





# Fragile Mastery

*Max Franklin*







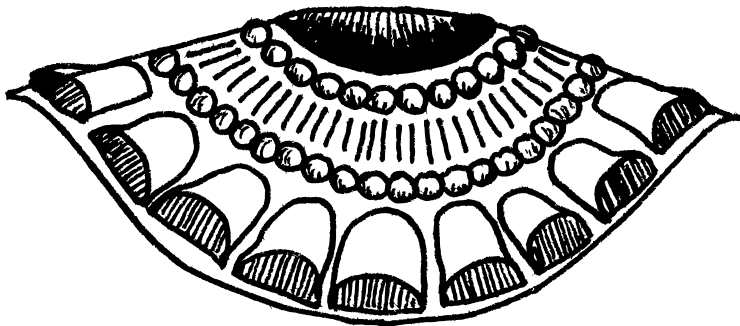
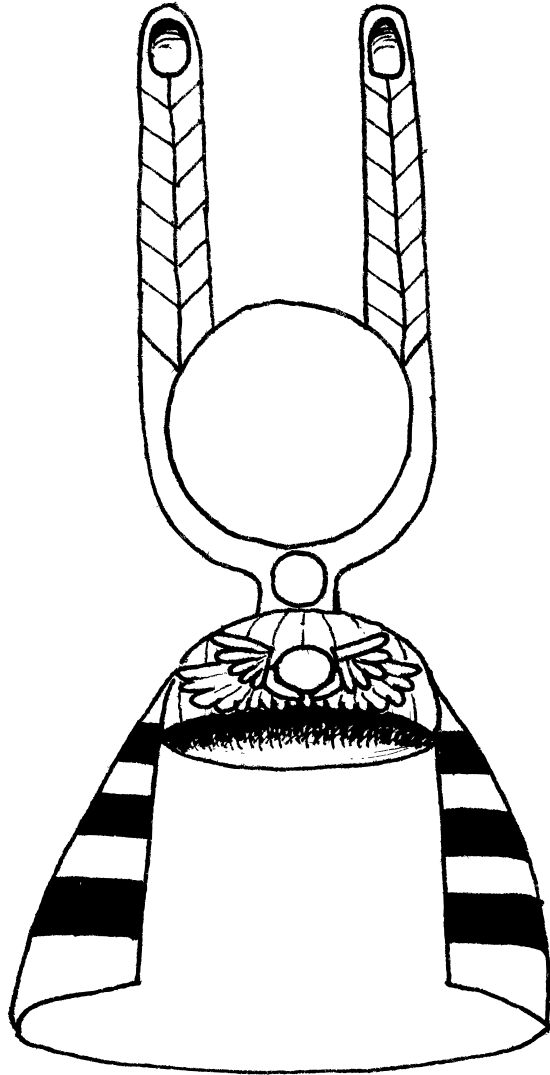
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All the tools used in the creation of this paper are Open Source tools and custom coded pipelines. If you are interested, you may find the source code, and downloadable PDFs at <https://git.suroh.tk/mastersThesis>.



# Introduction



Fragile Mastery is structured around conversations I had with my peers who are improvising musicians, supported by research on software, improvisation, and collective practices. These bodies of research are applied to my own works and my improvisational practice involving software and music. My interest in software and improvisation has led me to ask, how can improvisation augment my practice involving music and software?

I have pursued Improvisation as a methodology since as far back as I can remember. During my studies in Jazz Performance, I experienced problematics in my practice as a musician, and a narrow representation of improvisation. Improvisation here was limited to the structure and language of Jazz, limited by an approved rule set as extrapolated from the master's that came before. I later discovered that a resistance to a limited definition of improvisation was shared by many of the celebrated legends of improvisation that came before. The likes of Ornette Coleman, Herbie Hancock and others, who in the face of these narrow representations of improvisation shaped many contemporary musical styles. Some ways this manifested in their practices was through the abstention to theoretical and aesthetic structures of jazz, the adoption of new technologies and a re-imagining of the cultural mainstream.

I adopt software, primarily the visual programming environment *Pure Data* to further break from the predispositions of my formal musical training. Pure Data allows me to not only create software instruments to improvise

with, but is an environment in which I can apply improvisation to uncover both the breadth of the software, as well as new sonic possibilities.

Software like Pure Data share many qualities of traditional music. Like music it has a myriad of structures, rules, aesthetics, competencies, and practices as informed through history.

As a tool in any creative practice software can dissolve the distinctions between tool creator and art creator. This is explored by artists and researcher Thor Mangusson who, like many of his peers, acknowledge the challenges between creating tools and creating work.

