

# Useless, not Worthless: Absurd Making as Critical Practice

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## ABSTRACT

We report on the outcomes of a hackathon organised around the themes of absurd musical interfaces, questionable sonic interactions and unworkable music designs. At the core of the project is the intention to explore absurd making as a way to support critical and disruptive design practices. We reflect on how surreal, nonsensical and fragile artefacts can be helpful to stretch and critique conventional ideas of what is useful and appropriate in technology research and development. After introducing both concepts and methods that shaped the event we present a selection of useless interfaces designed by the hackathon's attendees. These musical artefacts, and the considerations around them, are then discussed as a viable means for communicating both design concerns and future visions. We also consider two features identified as playing a crucial role within the event: the discovery of contradictions and the importance of context-based ingredients.

## Author Keywords

Absurd Making; Critical Design Practices; Sonic Interaction Design.

## CCS Concepts

•**Human-centered computing** → **User interface design**; *HCI theory, concepts and models*; Sound-based input / output;

## INTRODUCTION

In recent years, human-computer interaction (HCI) has seen a flourishing of viewpoints and methods as diverse fields have been brought into contact with its research practice [60]. Researchers are increasingly engaged with an inclusive and critical discussion of technology, mediating perspectives coming from the arts [23], philosophy [35, 66] and social sciences [46]. HCI forms of engagement have expanded and diversified our design practice, fostering critical contributions that not only help us to “ask better questions about technology and society” [24] but also acknowledge different viewpoints and narratives [64, 34].

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Alongside more functionally-oriented perspectives, alternative strategies are often exploited to expand technical knowledge and advance HCI research. These include design fiction [52, 8], disobedience and critical making [61, 36, 37] as well as first-person<sup>1</sup> and reflexive methods [58, 38].

Inspired by these approaches, we explored a rather unconventional way to advance the debate on complex, interdisciplinary and multifaceted issues related to the use and development of technology. This is based on a cheerful, light-touch and permissive activity focusing on practical and creative design explorations. We therefore report on the *Unuseless Music Design - A Seriously Silly Hackathon*, an event organised around the themes of absurd musical interfaces, questionable sonic interactions and unworkable music designs.

During the course of two days, a group of artists, technologists and makers engaged with the development of new musical interfaces and sonic interaction design combining seriously silly and critical perspectives. The overall project's attitude is grounded on the idea that by subverting the ways we think about and perform with technology it is possible to reveal unstated assumptions, consider divergent strategies and, possibly, generate new knowledge.

More specifically, by making and sharing surreal and illogical musical instruments, we aim to expand our understanding of two main questions: how can absurdity be helpful to stretch and critique conventional ideas of what is useful, appropriate and sensible in technology research and development? And, how can the exploration of contradictory and fragile artefacts convey future visions beyond the paradigms imposed by current trends and technologies?

This paper offers an overview of the insights we were able to learn while reflecting on this experience. After covering relevant literature, we introduce our absurd music hackathon with an outline of the few methodological criteria we adopted for its organisation. We then present a selection of artefacts produced during the event to provide a sense of the technological puns, games and reflections that emerged. We also discuss a set of concurrent features that, alongside the playful and absurd perspective, influenced both the nature of the objects produced and the messages they convey. Finally we reflect on the notion of absurd making as a valuable approach to generate divergent design ideas, question current technology and reveal values and assumptions inscribed into it.

<sup>1</sup>On this topic, see for example, the [First-Person Research Methods Workshop](#) held at DIS 2019 - last access May 6, 2020

## A PATAPHYSICAL OUTLOOK

The discipline of imagining and building illogical, unfamiliar and overly complicated machines has long been practised by both artists and inventors (see Rube Goldberg, Heath Robinson, Simone Giertz and Joseph Herscher - to name a few). A well-known reference of absurd design ideas is Jaques Carelman's *Objets Introuvable* (unfindable objects) [20] which include the teapot with the handle on the same side as the spout - as noted by Vines et al., an image often used for the front cover of Don Norman's *Psychology of Everyday Things* [70]. Within western culture, these design hazards pay a tribute to the artistic/philosophical movements that developed in the period from the 1890s through to the mid-twentieth century, such as dadaism, surrealism and situationism.

While planning our hackathon we broadly looked at these cultural insurgencies, amongst them Pataphysics was undoubtedly the most inspirational. Pataphysics is often introduced as "the science of imaginary solutions" [43]. Raymond Queneau declared that pataphysics "rests on the truth of contradictions and exceptions", and many leading pataphysicians have added definitions such as the "science of the particular" which aims to investigate "the laws governing exceptions" [44]. While celebrating human subjectivity and the multiplicity of things, pataphysics offers a severe and ironic critique of positivist thinking, a serious humour that "finds fertile ground in any mind that thinks the objective truths of empiricism at least demand a little playful tweaking" [42].

Since the "apparent" death of its prime exponent Alfred Jarry in 1907, pataphysics has silently influenced a large part of western cultural production, including - directly or indirectly - academia and scientific research. Within the context of scientific dissemination, an example of such pataphysical attitude is the Ig Nobel Prize: an annual ceremony where actual Nobel Laureates award improbable but serious research achievements<sup>2</sup>. These prizes are intended to applaud unusual and imaginative research that makes "first laugh and then think" [1] as well as stimulate people's interest in scientific research such as medicine or engineering.

