ELECTRICITY ITSELF.

I've previously written about hobbyist electronics and its impact on music (Richards 2017a). To summarise, after World War II there was a surplus of electronic components waiting to be appropriated. Trevor Pinch and Frank Trocco have discussed how Robert Moog would scour electronics surplus shops when developing his synthesisers (Pinch and Trocco 2004, p. 13). The development of the transistor and integrated circuits (ICs) also led to a boom in hobbyist electronics. Monthly magazines with schematics and howtos were published. These included *Practical Electronics* and *Popular Electronics*, and a number of publications extended to non-English speaking countries in Europe as well as Japan: for example, the Japanese computer magazines *I/O* published in the 1970s contained schematics for DIY synthesisers. And authors, such as Forrest Mims, Donald Lancaster and Craig Anderson were concerned with reaching-out to non-specialists in the name of practical and popular electronics. The electronic component, therefore, became a ubiquitous building block for potential sound making. Electronic sound was not, as some history books would have us believe, restricted to the development of the 'classical' recording studio - for example, in the national studios of France, Studio d'Essai de la Radiodiffusion nationale, and Germany, Studio for Electronic Music (WDR) - but available at the fundamental level of the component. Musicians began to take advantage of these resources. David Tudor in particular highlighted the potential of music conceived out of the material nature of wires and the electronic circuit. Both Ron Kuivila and Nicolas Collins have written informatively on the work of David Tudor in this regard (Kuivila 2004 and Collins 2004). The spirit of composing inside electronics fostered by David Tudor also continued in the work of the Sonic Arts Union (Robert Ashley, David

Behrman, Alvin Lucier and Gordon Mumma), and can be found in Collins' edited *Leonardo Music Journal* (LMJ) and seminal book *Handmade Electronic Music: The Art of Hardware Hacking* (Collins 2006). But this new musical philosophy was not exclusive to the US. Taking a UK-centric position, the works of Hugh Davies also exemplify this exploration of electronic music at a fundamental level.

Let's think about the here and now and more recent developments in electronic music. At the turn of the millennium, terms such as post-digital began to emerge along with a resistance to a purely digital music. A need for more pluralistic approaches to working with technology and hybridisation emerged. Laurie Anderson's quote "there is not enough dirt in virtual reality" has stayed with me and captures this view (Anderson 1990, p. 96). I too took a lead from Anderson in defining my own work as *Dirty Electronics: getting the hands dirty in a 'physical' electronic music*. Digital technology only seemed to underline the role of the human body in performance, either through questioning the body's existence or redundancy. Ironically, the Internet not only offered opportunities for new digital music making, but also emphasised technologies of the past. Through online market places such as eBay, vintage synthesisers and valve amplifiers, for example, became collectable. Analogue became fashionable - a discussion beyond the scope of this talk. This return to the analogue was more than just nostalgia. A generation of musicians had been brought up on virtual instruments and studios and they wanted the 'real thing'. And with the real thing came a cache and sense of authenticity about the resulting music.

This post-digital ethos and analogue revival coincided with the growth of new maker communities. To be brief, I'll call this DIYness. Maker Faires, crafting, hack and fab labs, all capture this DIYness that has not always been rooted in making finished stuff. I've sometimes asked: "What are we actually all making?" But such a question fails to recognise the importance of making for making's sake, and the act of making as a political statement. The mindfulness of crafting is also an important factor. Making can be seen as a radical movement that seeks to readdress society from the ground up, a way of empowering individuals and self-determination. If we can all make it, then we can own it. To return to a more specific point about music, a DIY electronic music intrinsically addresses issues of access and engagement - two of the big themes in our work-in-progress book *On the Music of Sound and the Music of Things* (Richards and Landy). DIY, or more specifically DIT (do-it-together) or DIWO (do-it-with-others) workshops, modular synth meets, and participatory events have become commonplace. This making spirit that I've referred to has, therefore, fuelled the idea of electronic instrument as a collection of wires and components and that is something to be made.