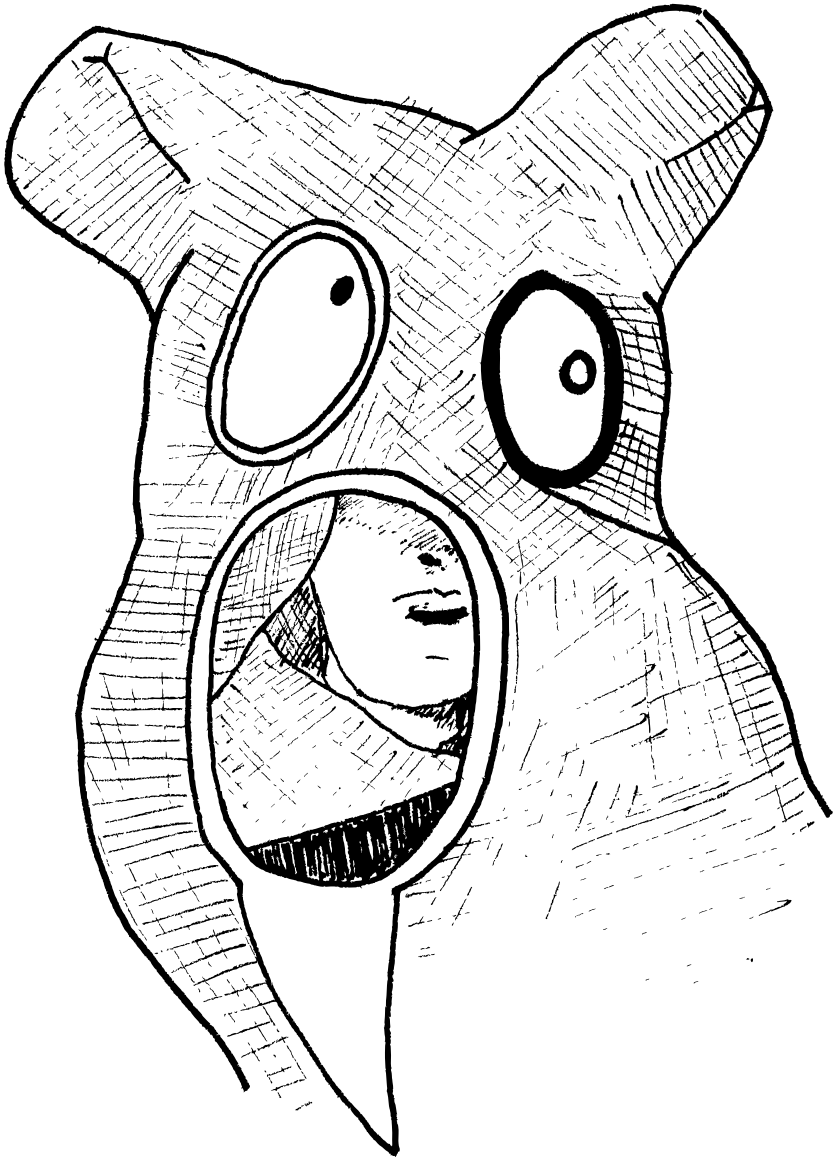
Software and improvisation however are not limited to creative practice. I have extended my practice beyond the frameworks of jazz, hybridising it through the employment of software, discovering new pathways into understanding and reflecting on discourses that extend beyond a creative field. For instance, performance artist and improviser Mattin proposes a relationship between improvisation and communisation, the act of revolution, which draws on agencies that improvisation provides. Mattin, in *Improvisation and Communization* (2014), examines the misplaced utopic ideals of improvisation by re-defining what extent improvisation can truly be revolutionary.

When I talk to my peers, who are improvising musicians, they do not make a distinction between their work and their instrument. The way they interact with their tools is inherent in their process. This relationship

extends to the collectivity of their practice, largely engaging in group work, collaborating with improvisers that break from the impositions of traditional music values.

To embrace software as a tool to problematise and complexify situations rather than to find solutions, would be to further explore our existences as a complex network of artists, activists, workers, and global citizens. It is this collection of complexities that instigated my passion for an improvisational methodology, and why I pursue a practice playing improvised music, and experiment with software. Through the course of my research I have witnessed the hesitation of others to incorporate either software or improvisation into their work. Both are full of preconceptions, impositions and legacies which either intimidate newcomers, or hold back seasoned practitioners. A contemporary adoption of improvisation engages directly with these barriers and has the power to overcome them.

Thor Mangusson suggests that open source software encourages questions rather than providing solutions (2008). In this work I try not so much as to answer questions on the merits of improvising and what agencies it may provide, but more propose it as a tool to question my own practice.





**Liberation**



At every point of my research, whether it be through my own practice, talking to others, or through academic research, improvisation is concerned with liberation. The specifics of the forms of liberation vary from person to person, practice to practice, yet they are all concerned with the breaking from standard theoretical, aesthetic, or ideological structures. For some it is in an effort to find uncharted creativity, to relate closer to their music, or to escape from it.

As the reasons to improvise are so different, I wanted to first better understand the practices of my peers, artists and musicians who are prominent practitioners in their fields. Through these conversations I was able to understand something about their practice, as well as my own motivations to build software instruments to improvise with.

The five artists that I talked to are composers, performers, musicians, artists and friends, who engage in an experimental, exploratory practice. They have all undergone a formal musical education which imposes some predispositions of practice, and a construction of cultural value. It was this question that opened all our conversations. It was this question that opened up my own research topic.

Throughout I will distinguish specifically when associating improvisation to music. An improviser is one that explores the possibilities of predefined structures, spaces, and/or culture. In terms of all the improvisers and groups mentioned, they are using music as their playground, but allow

their work to exist in forms like performance art, installations, video art, comedy, education, and many more.

## The Improvisers

My first conversation was with Peter Farrar and Laura Altman. Peter Farrar is a saxophonist who has been prolific within the improvisation scene in Sydney for over a decade, extending his practice to composition, hip-hop, and electro acoustic music. Laura Altman is a clarinetist and electro acoustic composer who too, extends her practice into the realms of folk music, jazz, traditional composition, and electro acoustic music.

Both Peter and Laura are prolific performers and improvisers playing with many notable Australian and international artists, and as permanent members, sometimes leaders, of improvisation ensembles around the world. During our conversation we talked about their individual practices, and about two groups in particular of which they are both core members, the *Splinter Orchestra* and the *Prophets*.

Liberation is very different depending on who you ask, and in which context they practice. Laura and Peter both talked in non-specific terms about how, rather than specifically liberating them from something holding them back, it was more the sense of being libre, free, unrestrained by training, tradition, or preconceptions of value. Laura and Peter used *Splinter Orchestra* and *Prophets* to illustrate these feelings.

*Prophets* are a group born out of a will to collectively improvise grooves, with no idolisation of the individual artist, and embracing the musicality of the "un-mastered" musician. To achieve these goals they employ techniques outside of a musical practice. By adorning themselves in custom made brightly coloured costumes, they take on alternate identities removing their own histories, musical or otherwise. This allows the musicians then to play instruments that they have little to no training on, obscuring any preconceptions of mastery as imposed by their audiences, or themselves. For the members of *Prophets*, they are liberated from the historical position of mastery, and any constructs of ego, embracing their music as a collective endeavour. The music dives headlong into a space of fragile possibilities based upon collaborative support, and happy accidents.

The *Splinter Orchestra* is a fluctuating, twenty person strong ensemble that too is concerned with collective practice, and embraces the contributions of artists that would not normally be considered musicians. The constitution of the orchestra is made up of many kinds of music making devices which in no way is prescriptive. Its primary form is to make collective improvised music where all kinds of mastery are welcomed. the *Splinter Orchestra* is concerned more with the conservation of a strong community of like-minded, creative individuals who wish to explore music together.

I mention these two groups as they contain all the artists I spoke to. These groups unify them in their creative intention, and demonstrates how very different practitioners are involved in quite a distinct collective practice.

Furthemore these groups exist as meeting places to explore interests and issues outside of their musical practices.