Out of the many resources that gather pieces of literary or handicraft absurd art works (e.g. [29]) we mention two works particularly concerned with *pata-musical* issues. The first, curated by Deirdre Loughridge and Thomas Patteson, is the *Museum of Imaginary Instruments*: a collections of "fictophones" often existing as diagrams, drawings or written descriptions [50]. Loughridge and Patteson note that musical tools "take on physical reality that previously existed only in the conceptual space". The project stimulates reflections on the emergence and evolution of musical objects and the requirements, at once material and intellectual, they should have to be acknowledged as musical instruments. The second is Andrew Hugill's survey on Imaginary Music Technologies [41]. Besides offering an intriguing summary of impractical music-making devices and artists (e.g. Johannes Bergmark's surrealist music perfor-

mances and Jean Tinguely's machines), Hugill provides us with a historically informed perspective on the possible ways in which musicians were able to "decorate with new solutions our representation of poverty-stricken, linear, word" [48].

The fascination with ironic and uncanny objects also exist in non-western cultures. Often mentioned in design and craft domains is the Japanese art of Chindogu, where a designer produces "un-useless" objects [9]. Unlike other absurd designs, Chindogu must physically exist (i.e. a concept should be translated into an artefact) and they must be, from a practical point of view, (almost) completely useless [45]. Often Chindogu solve one problem while creating other, larger problems - see, for instance, the Noodles Cooler: an electric fan attached to the chopsticks that cools noodles just before they are eaten. In this sense the object is not useless, but neither is it useful: it is *un-useless*<sup>3</sup>.

## QUESTIONABLE HCI RESEARCH

The spirit of Chindogu was embraced by Jennifer G. Sheridan and the *thePooch*. collective whom organised the first Chindogu Challenge<sup>4</sup>: "a kind of 'hackfest' for human-computer interaction academics with the purpose of challenging them to use an unfamiliar creative framework" [65]. Due to its explicit affiliation with the HCI realm, this initiative was a main source of inspiration for our enterprise. Another influence was the Stupid Hackathon, started by Amelia Winger-Bearskin, a playful event where participants create tech projects that "have no value whatsoever"<sup>5</sup>. From its launch in 2013, the Stupid Hackathon quickly caught international attention and such events are organised autonomously worldwide.

While integrating the critical and contingent attitudes that characterise research through design [28, 75], we situate our work close to fictional, speculative and ludic design approaches [26, 2, 10, 72]. A seriously silly approach that particularly influenced us is the one introduced by Mark Blythe et al. where design fiction is exploited to generate fragile, cheerful and sometime naive design ideas [9]. In this project, fictional artefacts, by producing playful narratives and scenarios, become useful prompts to acknowledge the complexity of design *problems* and the limitation of our *solutions*.

Vines et al. facilitated participatory design workshops by exploiting the notion of *questionable design concepts* [70]. The research team proposed to their participants a speculative exercise based on a selection of design concepts that were "not conceived to be entirely frivolous but neither were they thought of as in any way finished or likely solutions to the problems they sought to address". Thanks to this mix of serious and playful design proposals, participants were able to reveal personal views, providing suggestions, reflections and articulated rejection statements.

<sup>3</sup>For a better understanding of Chindogu read [The Ten Tenets of Chindogu](#) - last access May 6, 2020

<sup>4</sup>See the [Chindogu Challenge](#) organised by the *thePooch*. in 2005 - last access May 6, 2020

<sup>5</sup>For an overview of the first [Stupid Hackathon](#) - last access May 6, 2020

<sup>2</sup>For instance, the 2019 medicine award went to Gallus et al. for collecting evidence that pizza might protect against illness and death, if the pizza is made and eaten in Italy - see [2019 Ig Nobel Prize Winners](#) - last access May 6, 2020

More recently Laura Devendorf and colleagues questioned the assumptions and expectations that qualify a conventional HCI contribution by exploring what a “non-contribution” could look like [24]. Drawing affiliations with Fluxus’ artists and practices, they experimented with a set of open-ended design strategies and unsettled artefacts illustrated as HCI-amusement. The project, wants to “emphasise design practice over outcomes” as to highlight the value of subjective, diverse and non-linear HCI accounts with no need for immediate impact. This “para-research” adds on previous work for the discovery of improvised and disruptive design recipes [3].

The contributions introduced by these works include a diversification of critical positions [67, 64, 11] as well as the proposal of alternative modalities of HCI engagement [24, 14]. While questioning those positivist perspectives that impulsively acknowledge *the need for new technology* and *the urge for techno-scientific interventions*, researchers are shifting their focus on the re-interpretation of existing technologies [12, 31, 49] binding existing cultural forms and social conventions with design practices [40, 18].

### SERIOUSLY SILLY MUSICAL INTERACTIONS

Within the domain of musical interactions, it is possible to identify a small but growing body of work that challenges technology ideation and development through absurd and playful artefacts. These include the work of Andersen on the Magic Machine workshops in which the making of silly fictional instruments allows participants to generate design ideas beyond the paradigms imposed by current music tools [4].

Nam June Paik, Nobumichi Tosa [68] and Ei Wada [71] are well-known artists heavily involved with the creation of unique musical instruments somehow in line with Chindogu’s ethos. In particular, the techno-performance-art collective Maywa Denki manages to combine music tech with the absurd in a surprisingly accessible way [68]. These “Nonsense Machines” are either showcased through hilarious music performances or commercialised as music toys.

John Bowers and Owen Green instead exploited the notion of “hijacking” as a way to question existing music technologies, their customary range of application and the implicit norms of musicality codified into the artefacts [16]. As a means to critically engage with current machine listening techniques, Bowers and Green build provocative music designs such as disagreeing pitch trackers, re-de-reverberators and eternal resonance machines. These were collected in the form of an annotated portfolio [14] to outline the critiques and upshots emerging while designing and using the various makings.