3. INSTRUMENT IS NO LONGER CONSIDERED AS A COMPLETE SELF-CONTAINED ENTITY, BUT A COLLECTION OF INTER-CONNECTABLE THINGS.

This brings us to my second point. The act of making in a DIY electronic music context serves to underline that instrument is a collection of inter-connectable things. But before we look at a music of things in more detail, it is worth exploring the continuum of instrument, object and thing that I highlighted in the introduction. I've often considered an object-orientated approach to music making with particular reference to John Cage. Cage remarked: "Object would become process; we would discover, thanks to a procedure borrowed from science, the meaning of nature through the music of objects" (Cage and Charles 1981, p. 221). When discussing such object-orientated approaches, I've stated: "It is not simply a case of just playing these objects as instruments, but of exploring their properties at a fundamental level. In many instances, repertoire is 'found' in the object rather than played on the instrument" (Richards 2017a, p. 243). In addition, I've made tentative links to object-orientated ontology as expressed by Levi Bryant (Bryant 2011) (Richards 2016). But an object suggests something that is clearly demarcated, with discernable boundaries, stable and self-contained. However, in the performance of DIY electronic music, the idea of objecthood is often broken down. A messy tabletop of electronics becomes a music of things. Quoting from my earlier writings on this subject: "An instrument of electronics' therefore implies a disposition towards processes, connectivity, and relationships how things may or may not interact with each other." (Richards 2017a, p. 245) These are issues I've returned to again and again in my own practice and research. But for this talk, I'd like to present some of my more recent ideas surrounding the deconstruction of object in performance.

George Maciunas, founder of the Fluxus movement, has been cited as saying Fluxus "grew out of vaudeville, Charlie Chaplin and Surrealism, junk art, world's fairs and Walt Disney, readymades, Futurist theatre, and Wagnerism." (in Larson 1983, p. 104) In true Fluxus spirit, some of these attributions may be bogus, but the idea of object play and transformation and the readymade action as presented by George Brecht, are clearly evident in the films of Charlie Chaplin. The deconstruction of an object, not just in a material sense, but questioning scripts associated with objects, became a feature of Charlie Chaplin's comedy. This feature, along with what became known as the object gag, has been discussed in detail by Dan Kamin and is exemplified in the series of Chaplin films produced by Mutual (Kamin 2011). Chaplin's *One A.M.* portrays a drunk returning home after an all night session, and whose inebriation leads to confusion with everyday items and their use. Lighting and smoking a cigarette gets particular treatment in terms of object play and transformation. For example, a cigarette butt becomes a coin and is stubbed, seemingly innocently although with a certain vindictiveness, into the hand of the taxi driver - a title card states: "I never did like taxis". Various match and cigarette scenarios are played out: a match blown out before the cigarette is lit then smoking the unlit cigarette; smoking a match; flick-

ing ash into other objects, not an ashtray; striking uncompromising poses and falling over as a result of trying to light the match on a sole of his shoe, and so on. The interlocking relationship between match and cigarette is subverted. Chaplin begins to create new meaning for the match and the cigarette through an interrogation of this relationship. The smoker also becomes a triangulator in this process.

Other objects in the film are transformed, a decanter stopper becomes a pepper or salt pot, a coat stand becomes a ladder, a bathtub becomes a bed. A round table occupies an important position in the film, both physically in the centre of the hallway and as a key prop. The table, that spins, seems to represent Chaplin's state of mind and drunkenness, and adds to the flux and transformation of the objects in the room. It becomes an object mixer. Objects are put down as one thing but picked up as another: the spinning table seemingly transforms them into something else. The spinning also provides a readymade action. Chaplin finds himself on the table walking, running. The table becomes hamster wheel or tread mill. More readymade actions involve the two flights of stairs in the room. The affordance of stairs - walking up and down - is played upon with theme and variation. Falling down stairs backwards, sliding, rolling, rolled-up in the stair carpet, and with other objects (stuffed bear) is 'performed'. The stairs become such an obstacle that they are transformed into a mountain by Chaplin becoming a mountaineer in full regalia: hat, backpack, rope and pick. It is only through the transformation of one object to another, as previously mentioned a coat stand becomes ladder, that Chaplin eventually gets to the top of the stairs and the first floor.