The other musicians I taked to; Melanie Herbert, Bonnie Stewart, and Rhys Mottley are members of the *Splinter Orchestra*. the *Splinter Orchestra* acts not only as a creative collective, but as an important social meeting hub. For Rhys it was the difference between not playing music, and becoming a regular member of the *Splinter Orchestra*, *Prophets*, the manifestation of *Rebel Scum* and his development of a solo practice.

Melanie Herbert is an electro-acoustic composer and improviser, her compositions use field recordings and improvised clips which often take the form of multi-speaker installations. Her work has been installed in art galleries and presented in festivals across Australia. My interest in talking to Melanie was to understand what drew her to an improvisational practice from a background in composition.

Melanie's entrance into an improvised performance practice came from joining the *Splinter Orchestra*. Like many of the other members, Melanie joined the ensemble after appreciating their music for many years. She views playing with the *Splinter Orchestra* as a break from her compositional practice, playing an instrument she is not formally trained on allows her to embrace the collective spontaneity of improvisation, liberating her from any of her formal training. For Melanie, there is a delineated separation between her practice as an improviser and composer. She has no interest in

liberating herself from her compositional training, rather it enriches it while living in parallel.

Rhys Mottley and Bonnie Stewart make up the improvising duo *Rebel Scum*, self-described as a concept band performing narratives involving aliens travelling through space. *Rebel Scum* started as a name on a list, and a question about what alien music would actually sound like. It came after speculating about the plausibility of the famous cantina scene in Star Wars Episode IV : A New Hope.

*"Is that really the music that aliens would be playing in a bar? [...] Maybe they would be playing this fucked up shit, like this really weird noise music that everyone is kinda into anyway..." (Mottley, 2018)*

Both Rhys and Bonnie went through formal music training, which they referred to as "*Jazz School*", Bonnie on the drums, and Rhys on the guitar. I was curious about this time in their lives in relationship to their current practice. They concurred that they had no regrets following formal education in jazz and recognised that neither of them would be here today if they hadn't engaged in it. However Rhys was clear that there was a long time where he didn't want to play guitar any more as a result of his jazz training, commenting that it was repulsive to him to hear the guitar in the way that he was trained to play it. It was only after moving to Sydney and joining the *Splinter Orchestra* did he start to rediscover music through free improvisation.

*"..fallen out of like with the Jazz language [...] this new world that is a bit more open, exploring and finding something else." (Stewart, 2018)*

*Rebel Scum* liberates both of them in rejecting the structures of jazz improvisation, as well as a reincarnation of their roots in Punk music. For them, rather than adorning themselves in costumes to expunge their history and any preconceptions it may carry, they situate themselves in an imagined story from a galaxy far far away. They do not ignore their practices as highly trained musicians, rather ignoring any elitism *jazz school* may have applied, and acknowledge their passions for punk and science fiction as a means to re-discover music. The liberation here is less about abstaining from oppressive structures, and more about embracing a playfulness, and the lost merits for ones own cultural mouldings.

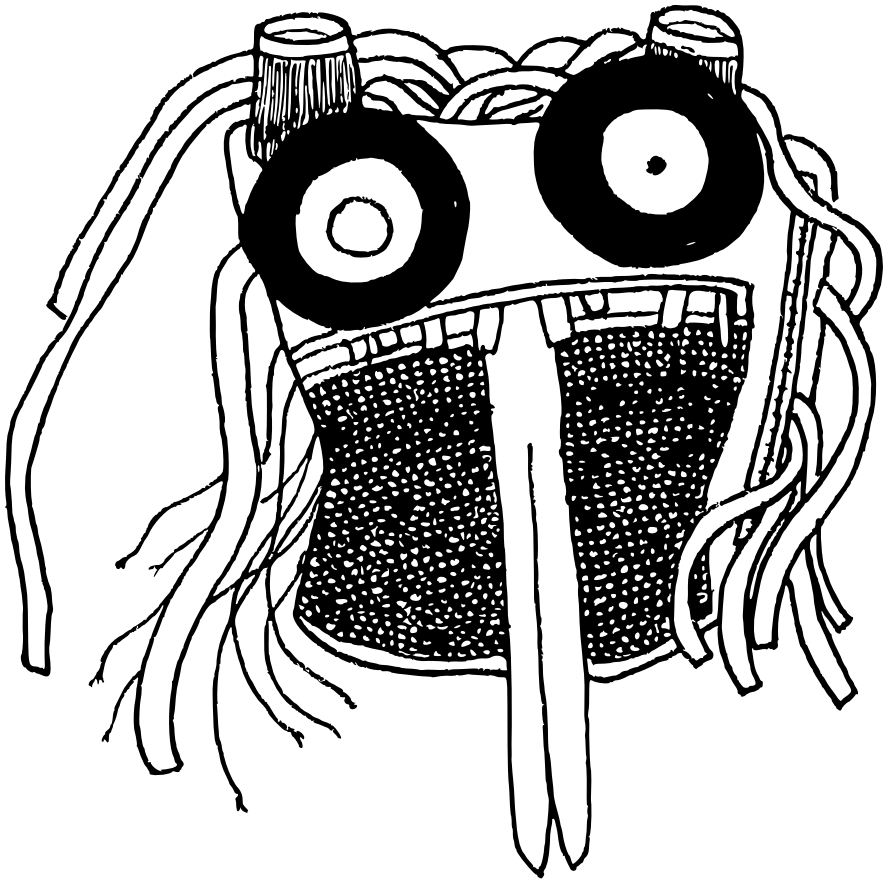
Improvising performance artist, and theorist Mattin talks about an improviser's search for fragility. He recounts Radu Malfatti when talking about musicians breaking from their musical orthodoxy, as the consolidation or re-metabolisation of fragile moments that an artist has encountered (Mattin, 2005, pp.22).

Mattin is an improvising, performance artist that works with computer hardware, open source software, and fluxus like techniques in cases where he physically alters computer technology (Monoskop, 2008). My introduction to his practice was through his writings on improvisation and



open source software, where he expands the application of improvisation beyond musical practice.

*Rebel Scum*, the *Prophets* and the *Splinter Orchestra* are all engaging with this fragility, pursuing not only to re-metabolise fragile moments, but to create new and unexpected ones. Mattin (2005, pp.22 )states that "*there is a fine line between being persistent in pursuing a particular line of research, and getting comfortable within one's methods*". If anything Peter, Laura, Melanie, Bonnie and Rhys are liberating themselves from the comforts their trained musical methodologies, and are interested in an expanded palate that improvisation has to offer.



