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**Lost and Found: the Mincer****Lost and Found: the Mincer**[Click here to download pdf version.](#)

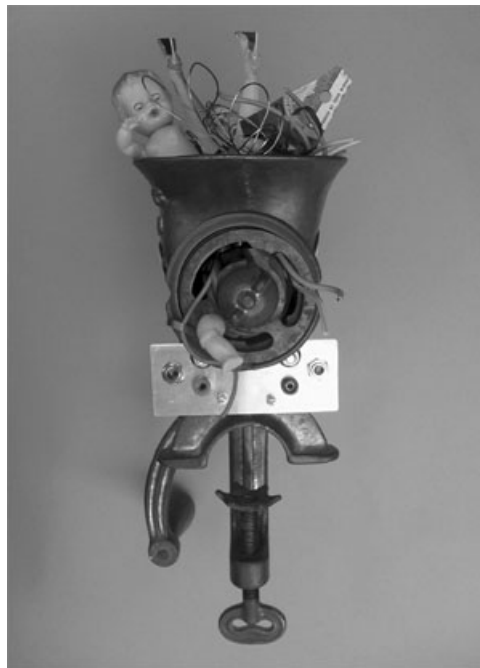
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**Abstract**

This paper discusses the author's Mincer: an 'evolved' sound generating object of which the mechanical properties and physical material of a meat mincer (grinder) are exploited. Through looking at the Mincer in detail, the author suggests a number of characteristics of the device that reflect current trends within the field of live electronics. This includes working with and appropriating found objects, do-it-yourself (DIY) electronics, bricolage, an emphasis on physical gesture, and sound generating systems celebrating super-hybridity.



**Figure 1: Mincer, John Richards, 2006.**  
Copyright © John Richards

**Introduction**

The idea for the Mincer came about through exploring a demonstrative performance style combined with novel and tactile interfaces that could control the Kreeback

instrument: a modular feedback network with additional sound generating devices that I have been developing with the group kREEPA [1]. A mincing machine was initially chosen due to the physical gesture-type associated with the object: a generous hand-cranked/turned mechanism (Figure 1). I had already explored hand-cranked instruments using dynamo-driven devices, and such physical exertion in the performance of electronic music was something I wanted to continue to investigate. I was also moving away from current digital aesthetics in music towards an approach I called 'dirty electronics,' perhaps best summarized as getting one's hands dirty in the process of both creating sound generating devices and using them in performance [2] [3].

Gesture, touch, physicality and the human body have become increasingly important in my work. This in part has been influenced by the work of David Sudnow, ethnographer and social psychologist. In *Ways of the Hand*, Sudnow puts forward, in his words, "a phenomenological account of the handwork as it's known to a performing musician" [4]. The account finishes with the lines: "I sing with my fingers, so to speak, and only so to speak, for there's a new being, my body, and it is this being (here too, so to speak) that sings" [5]. Bob Ostertag in "Human Bodies, Computer Music," has expressed similar views regarding the body where he considers that in the process of working with anything physically manipulable "an intelligence and creativity is actually written into the artist's muscle and bones and blood and skin and hair" [6]. There would seem a renewed vigor in the physical. Jem Finner has also suggested this in reference to the post-digital and his frustrations with "one finger music" [7] [8]; whereas, Michel Waisvisz writes: "A new generation of musicians is expressing interest in a more physical control of sound. The laptops are losing their perfect shine as digital culture becomes mainstream and 'high tech' culture associated with the war machinery" [9]. The use of body contacts, now commonplace in circuit bending, has also re-invigorated the interest in touch, electricity and skin resistance. The predictions of futurist Alvin Toffler - who in *Future Shock* prophesized that as people's working lives became more high tech, so their personal lives would become high touch - would seem to have considerable credence [10].

#### Junkism

The everyday common-all-garden object has become a rich vein of potential for artistic expression. From Marcel Duchamp, John Cage, Fluxus, pop art, and the more contemporary movement of the British Young Artists, found art has retained its fascination. In fact, with mass production of utilitarian items reaching new heights in the sweatshops of China, multinational corporations and globalization, and the rise of consumerism, found art has continued to be topical and relevant. Part of the beauty of found art is the finding. As Jon Spayde remarks in his article 'Found Art' and Finding Yourself":

The desire and delight associated with found objects feels somehow archaic - a return to the prized collections of childhood, when we loved to scabble in the dirt for pennies, arrowheads, pretty rocks, snake skins, and other surprises. It may go back even further, to primal cellular memories planted within us by hunter-gatherer forebears [11].