Thus researchers explicitly aim for the generation of unworkable concepts, questionable sonic designs and silly musical interactions as a way to advance the debate around the versatile and multifaceted nature of contemporary (music) technology [62, 15]. Within New Interfaces for Music Expression (NIME) research contexts, this discussion is often related to the notion of instrumentality. Instrumentality refers to those features that determine the specificity of a musical instrument as “distinguished from other sound-producing devices” [13, 19]. Often researchers argue that instrumentality is not so much



Figure 1. People making absurd things.

dependent on the properties of a device itself, but rather on the actions and meanings that are embedded into it. Thus, instrumentality seems to be a “dynamic concept that is not tied to an object *per se* but is rather a matter of cultural negotiation” [33]. “Since they act as creative and critical users of tools”, artists can be considered to be at forefront of those processes negotiating social, cultural and technological environments [21]. We then believe that new musical instruments can offer a valuable framework for experimenting with under-examined methods to better understand current tools and to enrich perspectives on design beyond artistic contexts.

### THE HACKATHON

Our event took place over two days at Queen Mary University of London. A public call was circulated through academic mailing lists and social networks. Interested candidates were required to submit a short written proposal outlining an unuseless music design to be developed during the hack lab. Proposals also included a short summary of candidates’ musical/artistic background, skills and motivations to partake.

A selection of participants was conducted based on the quality of the idea - i.e. originality, silliness, unuselessness, style and achievability, and the candidate’s background - while aiming to balance a multidisciplinary convergence of people. Moreover, we considered the applications a good way to understand participants’ interests and they were used as starting points for the later brainstorming/discussion that happened during the first day. 27 participants took part at the event - 12 male, 15 female, median age 32, age range between 23 and 50.

In order to support participants, two external mentors, John Bowers and Hannah Perner-Wilson,<sup>6</sup> were invited to join the event. These guests have significant experience in the fields of e-textile, music technology, craft, research through design, DIY, absurd making and other related fields. The mentors were on site for the whole duration of the workshop, guiding and challenging participants from both technical and theoretical viewpoints, while occasionally making their own absurd designs.

Mentors contributed to shape and tailor various activities. During the course of the event they each delivered a short seminar

<sup>6</sup><http://plusea.at>





Figure 2. *Parfileuse*: an artwork based on 17<sup>th</sup> century embellishment textile techniques. The artistic research culminates with a final performance in which e-textiles connected to audio circuits are disassembled after many hours of labour.

around the hackathon's theme and an introduction to e-textile materials and practices. To provide participants with a good range of tools and incentives, we also provided basic training on the Bela music maker platform [54].

The aim of the hackathon was to design absurd musical propositions using the tools and materials usually found in design and craft workplaces. The tools and materials provided included digital fabrication tools (2D design tools and laser cutter), traditional workshop tools, music maker platform (Bela board), low-cost circuitry and sensors and e-textile materials and tools. Participants were encouraged to bring any particular tools or materials and use any free or open-source resource.

During the first morning we organised a brainstorming session based on the absurd ideas and concerns articulated in the various applications accepted. Although participants were free to work on the concept previously submitted, we encouraged attendees to share their ideas, gather skills and collaborate for the making of similarly useless projects. By the end of the morning, participants were able to choose an individual or group project (see Figure 1).

The event ended with a final round of presentations and short performances in which each project was shown to the other participants and a small audience of colleagues and friends. We recorded all the presentations (audio-video) and, before this concluding act, we also interviewed all participants asking to tell us about their projects and the notion of absurdity behind their works. We also collected demographic data including academic, creative and technical backgrounds, age and gender.

### USELESS (BUT NOT WORTHLESS) MUSIC DESIGNS

One of the outcomes of our event are the produced artefacts themselves<sup>7</sup>. The various designs are here presented following the principles of annotated portfolios [14]. In this way, we aim to communicate, in a descriptive yet generative and open-ended fashion, a selection of themes and issues related to the absurd artefacts which were designed. In the spirit of

<sup>7</sup>For a complete overview of the project developed see the [hackathon web-page](#) - last access May 6, 2020.

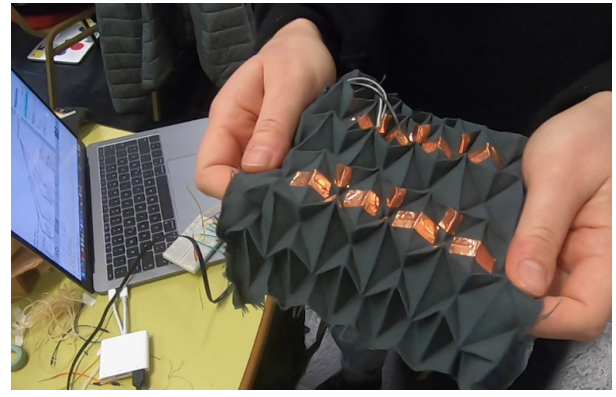


Figure 3. E-textile materials exploration inspired by the art of Origami: wearable sensors to control sound synthesis. To become an interactive music system in which the performer can be played by someone else.

annotated portfolios, we hope that the themes and the artefacts mutual illuminate each other to show the sense of absurd design that emerged in the hackathon.

In this section, we will often directly refer to the authors' statements, quoting either their comments on the artefacts (collected during the hackathon) or the concepts and ideas they proposed in the application forms. See the Acknowledgments for a list of projects and creators.