Before I leave Chaplin, I'd like to discuss his use of the technological object in his films. In *One A.M.* Chaplin is confronted by what appears to be a state of the art retractable bed. The bed is hidden behind a panel and Chaplin is presented with a set of buttons on the wall and the dilemma of which button to press to retract the bed. What follows is an object gag based on, not only object play - a thousand and one ways to get into bed - but technology failing. Try as he might, Chaplin fails, and the technology fails, to 'make' a bed. Similarly technology fails magnificently in *Modern Times* where Chaplin finds himself subjected to an automatic feeding machine and its glitches. The machine is archetypally, to use a British saying, Heath Robinson, a completely impractical and overly complicated machine to the point of humour. There are novel contraptions for eating certain types of food, for example, a rotating "counter-shaft, double-knee-action corn feeder", a no breath needed, compressed air soup cooler, and an automated mouth wipe. Within the film, the feeding machine takes a seemingly simple task of eating and convolutes the process with unintended and hilarious outcomes.

Ideas surrounding objecthood and the deconstruction of object through play is particularly relevant to music and performance. I was recently reminded of a concert I went to at the Bimhuis, Amsterdam in 2002 and drummer Paul Lovens. This is not tangential to my discussion on Charlie Chaplin. Object play is the link between these two seemingly disparate references. In the above-mentioned concert, observing Lovens play the drum kit was like watch-

ing Charlie Chaplin interact with the retractable bed in the film *One A.M.*. In terms of objects and their function, Lovens completely deconstructed the kit in the concert. The full apparatus of the kit became instrument. Stands were rattled and shook and ancillary metal objects placed on drums and motioned with the hands to make sound. After listening for a while and witnessing Lovens' rejection of the norms associated with a drum kit and wilful denial to 'just hit the drums', the performance became increasingly absurd.

4. MAKING AS A PROCESSUAL PART OF PERFORMANCE DARK ELECTRONICS WITH KANTA HORIO

When describing my own practice, I often state: "Performance begins on the workbench and as is extended on to the stage" (Richards 2008, p. 25). This has become my motto. The relationship between the making of musical instrument/sound devices and performing has been an ongoing theme in my work as well as providing a rich vein for further research. Such a preoccupation illustrates my attempt to consider how to make sound (making) and what to do with sound (performing) as a holistic practice. Yet, I've continued to scrutinise the relationship between performance, workbench and stage; so, when coming to my final point, making as a processual part of performance, the distinction between these terms become blurred. After all, the performance space can become the workbench or the performance can become the act of 'live' making. Process of making and process music become one and the same.

There are precedents for making as a procedural part of performance in early Fluxus works. For example, Alison Knowles' #2 - Proposition is based on a simple event score with the instructions "Make a Salad"; and #2a - Variation #1 on Proposition "Make a Soup". Both of these event scores present making as 'the work' and involve readymade actions. I've also previously discussed the practice of making circuits on the spot 'live soldering', an example being the performances of the group Loud Objects, and drawn parallels between the field of live coding. Then there is the Breadboard Band who take a prototypical approach to constructing circuits in performance. In my own work, the idea of making as a performance became acute in *Dirty Electronics: Solder a Score* (2011) that was part of Live Weekends: Notation and Interpretation at the Institute of Contemporary Art (ICA), London. The making and performance took place in the main lower gallery of the ICA over the duration of a week. Gallery attendees were able to watch the construction of circuits as if a living installation. At this stage I could discuss some of these performances and events in more detail. However, I want to focus on something topical and related to my current work.

As part of this visit to Japan, I'll collaborate with sound artist Kanta Horio to create a participatory event for the Sapporo International Art Festival (SIAF). I'd previously worked with Kanta in the UK and Japan. His work combines light and sound, and the exploration of objects - the bringing to life of inanimate objects through generating

electromagnetic fields. Through the movement and vibration of objects, sound is made. Kanta's work falls into the category of what could be called performance-installation. This year's SIAF has also been guest directed by Otomo Yoshihide whose aim was to put together a "citizen participatory art festival" where attendees are invited "to just get hands on, to create something with each other, and see what comes of it." (Yoshihide 2017) Many of the works and commissions for the Festival are site specific and seek to engage specifically with the local community.