The collector's instinct also seems evident in Marcel Duchamp. As John Cage testifies, Duchamp took twenty years in collecting the objects for *Etant Donnés*, which consisted of bricks from Spain, an old wooden door, twigs gathered from walks in the park, and an electric motor amongst other things [12].

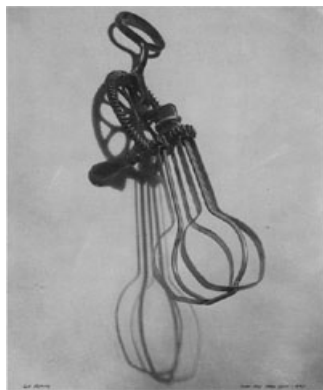
The ability to purchase junk online and to be able to digitally sieve through items systematically using powerful search engines, for example on eBay, has made the proposition of working with found objects even more appealing. The introduction of *Found Magazine* in 2001, "a showcase for all the strange, hilarious and heartbreaking things people've picked up" emphasizes the present interest in the found [13]. Furthermore, consumerism has resulted in a considerable profligacy of material goods. It is not just the rise of disseminating junk and antiques online, but a vibrant culture of the second-hand, car boot sales and flea markets in general that demonstrates an interest in the re-use of goods along with their appropriation and re-appropriation [14]. The charity shop (thrift store), since its introduction post-1945, has become a predominant feature of many high streets [15]. These shops have fostered the growth of certain subcultures and lifestyles, for example, ranging from trends in fashion, or antifashion through to vinyl record revival [16].

Circuit-bending can also be considered a form of found art, and its current cachet has invigorated musicians working in the field of electronic music to seek-out junk. In particular, the work of Reed Ghazala epitomizes this, where he considers the appropriation of discarded circuits analogous to Mankind adapting a coconut

washed-up on the shore [17]. The found object approach also extends to the housing of circuit bent and do-it-yourself (DIY) electronic devices. Old tins, cigar boxes and Tupperware containers are all commonly used [18]. Furthermore, in reference to adding control ornamentation to his circuit bent instruments, Ghazala states: "I collect all kinds of unusual items to incorporate into instruments. Wire in all colors and sizes, antique pilot lights and knobs, vintage switches and other components from electronics' classic era of deco style with glass, brass, and colored Bakelite trappings" [19].

#### **Grinder Reincarnated**

I eventually acquired a mincing machine from an antique/junk shop after searching for one at car boot sales (garage sale), the weight of the object and postage cost making an online purchase uneconomical. It was a traditional hand-crank, table clamp mincing machine, approximately twelve inches tall and made from heavy cast-iron. Embossed on the mincer was "Spong's No. 24, The Bantam London". James Osborne Spong set-up a business in 1856, in London, that promoted domestic economy. The Spong & Co.'s catalogue, selling domestic appliances, included self-setting rat and mouse traps, portable fire escapes, fire extinguishers, coffee grinders, mincing machines, and knife cleaners [20].



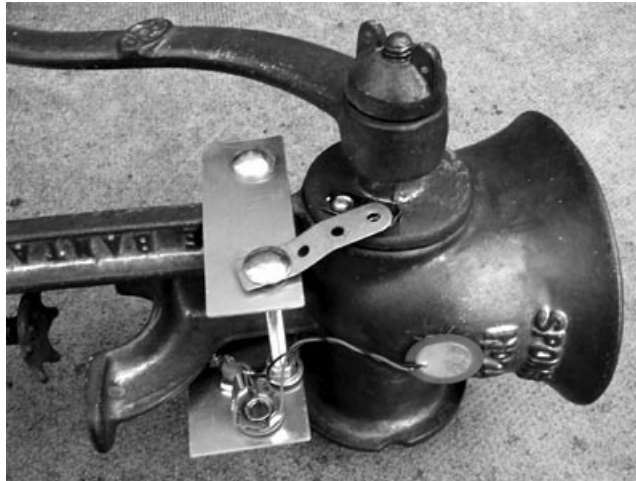
**Figure 2: La femme, 1920,**  
Centre Georges Pompidou, Musée national d'art moderne,  
Paris © 1998 Man Ray Trust/Artists Rights Society,  
NY/ADAGP, Paris

Once the mincing machine was at home on the workbench the question arose: 'How to modify and capture the gesture associated with the cranking?' Making major modifications to the Mincer, being cast-iron, presented some issues, especially with limited metal working tools at my disposal. Also, at this point the sculptural properties of the mincing machine became clear to me as well as its connection to other works of found art. Two particular images came to mind: Marcel Duchamp's oil painting of a chocolate grinder *Chocolate Grinder No. 2* and Man Ray's photo of a hand-turned egg whisk, *La femme* (Figure 2). Duchamp seemed particularly fascinated with gyrating machines. A coffee mill also featured in his work [21]. The visual aspect of the Mincer and its potential Surrealist connotations seemed something worth holding onto, although the Mincer was never intended to be a homage to Marcel Duchamp. The challenge, therefore, was to modify the mincing machine in an elegant way as to retain its discrete form, whilst considering the function and sculptural properties of the object.