### Unworkable Materials & Tools

Several of the hackathon's projects suggest reflections over tools and materials. *Parfileuse* is a e-textile project based on "17<sup>th</sup> century embellishment techniques" (Figure 2). The piece reinterprets in an artistic setting the act of removing precious metal threads from clothes and vests which has been performed for centuries "either as an act of recycling or as an act of theft". The embroideries are then "explored as a tool for performance": connected to an audio circuit and taken apart during the performance. While de-composing the needlework, the artist composes sounds in real-time. The main absurdity here is "the labour that goes into making the embellishments which are then taken apart by the same person who did it". Since *Parfileuse* is a sonic interface that vanishes while it is played, the piece might relate to the elusiveness of music and performance art along with their aesthetic and significance.

Nevertheless, *Parfileuse* might also invite us to reflect on craft practices and the precariousness of the objects we create. Such considerations might align with the research on the material turn in HCI, where designers are particularly concerned with the experience of living materials [63]. The single materials constituting an artefact might have a much longer life than the one of a specific *composition*, as trees grow for years in the forest before being used for a furniture [25].

In this regard we saw many projects that took an exploratory view of material qualities as a starting point. For instance, we witnessed a considerable number of e-textile explorations (almost half of the projects), which was expected given the featured introductory activities and the background of the participants. One of these projects, inspired by the art of



**Figure 4. The Patroniser & Vinip: two wearable instruments designed for uncomfortable interaction i.e. nipple squeezing and hat patting.**

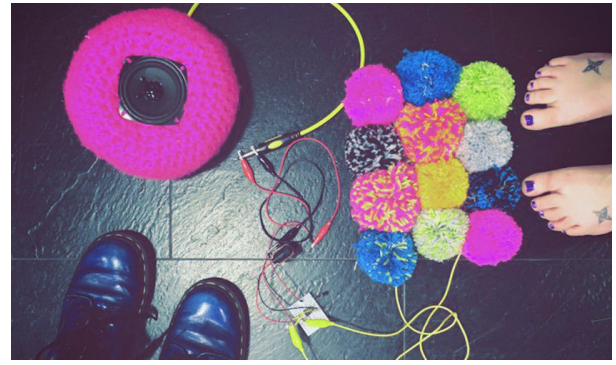
Origami, is a first prototype of a wearable sensors to control sound synthesis (Figure 3). The interface is conceived to detect joints such as wrist and elbow articulations and, according the authors, future development might result in an interactive music system in which, like puppets and marionettes, “*the performer can be moved/played by someone else*”. Besides the silly idea of having a “*performer that does not play but it is played*”, we were captivated by the fact that both physical and digital properties were tightly considered together as if they were composite materials [69]. The inter-dependencies between textile properties, sensors arrangement and sound mapping clearly emerged since the early stages.

Some participants instead steered their projects towards the making of overly complicated sonic machines. For instance *The Winner* “*repurposes a vintage claw crane motor usually found in arcade games*” to grab an e-textile sensor which then produces a sound. The user can only operate the system with a single button that opens and closes the claw. It is not possible to move the claw which is located exactly on the top of the fluffy object that should be grabbed. In practice the user presses a button and makes a sound, however, from a technical viewpoint, this action passes through various layers of completely useless steps.

The author explained that the artwork is based on the notion of “*expectation*”, thus making an arcade-like game which “*is almost impossible not to win*”. This work then raises questions for strategies of design which emphasise efficiency-driven approaches to creative technologies that apply videogame-style motivations and rewards to creative and aesthetic practices [56], while highlighting the importance of the complex interplay of anticipation and frustration to interactive experience.

### Impractical Bodies

*The Patroniser & Vinip* (see Figure 4) are two pieces of wearable sonic interfaces “*built to provoke uncomfortable situations*”. *Vinip* is made of an interactive bra that responds to different gestures (e.g. stroke and press). *The Patroniser* is a hat which, as a sort of giant press button, detects when someone pats on it. The hat touch sensor was made out of two layers of conductive fabric separated by anti-static foam, while the bra’s nipple area is made responsive using woven non-conductive and conductive material strips.



**Figure 5. Pompom Swatches: knitted balls, to be positioned in awkward places and played through non-conventional gestures.**

These two e-textile designs deal with an idea of social interactional appropriateness and trouble. Sonic interactions, where body gestures such as scrubbing, squeezing and patting, become “*something that put you in a weird and awkward place*”. *The Patroniser* and *Vinip* raise a “*critique of technology for leisure and satisfactory experience*” exploring the notion of “*uncomfortable interactions*”. With its focus on social embodied conventions these artworks invite us to rethink what is permitted with our bodies (including their objectification and commodification), what are the values we associate with them and how they can be integrated in the design of new technology [39].

A similar set of reflections is conveyed by the *Pompom Swatches* sound interface in Figure 5. These belong to a family of instruments made of knitted balls, to be “*positioned in awkward places and played through non-conventional gestures*”. In this particular implementation the interface is placed on the floor and, as a sort of magic sonic carpet, it can be performed by different bare-foot people simultaneously. This soft and colourful sound art work offers “*the opportunity to make, play and collaborate*” exploring unusual body interactions for music performance. These funny hand-crafted pompoms seem indeed to privilege active participation and physical presence through the combination of accessible materials, tangible interactions and sonic environments.