**Collectivity**



For improvisers it is central to their practice that they are engaging with networks of objects that equally have as much impact on the output as their individual input does. For the improvisers that I talked with, these networks come in the forms of instrumentation, collaboration and environment. The scale of these interactions vary from the individual, working solely with their instrument or a small collection of collaborators like in *Rebel Scum*, to ever larger collectives like the *Prophets* or the *Splinter Orchestra*. During our conversations we talked largely about collectivity, and how often it is defined by something beyond a creative practice, or mastery.

In this chapter I want to explore how collectivity sits central to an improvisational practice. Collective practice is one of the central qualities of open source software development, something rarely related as creative practice, especially those regarding improvisation.

Open source software is a clear liberation against the standard structures of software development, and redefines the roles of user and creator. This quality too is embodied in an improvisational practice, identifying a collective relationship between creator, tool and output. For an improvising musician this would be musician, instrument, music. Each point interacting with the next in open and unexpected ways. In my own practice it is the collectivity with software alongside my instrument that not only stimulates my improvising, but also according to Mattin "[*experiments*] with our own selves, material conditions, and broader social relations" (2014).

To understand the collectivity of software, improvisation and their fusion, I look at the collectivity of different improvisers and how they practice. This opens the question about collectivity outside of a musical sphere, and the challenges and agencies improvisation may provide.

## in Music

While talking to Laura, Peter, Melanie, Rhys and Bonnie I noticed how they rarely talked about a solo practice. Furthermore their definitions of improvisation within music are concerned with collective listening, and sensitivity. Early on in our conversations, Peter made a point to reconfigured the language we were using to talk about the kind of improvising that they involve themselves in.

*"...rather than improvised music, I think what we do is better described as Collective Music..."(Farrar, 2018)*

Defining their practice like this intertwines it with groups of improvisers, breaking down any option to individualise their position from an ensemble. This position is shared by Melanie, Bonnie and Rhys too. the *Prophets* is built upon an unspoken manifesto of faceless collectivism. They play collectively improvised grooves, where no one improviser is any more or less important than the next. Their brightly coloured, custom made costumes not only liberating them from any preconceptions, but also removing an identifiable individualism.

Similarly the *Splinter Orchestra's* ideology is about a collective process, working to not single out individual virtuosity rather to play as one entity. As a whole it allows itself a dynamic range of musical output matched, and reinforced by the equally diverse range of its improvisers. Melanie talks about how she has the space within this collective to explore the violin's sonic possibilities while contributing to a larger sonic landscape.

For all the improvisers I talked with, the final manifestation of music was less important than the experience of playing with others. *Rebel Scum* can plot their story in terms of friendship, but also a light hearted question brought about by a collective interest. For Bonnie and Rhys to come together and spend time to explore the question "*what would alien music sound like?*" is far from purely creative pursuits nor academic constraints for music production. This can also be thought of an embodiment of ideologies or politics. Like *Rebel Scum's* common question, this exists within groups like the *Splinter Orchestra* of shared politics concerning things like gender, social, and environment.

When an audience goes to a *Rebel Scum* gig, they might well be able to imagine the alien journey that Rhys and Bonnie are undertaking, but if the listener is attuned to improvised music they will more likely *join* them on this journey. This is true too for the *Splinter Orchestra* when they choose to play in unconventional spaces like national parks to an audience of native animals, or the *Prophets* busking in the cold streets of Berlin. The listener then is equally involved in the improvisation as the improvisers "on stage",

allowing this journey to be about a broader re-contextualising of time, space and/or ideologies and hierarchies beyond the musicians.

Richard Sennett in his book *Together: The Rituals, Pleasures and Politics of Cooperations* (2013) identifies two models of conversation: dialogics and dialectics. Dialogics is based around a concept of unresolved discourse where one is able to discuss ideas but not need to settle on a single meaning. Sennett suggests that both parties are able to exchange ideas and expand not only the other's position, but also become more aware of their own point of view (2013). In improvised music it is this dialogical discourse that informs improvisers and listeners alike.

Throughout our conversations, we primarily talked about the qualities of collective improvisation within an ensemble setting. It was only while talking to Rhys and Bonnie did we touch on what collectivity is within a solo practice. In this case it is a collectivity an artist has with their audience and instrument, where a dialogical interaction is key in so much that neither will settle to your desire. A collectivity with ones instrument exists in much the same way as with other musicians, in that the interactions are indirect and reliant on being an active listener and willing contributor. The dialogical relationship with one's instrument is a conscious decision in that the improviser does not want to return to an accepted interaction with it. This would return them to a hierarchical position where their formal training and mastery would degrade collectivity.



## in Software

Much like improvisation, open source practices are equally concerned with a liberation from standard structures, and collective practice. Ensembles like the *Splinter Orchestra* are strong creative forces thanks to the collective efforts of many different kinds of improvisers who employ a vast array of tools and techniques. In software development a vast array of developers and users enable both a rich creative base to develop from, as well as a large network of creative thought to discover possibilities previously not considered.

Eric S. Raymond writes about the successes of Linus Torvalds' development of the open source operating system *Linux*. Despite the size of the project, *Linux* continues to flourish on the efforts of a large motivated community. This is thanks to the ideology of releasing early and often coupled with the maxim: "*given enough eyeballs, all bugs are shallow*" (Raymond, 2001). *Bugs* in software refer to errors and bad code that cause unexpected results, or fatal issues. The process of finding and fixing bugs in a traditional development model is long and arduous, but is alleviated when development is open in this collective manner. This trust in an ensemble of enthusiastic hackers, of unknown origin, training, ideology or geographical location is a fragile and precarious position to take with such an intricate process. What it allows for however is not only functional efficiency, but engages directly in the material conditions, and broader social relations in which we exist.

Rather than quashing bugs in the software that I use, I work through the bugs of my musical training. The employment of Pure Data is not only a functional and ideological position, but opportunity to enter into a community of users and hackers that engage in creative practices. The augmentation of my practice is not limited to the agencies that the software provides, but also the eyes and ears of fellow users, hackers, developers and improvisers within this community.