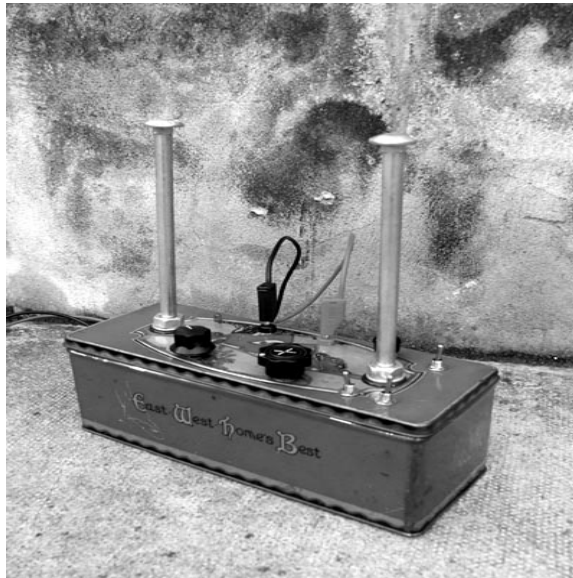
#### **Animal, Vegetable, Mineral?**

Whilst at STEIM (the Studio for Electro-Instrumental Music), Amsterdam, in 2002, the spirit of Michel Waisvisz seemed to have a subconscious affect on me despite having very little contact with him. Although I was there predominantly exploring software and sensing, it was some of the 'antique' interfaces in a glass cabinet in an upstairs room of the institution, where a Cracklebox was also housed, that intrigued me. Waisvisz's commitment to touch as an integral part of instrumental performance is demonstrated in his earlier works where skin resistance and conductivity are used: the Cracklebox being a prime example. The Crackle Family is an extension of the idea of using skin resistance and conductivity along with other conductive objects. In the Crackle Family this includes knives and forks and the tea from a teapot [22]. In the early 1970s, Hugh Davies also experimented with similar techniques with the group Gentle Fire. In the piece *Group Composition VII*, probes, connected to the voltage-control input of a VCS3, were stuck into a cheesecake. A pint of beer and knives and

forks were also used to similar effect [23]. Organic matter too, such as fruit and vegetables, has also been used to conduct electricity: a common experiment in a physics class.



**Figure 3. Back of the Mincer showing the ratchet-like mechanism and fixings.** Copyright © John Richards



**Figure 4. Red LFO, John Richards, 2005.**  
Copyright © John Richards

By using the physical material of the mincing machine, cast-iron, an idea arose to generate different resistances from the machine without any additional electronic components by turning the handle. Like most hand-cranked mincing machines, the Mincer comprises of a screw shaft or corkscrew blade to which the handle is attached. The base of the shaft, handle end, sits flush with the main body of the mincing machine, and the shaft is locked into place by the front-end circular cutter disks secured by a wing nut. The resulting design is more a switch with slight variable resistance caused by contact bounce. The act of mincing things creates further variable resistance (this will be discussed later). A contact arm made from Meccano rests above the base of the shaft and connects with the actuator (moving part of the switch) when the mechanism is turned (Figure 3). The actuator is angled, sprung, and fixed to the shaft's base by a machine screw. It is designed to pass underneath and rub against the fixed contact arm in the manner of a ratchet. Consequently, the handle has to be turned in one direction, clock-wise. Two metal plates are clamped to either side of the mincing machine's legs by two steel bolts. One of the bolts is used to secure the contact arm, and is insulated from both front and back plates by rubber grommets. The front plate is also used as a panel for connector sockets.

As previously mentioned, the Mincer was conceived to be used in a modular

environment. Many of the self-built electronic sound generating devices of this environment have inputs where particular components within their circuits can be bridged using banana connectors. The Mincer has been predominantly used with the Red LFO: a low-frequency oscillator where the speed of the LFO can be controlled by a regular potentiometer, skin resistance through its two bolt body contacts, or an external device that is connected in parallel with the above potentiometer (Figure 4). The LFO is used to modulate the Kreeback instrument. The wiring of the Mincer is simple. The connector sockets are wired to solder tags; one connected to the insulated bolt, which in turn is connected to the fixed contact arm, the other to the bolt that touches the cast-iron body of the device. When the Red LFO is connected to the Mincer with two patch cables, turning the handle of the mincing machine creates two different LFO speeds (switch open and closed). When closed, a circuit is made by electricity passing through the cast-iron body of the Mincer. It is also possible to get variables and fluctuations in the speed of the LFO by rocking the actuator gently back and forth across the fixed contact point. The speed in which the handle of the Mincer is turned creates different periods between the rates of change of the LFO's speed.