Participants produced various other projects concerned with impractical and idiosyncratic body interactions. These seriously silly artworks include “*an instrument that only works against gravity - where the musician is able to listen to what is s/he playing [only] when both feet go above the ground level*” - and an interface for dance performance inspired by “*non-doing activities such as meditation and relaxation*” in which body movements are used to shake jelly sculptures (sympathetically called by some participants *Dancing with Jelly*).

### Musical Pitfalls

As we expected, several projects focused on questionable sonic interfaces directly relate to current music technology and its implied values. Nonetheless, the critiques emerging from these artefacts can easily be applied to broader HCI contexts which might not be directly related to the development of technology for creative practices.





Figure 6. *Anyone can Make Music*: an oversimplified instrument that plays poor-quality music with the press of a giant red button.

*Anyone can Make Music* is the solution to music making that nobody was waiting for. The designer explains that “*thanks to the latest digital technology, anyone can make music. This instrument solves your problems. It lets you make music when you could never make music before.*” *Anyone can Make Music* is a self-contained instrument shaped like a pair of music notes, featuring a speaker and a giant red button. Pressing the button causes the instrument to play a random excerpt of a crude MIDI rendition of Pachelbel’s Canon, chosen to be the most “*insipid*” possible musical material. A selector switch allows the performer to “*make music in any style*” by choosing between 5 different MIDI arrangements of the Canon.

The hyper-reductive instrument offers an explicit critique to many crowdfunded commercial instruments, whose campaigns often claim that new technology is the answer to enabling people to make music, while devoting relatively little attention to the kind of music that the instrument makes and whether this music aligns with the aesthetic values of the would-be performer. These projects often ignore the importance of time and embodied practices while learning an instrument. The risk is then to present misleading user-friendly interfaces that promote the illusion of a technology characterised by a “low entry fee with no ceiling on virtuosity” [74]. Notions such as “technology democratisation” and “accessible tools” become functional to marketing campaigns and part of well-defined business strategies.

*MusiTex* is instead a collection of musical artefacts that permanently “*solve the age-old problem of making too much noise with musical instruments*” by replacing sound with text. The different designs developed within the *MusiTex* framework feature e-textile bouncy sensors, tongue in cheek genre recogniser (e.g. “gentle banana metal”) and various applications based on pool noodles. Another interesting *MusiTex* instrument implements an advanced artificial intelligence technology to convert the sound of a kazoo into text. “*The instrument’s paper membrane is replaced with a piezo mic, allowing the air pressure to be monitored. With a focus on the textural rasps and timbre of the kazoo, these are converted into a form of rapidly generated noise poetry: brwwwzz.. bwz.. bfwzzz...zbf.. zbfff*”. To be more appealing for the market the banana feature was introduced. It is therefore possible to accompany the kazoo and intensify the complexity of the verses generated. “*Since*



Figure 7. *MusiTex*: featuring a mute kazoo that converts kazoo to text (for silent practice) and a banana to text instrument to accompany the kazoo.

*sounds are fully represented as written composition, the instruments can be played in nearly complete silence, opening up new methods of performing and enjoying silent music*”.

Overall, the *MusiTex* collection made us think about two main considerations. The first relates to the fact technologists and researchers are often keen to advance explanatory models of music that inevitably fail to grasp the composite, situated and often inscrutable nature of art. Highly sophisticated technological advancements might then result into naive symbolic and abstract representations that, once put in practice, ignore the specificity of contexts and generate rather poor outcomes.

The second refers to the understanding of music as an entity that should be solved. The *instrumental rationality* common in technical problem-solving within science and engineering is essentially interested in the design of *better technology* regardless its actual context of use [27]. Accordingly, this approach tends to consider artistic contents as battlefields for the training of the latest technology that, if powerful enough, will prevail over its competitors.

The FUMC (for Fucked Up MIDI Controller) by mentor John Bowers was an adaptation of a commercial MIDI fader, knob and button box to create a device that was radically resistant to conventional ideas of music ‘control’. The data from the knobs and faders passed through non-linear (and randomly changing) transfer functions. Periodically, the knobs would require a double-press to perform the action that would normally require one press. From time to time any of the widgets could disengage and ignore user-input or provide random values themselves. FUMC was presented in a 10 minute improvisation where the performer feverishly tried to decode the current state of the device while sometimes over-exerting in the hope that something would happen. In all these respects, ideas of performer control were challenged along with audience’s customary strategies for reasoning about what performers are doing.



Figure 8. The latest innovation in Pipe Technology: a project that magnifies standard music controllers allows us to expand what previously was really small.

Another group of participants decided to design giant music interfaces. The *Pipe Technology* project (see Figure 8) magnifies standard music controllers and uses them to control unpredictable and chaotic sonic engines. These “*latest frontiers in high definition technology*” allows us to “*expand what previously was really small*” into interfaces that “*could be controlled with one finger now require full body movements*”. How does music production and performance change if we use 1.5 meter long sliders and knobs with 1 meter radius?

Through their satirical and playful stances, these kinds of projects relate to contemporary technological trends and incite us to wonder about different design strategies we could consider. For a long time, the miniaturisation of technology is a key driving force behind technological development and clearly it brings many useful aspects. However, the *Pipe Technology* project opens up a design space in which the shrinking of technology is not a prerequisite, an intuition that might let us discover musical alternatives and new aesthetic opportunities through the exploitation of full-body sonic interactions.

Finally amongst the many impractical projects concerned with musical matters, it is worth mentioning the *MIDI Uncontroller* - a MIDI keyboard designed to “*minimises performance anxiety*” by taking control away from the musician: once the performer press a key the machine plays a random sounds at a random volume - and *The Bee* - a stretchable guitar strap that modifies the music produced by the instrument (i.e. a seriously silly bee sound).