My colleagues which I conversed with talk passionately at length about the relationships they have built with their fellow artists, and the engagement they have with their tools. Software, particularly software development environments like Pure Data still live a long way outside of their purview. The relationship that they hold with software is still defined within the dichotomy of maker and user, perceived to only overcome through traditional ideas of mastery. There are not many examples of improvisers engaging with software which makes it hard for many to imagine how this could be possible.

Performance practices that utilise software don't often meet the desires of improvisers. Rather than this being a value judgement, it is an observation of performative practices using software, and the opinions shared during many of my conversations. Melanie recounted her few experiences collectively improvising with software in where she was "*triggering pre-recorded, or generated sounds*". The lack of live interaction to the core elements of these sounds made Melanie feel disingenuous. In her

experience working with, or talking to computer music performers, she finds that they often have quite a distinct plan. The act of performing with such a strict plan, to Melanie, made the performing of the music an arbitrary act. During one of her improvisational experiments she tried to make more '*genuine*' interactions with the music, rather than just playing clips she would feed her audio back into the software to affect it again and again.

The difficulty for improvisers to employ software often comes from a history of software and music. The adoption of software in music is more common in the process of recording, where software exists as a fully equipped recording studio (DAW) with digital tape, mixing desk and effects. In Melanie's case, she uses a DAW extensively in her compositional practice, editing recorded and synthesised material into spacial compositions. During her brief foray into improvising with software, she returned to this same tool. It is the act of experimentation with an instrument, the sounds that it makes, the alterations applied to it and the collectivity you have in this process that stimulates an improviser. Audio software is traditionally concerned with the recording of instruments and then the affectation of that sound. The simple fact that DAWs are not instruments, makes improvisers like Melanie resistant to a wider adoption of software.

Digital synthesis is another application of software, but in this case, standalone instruments were more often created first, then re-created

within computer software like DAWs. There is a noticeable renaissance of hardware interfaces to aid in the performative nature of software, but these often lend their workflow to a compositional method rather than an improvisational one.

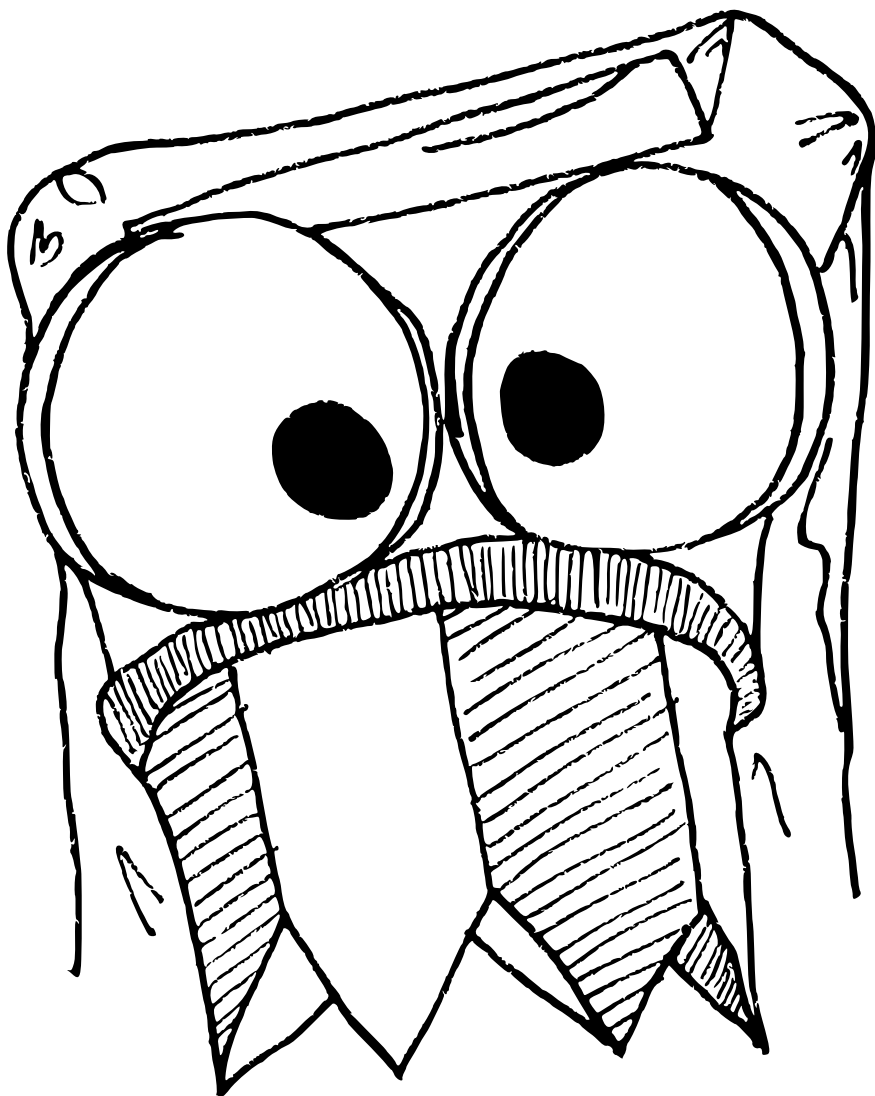
*Live coding is an improvisatory performance method that has been applied in the diverse art forms, but historically it has been very prominent in music, perhaps due to the importance of the musical score, computer music, and the technological foundations of musical practice in general (as demonstrated by the history of musical instruments). (Magnusson, 2017)*

Live Coding is often purported to be akin to an improvisational method as it does share many of the attributes of improvisation. Live coding however exists more as a compositional practice rather than an improvising one. It is true that the performer is free to experiment on the fly, however the input is still restricted to a framework as dictated by the programming language. This is not to suggest that it has any less creative an output, more so to suggest the reason why improvisers who familiar with acoustic instruments are not drawn to it. The liberation from strict structure stands in contradiction to the collective desire an improviser wants to attain with their instrument and environment.

Collectivity is the combination of active listening, contribution, and rich relationships between the various parts of the network you are

improvising within. Pure Data is designed in such a way that this network is embraced within its interface of interconnected objects connected by digital cables, and its functionality. Although restricted by its own parameters, is built in such a way that allows free experimentation to not be met by complete failure. An improviser will more often than not encounter unexpected outcomes of which failure is only a matter of opinion.