Kanta Horio has been commissioned to create an installation for the Festival in an abandoned building in the neon-lit entertainment district of Susukino, and this is where we also chose to stage our collaboration. Some of the floors in the multi-story building are without electricity, and there is a very dark windowless basement. As well as responding to the idiosyncrasies of the building and its electrical wiring and infrastructure, being in situ, 'making' in light, or the absence of light, became our starting point. I also wanted to investigate some of the core themes of my current work, namely making as a procedural part of performance. A simple event score and propositions for the work followed:

1. Darkness a room without a window
2. Make a sound circuit
3. Blow into a whistle to generate electric current, light and sound
4. A collective performance

And the propositions: "What happens when darkness descends on our workbench? And mains electricity becomes scarce and precious?" Some ideas for titles were discussed - Nocturne (night music), Night Birds (due to the generator 'whistle' and bird-like sounds of the circuits) - but we settled on the title *Dark Electronics*. I'd explored similar themes in the past, such as in the *Dirty Electronics Ugly Weekender* (2015), where DIY circuits were made in candlelight. But these works are not concerned with light and darkness per se, but how such limitations highlight the process of making, and change the relationship with materials, tools and other participants. The absence of light also naturally diminishes visual cues and emphasises the senses of sound and touch. This heightened experience could be thought of as a form of 'acoustic making'.

One of the main ideas behind working with these limitations was to question optimisation and efficiency in production. Through the reduction of light in the work environment, making a DIY sound circuit becomes a different proposition. The time needed to construct a circuit will be considerably longer. In a recent article, "Slipper Bows and Slow Circuits", I wrote about slowing down the making of DIY circuits in participatory events to emphasise process over final outcome and to give "more time for reflection and an opportunity to re/connect with musical stuff." (Richards 2017b, p. 30) In this article, I made comparisons to the Slow Movement (Honor 2004), a movement that rejects many of the trappings of hi-tech, as well as discussing slow tech (Hallnas and Redstrom 2001). In terms

of participatory events, "To Do or to Have? That Is the Question" (Boven and Gilovich 2003) has become one of my fixations. With an emphasis on process, there is also a weighting on the experiential versus a finished 'product' to take home. This emphasis is a new departure in my work as Dirty Electronics, where I've previously designed and run workshops where participants get to make and take home hand-held synths and sound circuits. The recent work, *The Construct has no Purpose* (2017), a Dirty Electronics collaboration with Max Wainwright and Amit Patel, set out to critique maker culture and tokenistic making prevalent in the ever-growing DIY synth and electronic music workshop scene. In part, this work also sought to challenge my practice. The introduction of constraints for making is also an attempt to firmly align the work with a crafting ideology. David Pye has written on workmanship and risk as a defining aspect of craft (Pye 1995). There is risk in *Dark Electronics*. Successful completion of the sound circuit is not a foregone conclusion due to the working conditions. I've often referred to Brian Eno's *Oblique Strategies* (1975) in relation to designing sound making devices and performances. This idea of oblique strategies can also be applied to the making process as is the case in this collaboration with Kanta Horio.

I'd like to draw together some additional themes of *Dark Electronics*. Simon Schaffer in his recent BBC documentary *Mechanical Marvels: Clockwork Dreams* discussed the incredible craftsmanship of eighteenth-century watchmakers and their working conditions. Artisans in the 'clock trades' were required to undertake extremely small and detailed work often in candlelight. *Dark Electronics* is a tribute to such hand skills and a celebration of manual labour. The pre-conditions of the event for SIAF also force the simplification of circuit design and constructs. This form of reductionism is also an attempt to reveal the very essence of the work. Finally, constructing a circuit in such conditions will require the help of other participants. This places an onus on DIT, rather than DIY, which has become central to my practice as Dirty Electronics.

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- part of the Music, Technology and Innovation Research Centre, at De Montfort University where he helped initiate the Music, Technology and Innovation, and Music, Technology and Performance degrees. Richards has also written numerous texts on DIY practices in electronic music and new modes of performance.
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6. AUTHOR'S PROFILE

John RICHARDS

John Richards explores the idea of Dirty Electronics that focuses on shared experiences, ritual, gesture, touch and social interaction. He is primarily concerned with the performance of large-group electronic music and DIY electronics, and the idea of creating music inside electronics. His work also pushes the boundaries between performance art, electronics, and graphic design and is trans-disciplinary as well as having a socio-political dimension. Dirty Electronics has been commissioned to create sound devices for various arts organisations and festivals and has released a series of hand-held synths on Mute Records. In 1999, Richards joined Andrew Hugill and Leigh Landy as