### Beyond Human Music

*The Bug Orchestra* is a fully equipped art residence facility for robotic bugs (Figure 10). These amenities include “*a dance floor, a red carpet, a rave area and a death trap*”. The aim of the project is to create an environment that could “*adequately stimulate bugs’ creativity, give them compositional freedom and eventually music performance training*”. Opportunities for sound-making are then implemented with a camera tracking the robots’ movements and with a piezo mic detecting their dance steps. The paths the insects take around the residency then modulate electronic sounds. Overall, we can say that the facility - designed to “*eliminate procrastination, stage fright and writer’s block*” - positively influenced artistic pro-



Figure 9. A sonic interface inspired by Narwhal whales. To be used in the depth of the ocean to explore the surroundings and communicate with friends.

duction of the guests who took to hackathon’s final round of presentations with a captivating music performance.

Another project concerned with animal issues developed during the event is a sonic interface inspired by Narwhal whales (see Figure 9). The questions behind the project can be formulated as follows: “*if you were in the depth of the ocean, where there is no light and no vision, how you might explore your surroundings? How would you communicate with friends and neighbours?*” The interface assembled featured a horn that can both sense the environments and detect the head movements of the person that is wearing the instrument thanks to two touch sensors placed at the two ends of the horn. The interface also blocks the user’s sight since it aims to reproduce the Narwhal whales’ habitat.

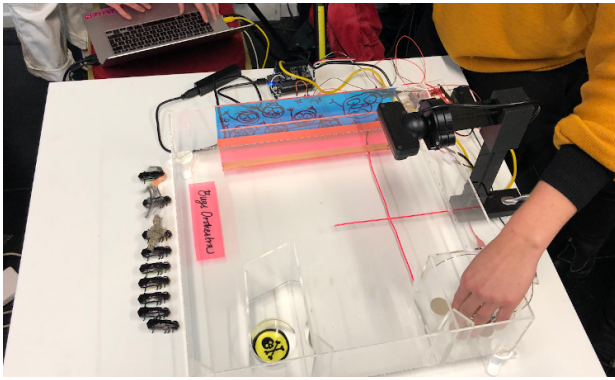
These projects share an interest to explore technology that goes beyond the human-centred paradigms and explore playful approaches which consider different ecologies and somehow de-centre the human as part of design process and outcome [73]. These works displace or resituate human agency within more extended ecologies which recognise forms of machine vitality. As such, they highlight creation processes which engage with topics such as shared autonomy and non-human interactions. We see these conversations more and more frequently in HCI, and amongst them we spontaneously relate our absurd projects to the debates around the ethical issues we might face while considering animal-computer interaction [51]. Thus taking into account the animal perspective might help to advance a debate that, even if has never entered mainstream in HCI, has extensive ecological implications.

### THE DISCOVERY OF CONTRADICTIONS

The idea behind our research is that through the combination of play and making it is possible to create reflections that would be difficult to elicit with more traditional methods, while avoiding overly theoretical and formal discussions. Playfulness, humour and irony are the devices exploited by our participants to inspire making and inscribe meanings into objects.

As Hugill suggests “*humour lies in seeing an incongruity between a fact and an imitation of a fact ... the incongruity observed is not complete, but only partial; because a likeness*





**Figure 10. The Bug Orchestra:** a fully equipped art residence for robotic bugs. The facility is designed to adequately stimulate bugs' creativity, give them compositional freedom and music performance training

as well as an unlikeness must exist in the bogus ... the mind half accepts, half rejects what is being offered to it for recognition ... it becomes simultaneously aware of its own madness and its own sanity" [42, p.14]. Considered as one of the most evolved defence mechanisms [22], humour therefore explores the absurdity potentially inherent in any event, thought the juxtaposition of incongruous elements [17].

Interestingly, the etymology of absurd (*ab* - "off, away from" + *surdus* "dull, deaf, mute") relates to expressions such as *out of tune*, *discordant* and *dissonant*<sup>8</sup>. In this section we aim to elaborate on the nature of absurdities encountered in our hackathon. Rather than deepening the analysis of each single project, we aim to expand on the different kinds of contradictions and dissonances we can observe in our research across the corpus of projects developed in the hackathon. By revealing some underlying mechanism (i.e. identifying the dissonance) we hope to partially disclose the intentions and reflections of the participants. However, far from being fully explanatory the "absurdities" introduced in the next session might apply to more than one project, each time with slightly different connotations.

### Paradox

Many of the artworks developed during the hackathon convey paradoxical accounts. Paradoxes are statements that run contrary to shared expectations, trends or assumptions. The embroidered e-textile embellishments of *Parfileuse* might be a good example of such a mechanism. After many hours of precise and intricate labor, the artist de-composes them to produce sound during a performance. The assumptions we might have on craft and design practices and technological standards such as robustness, durability and reproducibility are then challenged through the unworkable artefacts.

*The Patroniser* and *Vinip* partially exploit the mechanism of paradox. In this case, the work targets common design principles introducing the idea of uncomfortable interactions. Tangible artefacts might then be re-evaluated through this lens, and such offbeat statement might help to build awareness about

the current ubiquitous technologies that already put us in an "uncomfortable situation".