I find I am able to apply an improvisational method, developing my own routes to generating or effecting sound. I find myself augmenting the collectivity of my improvising on the saxophone, with that of software, looping and feeding back information from my saxophone, or digital inputs as defined by what I hear. We then arrive at a point where, rather than composing music live through coding, we are really working with something that can be interacted with in a similar way to an instrument.



**Mastery**





For musicians and developers alike, mastery of one's tools is considered a foundation for a strong practice. Many musicians train from a young age, learning standard theory, and repertoire, honing their techniques in an effort to become a flexible musician. For developers, an equal amount of work goes into understanding syntax, environments, and then honing those skills dependent on the field they are involved in. For both, having an in-depth understanding allows you to move from context to context, deftly adapting your repertoire to the needs of the moment.

Mastery comes at a cost however, the weight of imposed skills, and a responsibility to be true to the structures of ones training limit possible practitioners to those who fit a rigid model of mastery. Improvisation is an action that takes these structures and re-configures them, breaks them, or ignores them in an effort to fully exploit the possibilities of the craft. An idea of mastery then, has a much broader scope of possibilities, pushing it beyond academic or popularised criteria.

Melanie chooses to improvise on the violin, an instrument she has no formal training on. She masters a different set of techniques and theory, which in turn develops a completely different repertoire. It is the alternate masteries that improvisers develop that can be applied to other realms outside of music, like software.

## in Music

Free improvisation's methodology puts into question the idea of *language*. This is in contrast to Jazz Improvisation which has a distinct repertoire and language built upon specific structures and theoretical basis. The Merriam-Webster dictionary defines language as "*the vocabulary and phraseology belonging to an art or a department of knowledge*", this implies a shared, agreed upon structure. So then what is the language of Free Improvisation in music?

Peter, Laura, Bonnie and Rhys all used the word language when talking about improvisation. David Toop however warns that "*...music should not be confused with language...*" stating that any meaning or moral purpose music may possess can only be attained dialogically (Sennett, 2013) without any hope of resolution. It is this collection of values that made it difficult to pin-point what Bonnie, Rhys, Laura and Peter meant by the word *language*.

When Peter started out 'free playing', he was recommended to go and play with as many musicians he could so as to become a great *free* improviser. It was mostly related to the idea that you should build a wide vocabulary so as to have many ways to express yourself, and possibilities to play with others. This predicates that there isn't an identifiable common language amongst improvisers, but languages unique to each improvising environment.

There is a difference too, between playing with artists you have been working with for a long period of time and those that you have met just before performing. Peter talked about artists with whom he has been playing for many years, and how they developed a particular language. Rhys and Bonnie mentioned that it takes some time for newcomers to adapt to the dialogical interactions of *The Splinter Orchestra*, it being a very sensitive environment with no space for something like a *Jazz Ego*. As it is such a large group, it requires you to be listening more than in many other cases. Bonnie said that out of all her playing, the *Splinter Orchestra* demands the most amount of listening.

I mentioned to Rhys and Bonnie that David Toop cautions the use of the term "language" to identify the structures found in improvisation. Bonnie's response was to question what makes a good piece of improvised music. For Bonnie the question is not about the structural system that allows Free Improvisation to happen, rather what are the methods that allow Free Improvisers to share their music. It is here that one must contemplate the alternative masteries that improvisation demands.

Mastery in the traditional musical sense would be to have technical proficiency on your instrument and a natural understanding of the theoretical structures that make up the music you are playing. For some of the improvisers that are members of *The Splinter Orchestra* they play either instruments they are not traditionally trained on, or play objects that wouldn't be traditionally considered musical instruments.

As previously mentioned, Melanie is not a trained violin player, after improvising on it for six years she has developed a mastery is directly connected to her improvisational practice. For members of *Prophets*, although they are all trained musicians, they choose to play instruments that are not their primary instruments. What this enables is a freedom to explore the music, develop the grooves, without any legacy of training imposing on their creative process.

When asking about their opinions on a concept of mastery in the realm of improvising, Rhys opened by saying he was going to contradict himself with two statements that he believed to be true. These were : Mastery of your instrument makes you a more expressive improviser and Mastery of an instrument is not essential to be a great improviser. Rhys feels so much more in control on the guitar, because he has technical mastery attained after years of formal training and playing. However he doesn't believe it is essential as there are many examples within their scene of artists who do not have musical mastery in the formal sense, nor play conventional musical instruments that *can* be mastered nevertheless are great musical improvisers. The mastery of improvisation is that of a good listener, sensitive to your surroundings, instrument, and fellow musicians and then to contribute willingly.

# in Software

The idea of mastery as accepted by a Free Improvisational technique in music, can openly be applied to the application of software in art. Software development and music share ideals of mastery in the pre-supposition of years of training leading to a level of mastery to express oneself. A conventional sense of mastery doesn't apply to musicians engaging in Free Improvisation and has led to the development of radically different practices. Where does software fit in this methodology?

Thor Magnusson is a lecturer in Music at the University of Sussex. His work focusses on the impact digital technologies have on musical creativity and practice, explored through software development, composition and performance. In the book *FLOSS + Art* Magnusson writes about the difficulty of balancing the time and effort in the creation of creative software tools and the employment of them (2008). He presents the practices of software artists, their creative methods and the reasons why they create and adopt open source software. He makes the case for breaking the distinction between building a tool and a piece of art. This position is already well within the vernacular of Free Improvising musicians who do not consider their instrument nor the environment they practice in as exterior to their work.

A traditional art practice distinction could be generalised into two parts, creation and presentation. For traditional music, this would be

composition, practice and performance, for software, development and its use. Magnusson writes of mastery, craft, the enjoyment building tools rather than work, and the difficulty to balance the time between that and the creation of work. For me these difficulties are ripe for an improvisational mentality. It somewhat contradicts many of the positions of the interviewees stating a need for mastery, but alleviates many of the perceived issues of not having time to make art, or not finding it as enjoyable as creating tools.

Magnusson argues that we should consider the tool to be sufficient as a piece of art. I am cautious with this suggestion as it still adheres to the structure that it is proposing to subvert. Mattin writes in his essay *Improvisation and Communization* about *Negative Improvisation*. This is an improvisational practice that acts to totally remove itself from all the systems that improvisation is working against, such as standardisation, programming and hierarchy so as to truly liberate itself from any predispositions (Mattin 2013).