#### **Sausage**

Amplifying the Mincer using contact microphones was a secondary consideration. Two microphones are attached with hot glue to the opposite sides of the Mincer's funnel to give a stereo effect. The microphone jack sockets are also recessed into the front panel. These sockets are insulated from the panel to prevent a short circuit: the front panel, due to the wiring, being live. Although the modifications to the Mincer are relatively simple, its use with the LFO and the resulting modulation of the Kreeback instrument, produces complex musical results. Furthermore, it is possible for the Mincer to selfmodulate its own amplified 'minced' output: the sounds from the contact microphones can be mixed with the output of the LFO. The act of mincing certain objects, for example, a carrot, also changes the resistivity of the Mincer and consequently how, for example, the Red LFO responds.

It was not until the first performance with the Mincer that I realized the theatrical potential of the device. The mincing machine is an extremely strong metaphor. Being 'put through the mincer' suggests insensitivity and force, a way of reducing something to small insignificant particles. It would also seem to symbolize transformation: no matter what goes in one end comes out the same shape and size at the other. The mincing process also seemed analogous to certain digital sound processing techniques such as brassage and granulation, where sound is reduced to segments and grains. Trevor Wishart, who named one of the brassage functions in the Composers Desktop Project (CDP) software Sausage [24], has used this analogy. To date a rubber hand, doll, cassette tapes, vegetables, gramophone records and miscellaneous crunchy items have gone into the Mincer in performance creating moments of pure theatre as well as generating a rich palette of sounds. Mincing some of the above, at times, was not without humor and satire, and required considerable physical force and energy on behalf of the performer.

#### **Paper, Pens, Card And Glue**

The work carried-out on the Mincer reflects the zeitgeist of a vibrant DIY culture. Crafting is back. Online communities such as craftster.org have sprung up: a repository for hip, crafty, DIY projects. They state: "If you've been known to run with scissors, you can break the rules of crafting with your fellow rebel DIY'ers here!" [25] There is also Ulla-Maaria Mutanen's "Crafter Manifesto: The magic of making things," which, as Mutanen remarks, is an attempt to "pin down what is driving the increasing popularity of crafting" [26]. Then there is Make Magazine, published quarterly since February 2005, which professes the first magazine devoted entirely to DIY technology projects [27]. The interest in hobby electronics has perhaps not reached the heights of the 1960s, but musicians are returning to the soldering irons they put down, as Nic Collins points out, in the 1980s when MIDI and microcomputers were introduced [28]. David Tudor's approach to DIY electronic devices forty years on is alive and kicking.

#### **Composing Inside Junk**

The Mincer combines both Cageian and Tudor-esque approaches to working with sound. This includes, to use Tudor's phrase, 'composing inside electronics' and Cage's view that an object is a discrete system from which to draw musical material. Not only are electronics used to get 'inside' the Mincer to extend the musical potential of the object, but the object also becomes part of the circuit. Quoting Cage: "Object would become process; we would discover, thanks to a procedure borrowed from science, the meaning of nature through the music of objects" [29]. However, using an object as a musical process can be taken even further by looking beyond the object and thinking in terms of its function. In the case of an ashtray, an object Cage used as an

example, this would be to collect ash and hold a cigarette. This function is also connected to smoker and their relationship to the ashtray. Returning to the Mincer, a musical 'event' may depend on the time it takes to mince some meat, or to complete a rotation of its handle. The musical process also extends to the gathering of the object, the tinkering and general bricolage.

#### **Discography**

John Richards. Mincemeat, kREEPBACK, Monium, mon005 (Birmingham, UK, 2006). Piece for Mincer and Kreepback instrument. Format: postcard with 3-inch CD attached (audio excerpt). Information at: <<http://www.monium.org.uk/>>.

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#### **Author Biography**

John Richards' work explores performing with self-made instruments and the creation of interactive environments. He performs regularly with the groups kREEPA and Sand and is a regular collaborator with Nicholas James Bullen (ex-Napalm Death). He is currently part of the Music, Technology and Innovation Research Centre at De Montfort University, Leicester, UK.



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