*The Winner* instead might use paradox in regards to the expectations we have towards technological novelty. While tinkering with arcade game aesthetics and their seductive powers, the designer breaks norms and expectations by building an overly complicated game which is impossible not to win. According to the maker: "as a kid, you know, you want the toy and you want to play the game ... but it doesn't matter how much money you put on it ... it's rigged!". We might say the paradox of a technology that compulsively generates both always-new desires and the illusion of satisfying them.

We discovered that paradox has been exploited by our participants to elaborate on technology and its socio-cultural implications. Overall these works offer critiques of methodological alignments and standardisation of thinking, a discussion we also find in HCI contexts [5].

### Hyperbole

Hyperbole - the exaggeration of ideas to intensify feelings or impressions - is a rhetorical device that has often been used in those works concerned with musical issues. In particular, the messages disclosed using this type of dissonance relate to the embodied intimacy musicians develop with their instruments [74, 55] and the design, evaluation and marketing of new accessible musical interfaces [53], both of which are lively debates within the domain of music interactions. Two examples are *Pipe Technology* and *Anyone can Make Music*.

In *Pipe Technology* the scale of standard digital instruments are massively expanded. A slider potentiometer then becomes 1 meter long. While sharing their reflections on this absurd magnification the artists explained: "there is connection between precision in small things and large things. So if you have a very small knob to move around, you can never been really precise, if even if you barely touch it you can already have moved it. The super large thing actually require some effort before you can move it from one position to the other. It will be more physical... We are exploring how that influences our experience of playing". Exaggeration then becomes a means to open up new design spaces and look at a specific music technology issue in a different way. Thanks to this silly ambition, which is allowed by a permissive and lightweight context, it is possible to explore full-body interactions with large-scale controllers escaping technological trends.

*Anyone can Make Music* instead aims to amplify the alleged musical opportunities offered by many commercially available digital instruments which (over-)simplify music making. The implied discourse might relate to the commodification of creativity and learning processes. In particular, since these processes are characterised by a complex, time-consuming and effortful course, we might take advantage of "expert systems" which "can pull out expertise that take tens of thousands of hours for humans to learn ... this means that everyone has access to this type of expertise".<sup>9</sup> On one hand an appealing product, on the other the perspective of a very naive idea of music practice and creativity.

<sup>8</sup>Online Etymology Dictionary - last access May 6, 2020

<sup>9</sup>Matt Wood announcing [DeepComposer](#) - last access May 6, 2020.



## Suspension

Suspension (or aposiopesis) is a figure of speech that might be helpful to describe a kind of absurdity we observed in some of the impractical artefacts. This rhetorical figure refers to a “sentence that is deliberately broken off and left unfinished, the ending to be supplied by the imagination, giving an impression of unwillingness or inability to continue” [47, p.20].

One of the pieces that particularly relates to this concept is *Dancing with Jelly*. While interviewed, the artist that developed the piece explained that “*in Tai chi there is this idea of ‘non-doing’ ... I mean, even silence is generative. ... at the beginning of the hackathon someone mentioned that the more you can control an instrument the more you can express through it ... I am more interested in non-expressing ... maybe the less you can control, the more you can express ... I don’t think anybody knows what do they actually want to express*”.

This intentional suspension is in contradiction with many functional approaches to the use of art technology (i.e. as a means to express something). From our viewpoint, this piece therefore seeks to stretch conventions on body expression through the idea of non-doing. “*It’s not about creating a symphony, but what’s happening when you are not trying to create a symphony? Maybe your symphony appears anyway*”. The notion of ‘playing for’ is then replaced with the concept of ‘playing with’: “*allowing the unpredictability to come out of the system*”. These kinds of observations echo the debates around around contemporary art practices which aims to acknowledge a diversity of aesthetic goals in virtue of the “complex interrelation of human and non-human agents” [32].

*Pompom Swatches* can also be interpreted as a conscious act of suspension. In this case, the piece might represent a sort of resistance (or reticence) towards hi-fi and forefront technology. Indeed, the tools and materials used in this project belong to hand-craft practices and, in contrast to futuristic machinery procedures, they look to ancient techniques and methods. We correlate these attitudes to craftivism approaches in which ‘domestic arts’ such as yarn-bombing or cross-stitch are used to engage with critical discourse on social process of collective empowerment art expression [30].

## Oxymoron

We noticed that some of the hackathon’s projects rely on the combination of the opposites. *MusiTex* is an example of this contradiction in terms: a set of musical instruments in which sound is replaced by text. In our view, *MusiTex* proposes a playful critique that mitigates “the emergence of seemingly omnipotent computer music languages and ultra-specialised music apps” [50]. In short, as suggested by other artefacts, the message might be that latest cutting-edge technologies do not guarantee convincing musical results (as in the surreal non-musical output of *MusiTex*). In fact, the controversies related to the success or failure of new music technologies is a hot topic in the NIME research community [57].

*MIDI Uncontroller* is another example of musical oxymoron. According to the creator “*a lot of the stress in making music is about what is going to be the next note, or how you should play ... so why don’t let machines make choices for you?*”.

However, this particular machine is designed to take away from the performer way too much control. The musician ends up being completely excluded from the performance. An uncontrollable keyboard points at the anxiety and frustration many musicians feel towards what the designer calls “*happy accidents*”. The instrument’s contradiction then relates to a long-lasting debate on mistakes in music performance [7].

We found that the device of self-contradiction was mainly to investigate music technology and performance. These artefacts raise questions on the long-term impact artificial agencies will have on our understanding of perception of musical instruments [33].