An improvisational technique liberates one from this problem as the tool building and work creation are no longer separated, removing the preparation stage in favour of production. Furthermore, the learning process and the making process are rarely separated. Mastery being a pre-requisite to production is an ideal that should be questioned, as it not only limits potential practitioners it also implies an acceptance of a predefined set of methods and systems.

One of the strengths of the open source software community is the ability to work past many of the predispositions of software development by opening up the process to an indiscriminate amount of developers. It is through a wide range of approaches and methodologies that innovation occurs. For free improvised music, this happens in the same way at a collective level, and at an individual level with the adoption of alternative masteries.

In my survey, improvising musicians do not readily engage in the use of software on a level of mastery for a couple of reasons. Regularly improvising musicians are those who are trained on their instruments looking for a more expressive output. To trade their years of training to adopt software is a daunting task, especially because traditional mastery of software does not garner creative output. Melanie feels isolated from creating software or instruments in software. Her experiences with software like MaxMSP was that it was too mathematical and separated from music making. Then outside of the mastery of software as a tool for improvisation, there is a resistance against the lack of physicality in software. The interface of a physical objects not excluding more traditional musical instruments are immediately accessible. We are well versed with interacting with physical objects, analysing, and experimenting with them, but when functionality is abstracted it can be daunting.

An untrained individual can understand the function and interface of a drum, and begin to experiment with it immediately. A piece of sheet music

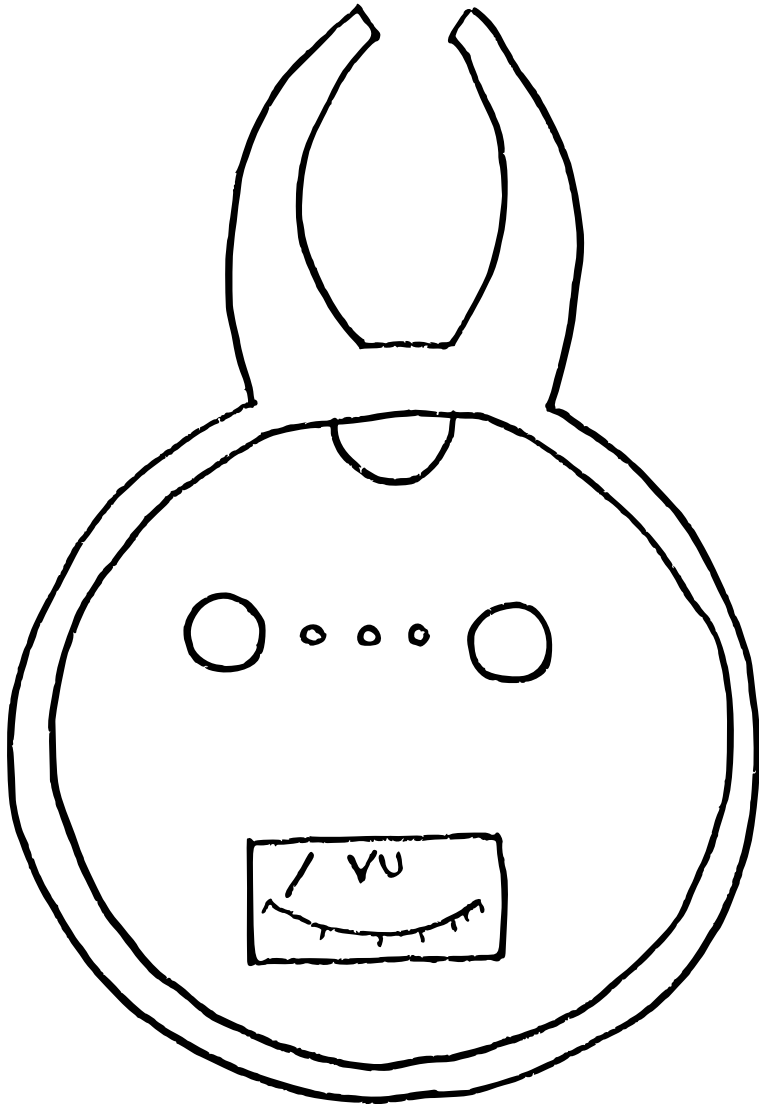
however would pose as intimidation if they were expected to interpret it. The expectation of structure like music notation, or code, get interpreted in a binary fashion of needing to understand it to play with it. However these issues start with an issue of mastery either perceived or learned. A piece of music, or a visual coding environment can be improvised with in the same way the drum can.

Melanie Herbert uses software extensively in her compositional practice but is resistant to use it in her improvising. She considers the possibility of improvising with an instrument and affecting it with software to be the most valid way of doing things, but says that working with live software "*freaks her out*". She feels that things can go wrong so fast, and the anxiety of having a technological issue during a performance prevents her from trying it. The violin by contrast is a piece of technology that she feels she can control, all of its function, input and outputs are tangible.

This mastery to value ideology was also voiced during my conversation with Bonnie, when she reflected on it as an audience member. She mentioned that when she is watching electronic musicians, particularly if they are behind a laptop, if she can't understand what they are doing, she can't get engaged with the music. Bonnie thinks this might be because she is a musician who plays acoustic instruments, and that the lack of physicality is un-relatable. Sydney musician Alon Ilisar developed an expressive digital musical interface called *Air Sticks* which allows an artist to manipulate software by tracking motion in space. For Bonnie the two



characteristics that validate Alon's music come from the knowledge that he is a trained drummer, and thanks to the performative nature of the Air Sticks which Bonnie described as "*being used more like an instrument*", the movement somewhat resembling the movement of drumming.



**Revolution**



Mattin has been a strong voice in all of my research on improvisation, and has helped me formulate my arguments in promoting improvisation as a method for creative agency within software. In his essay *Improvisation and Communisation* Mattin outlines however that it is naive to believe that Improvisation can be a tool for agency outside of creative contexts. He asks the question "*how can improvisation be a "praxis of freedom" in conditions of unfreedom?"*" (Mattin 2013).

Through his essay he compares the music improvisation practice of the 1960s to communism, capitalism and elitism, outlining why he thinks that it doesn't, yet *can* provide the agency perceived by its practitioners.

I have been praising improvisation so as to provide further agency, creatively or otherwise. Improvisers have an inherit belief that improvisation avoids commodification because it breaks away from the predispositions of elitist traditional music, and the hierarchies between player, composer and audience. This is not the case however, it too is limited to a niche, avant-garde practice appreciated by very few.