## CONTEXT-SPECIFIC INGREDIENTS

In this section we identify a set of context-specific elements that shaped our hackathon. These considerations might be relevant for broader reflections on hackathons as well as for researchers interested in running a similar activity. Our considerations are in line with the findings discussed by Falk Olesen et al. while analysing the factors that mostly inform design judgement at a hackathon: event format, available tools and participants’ backgrounds [59].

The choice of framing our event as “absurd hackthon” was partially satirical: a critique of rather unsustainable and technology-driven sprint-like events. According to this attitude, we decided to not present the event as a competition (with judges and prizes) and we instead promoted a playful and permissive mood.

We asked our participants to submit a proposal of an absurd interface. These proposals were the basis for a discussion and brainstorming session that occurred during the first day. We were surprised by the many interactions and mutual influences that happened amongst participants. When asked, they identified the initial brainstorming session as a particularly generative stage. They often referred to these early discussion as engaging and useful for getting to know the other participants and start collaborations. Conversations helped to reinforce early ideas, stimulate new concepts and inspire future projects.

In the hackathon call, we made clear that selected candidates would have been able to either develop the submitted projects or collaboratively work on a fresh silly idea. Almost half of the makers focused on the creation of the unworkable ideas they sketched in their application to the hackathon. Attendees that submitted an idea as a group, mainly worked with the colleagues involved in the ideation of the original application. The other half instead ended up doing very different projects. Interestingly, these participants often worked on multiple concepts, collaborating simultaneously with each other in a dynamic and open-ended fashion. Such tendency may derive from the event’s playful and non-competitive atmosphere, the initial brainstorming and the relatively small number of participants.

The tools and materials we provided clearly influenced our participants. Bela and e-textile materials were used in many projects (11 of 19 projects featured e-textile materials and 12 artefacts were running Bela). The proliferation of these tools

is surely related to the fact that during the first day we delivered two short workshop on these technologies. On the other hand, accepted participants were encouraged to bring their own materials and tools. We noticed that participants shared materials they brought in a spontaneous and cheerful fashion. Some of the items, due to their captivating and absurd qualities, went almost viral and therefore were used in many questionable artefacts (e.g. pool noodles). Occasionally cooperation emerged because of a shared interest in the same material or technique. An example of this kind of “collaboration through materials” is *Pipe Technology*, where different artists, both interested in working with pipes, managed to assemble an artefact that combined their absurd concerns.

Various participants also identified as a strong source of inspiration the invited mentors. Our mentors found themselves engaged in a variety of activities, some intended in advance (introducing the themes of the hackathon, presenting some of their own work, offering advice and constructive criticism), others emerged as the hackathon unfolded (creating solutions for problems where participants were blocked on details, making their own absurd designs when time became available, offering wilfully absurd advice through a random selection from a book of aphorisms written during the event). In these ways, we felt that the specifics of doing an absurd hackathon suggested the beginnings of an absurd design pedagogy - something we intend to develop further in future work.

The backgrounds of the artists and technologists involved in the event undoubtedly influenced the absurd journeys undertaken. It is beyond the scope of this paper to compare the resulting designs to the background of individual participants, however this would merit future investigation. What we could easily understand is that participants were naturally engaging with impractical themes related to their area of expertise. For example, musicians, sound designers, composers and improvisers were generally concerned with musical interactions and preformative paradoxes. Similarly, practitioners with a background in craft and e-textiles mainly focused on these kinds of resources. Nevertheless we observed situations in which participants engaged with relatively unfamiliar domains. This was the case of several music technologists and interaction designers that for the first time worked with e-textiles.

## CONCLUSION

The playful but serious approach for critical making explored in our research allowed us to engage with rich, complex and amusing design outcomes. Clearly our strategy is not necessarily meant to produce either quantifiable evidence or “silver bullet” technology-driven solutions [9]. However, they turned out to be rather powerful tools when reasoning about human-machine agencies and ends. Overall, we propose absurd making as a way to generate lighthearted critical thinking. The event offered a valuable framework for discussions on the use and development of musical interfaces, interaction paradigms and design tools. In fact, many of the projects convey implicit criticisms towards existing technology. One of the lessons we learned is that humour and absurdity can be convenient devices to point out bad design ideas and uncover poor imple-

mentations as well as arguments why sometimes it is better to not design technology at all [6].

We frame absurd making as a critical practice for the discovery of contradictions. Contradictions might help to unpack values, stretch conventions and question norms and expectations linked to current and future technology. While reflecting on the projects developed during the hackathon we were able to identify four type of contradictions: paradox, hyperbole, suspension and oxymoron. These rhetorical dissonances functioned as a conceptual guide to illustrate new uses of materials, critical statements and alternative visions.

On the other hand, we are left with many questions that still need to be addressed. Future work should better tackle how to facilitate and challenge absurd making in terms of format, activities, materials, and mentorship. For instance, we realised that more time could have been dedicated to the performance of the musical tools designed. Performance (in a broad sense i.e. interacting with artefacts and people) might be a valuable place where impromptu and unscripted absurdity might emerge. Absurd making might also be applied to other design methods and communities. In particular we would be keen to explore absurd making in participatory design for engaging participants and clearly revealing their assumptions and needs.

Finally, our intention was also to support those design and artistic sub-communities with similar concerns to those expressed in this paper. This is because our impression is that, within strongly technocentric contexts, researchers interested in this kind of work can feel quite isolated, if not surrounded by scepticism. Our goal was then to build on existing networks and initiatives over which practitioners can draw on for confidence, ideas and inspiration. On this note, we were impressed by the energy and enthusiasm that our participants expressed throughout the whole event.

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