## How?

Improvisation is concerned with liberation, reflection, restructuring, and problematising, all of which I have applied to my own practice. This research has allowed me to identify the thread through what I originally thought were discrete practices starting in a Jazz Improvisational context,

into my current practice developing custom software instrument to improvise with. It has also helped me better formulate my practice to further explore the possibilities that improvisation can provide.

During my formal jazz training, I reached a point where I was finding my practice detached from the society that I was practising in. This was not so much in the fact that I was playing music that was difficult to relate to because it was challenging, more so it was quite far removed from any cultural practices experienced day by day.

During that time two friends of mine and I started the group *Debonair Gentlemen* a trio made up of Saxophone, Trombone and Double Bass. We came together in response to our desire to play standard jazz repertoire in non standard ways and hybridise it with many other musical styles and approaches outside of our formal jazz training. We wanted to explore traditional music styles like blues, blue grass, hip-hop to name a few, while avoiding any oppression of the structures and predispositions normally imposed by them. We did so by heavily adopting improvisation to engage with these rich cultures of music.

Martin suggests that Improvised music has the potential to disrupt previous modes of musical production, but it is up to the player to tear them apart in order to find a way in. Although I could not have expressed this then, *Debonair Gentleman* were tearing apart the elitism, and academisation of the jazz practice. Even at this point I found my interrogation limited to

music only, and did not know how to expand my curiosity. It is only since reading the works of Mattin that I have started to understand the impossibilities and possibilities of this pursuit.

*It is not about changing the labour conditions of a majority of people but being aware that culture creativity and communication are becoming the tools for the 'factory without walls'. We need to be suspicious of ways in which cultural practices can be exploited by capital. (Mattin, 2014)*

Through my musical explorations, and my current research I now understand that the fathers and forefathers of jazz were equally as questioning of the structured environments they were practising in. Forever questioning their practices, and the ways in which cultural practices were being engaged with. Artists like Miles Davis and Herbie Hancock adopted cultural artefacts in their music to represent their positions in society. This happened through their adoptions of cultural mainstems like hip-hop, black rights, and technologies like effect pedals and synthesisers. Others like the groups *Art Ensemble of Chicago* and *Sun-Ra* drew on cultural histories and fictions to reformulate not only their position within society, but also to expose an oppressed black American culture.

My own existence is heavily framed within a training of Jazz, but historically removed from it in political, ethnographic, geographical, and technological terms. It is the improvising that has both defined my jazz

practice, and allowed me to question it. Software is however is ubiquitous in our material existence and one that improvisation doesn't readily engage with. By imposing improvisation upon software, and software upon my improvisational history, I am reformulating my relationship with my instruments and improvisational method.

It is why I pursue an improvisational practice involves software, saxophones and synthesisers. I play acoustic and midi saxophones, and manipulate synthesisers outside of the software's control. The software manipulates and analyses audio, and midi which in turn controls software and hardware synthesisers, and manipulates my playing on saxophones.

I also apply an improvisational method to the development process, bootstrapping vague idea upon vague idea, exploring the software without preconception. If I am experimenting live with a combination of instruments, I will approach my saxophone playing consciously avoiding jazz language, rhythms, and tone, not necessarily in an aim to replicate the digital, but to at least break from the frameworks that have informed me for such a long time.

I'm interested in the activity of improvisation, its possibilities when coupled with software, and the roles of musician, developer, instrument maker. I also want to continue breaking apart and reconfiguring my formal music training so as to better understand what it means to be an improviser. Working with software makes many of the predispositions as



informed by jazz training challenged. However it also illuminates the ways it informs my aesthetics, and value judgements.

## Communitisation

Communitisation is used in Mattin's text to define the *"production of communism by the abolition of all capitalist social relations and the mediations that they entail: commodity, exchange, class, property, divisions of labour, the State, wage labour, and gender relations as we understand them today"* (2013). These sentiments of communitisation are the very same made available by an improvisational method. However Mattin neatly outlines how improvisers have always had this belief, yet how its employment was often less than successful. Communitisation is the process of revolution, the breaking down of the capitalist methodologies, in the same way as improvisation is the action of breaking down prescribed frameworks.

The similarities of communitisation and improvisation as compared by Mattin from the studies by *Théorie Communiste* are as follows. Both are against the notion of prescriptive programs, emphasise activity rather than product, question representation, and strive toward un-mediated social relations. Additionally they both challenge property relations by proposing a collective human activity beyond the capitalist subject-object relationship. Mattin is quick to identify the utopian political activity that improvisation perpetuates.

Improvisation's claims of *unmediated experiences* and its liberation or *purchase over capitalism* are utopic ideologies. The revolution of improvisation is not so effective in its counter capitalist plight, as its niche practice manifests itself as a self-satisfying act of cultural self investment. Its prescription to standard methods of distribution through concerts, records, festivals and magazines needs to be examined. The practice should be applying its own self-negating methodology to its ideology, so as to understand the informal structures and material manifestations that has accompanied it throughout its history.

Martin uses the research by Theorie Communiste). This is the way labour exists two fold in capitalism both as concrete and abstract labour. The working class revolution was unsuccessful because it strove to affirm labour, which then did not sufficiently challenge the capitalist system.

The artist is ever further embedded in the issue, continuing to enact revolution and failing like our revolutionary predecessors in that they are trying to affirm the labour of our work. The artist's judgement of value is so acute that it is applied to works that have not been thought of yet, speculating on potential values. As we have to abolish the systems that we have inherited within our practices, improvisation is the only option. We should not have a predisposed idea about what the fruits of our revolution will, or should look like.

The ultimate process for communisation is that of the abolishment of the value-form according to Mattin (2013). This too should be considered within the practice of music, and art which is where improvisation plays a role. As now value is not inherent with objects, the worker, producer, is not as powerful a figure in the process of value production. So then we too must undergo a transformation in that the abolishment of value and property will also require a thorough reconfiguring of our own subjectivity as it too is largely shaped by capitalism.

As mentioned earlier, the response from some improvisers to truly stand against these structures of standardisation, programming and hierarchy, has been to develop a practice of *Negative Improvisation*. *Arika*, a Scottish experimental music, film and art group, reinforce the fact that "*music is a product of rich and complex social philosophical, political, and economic factors*". In so doing they promote actions of negative improvisation that seem to lack artistic creativity all together, in an effort to avoid making oneself a commodity.

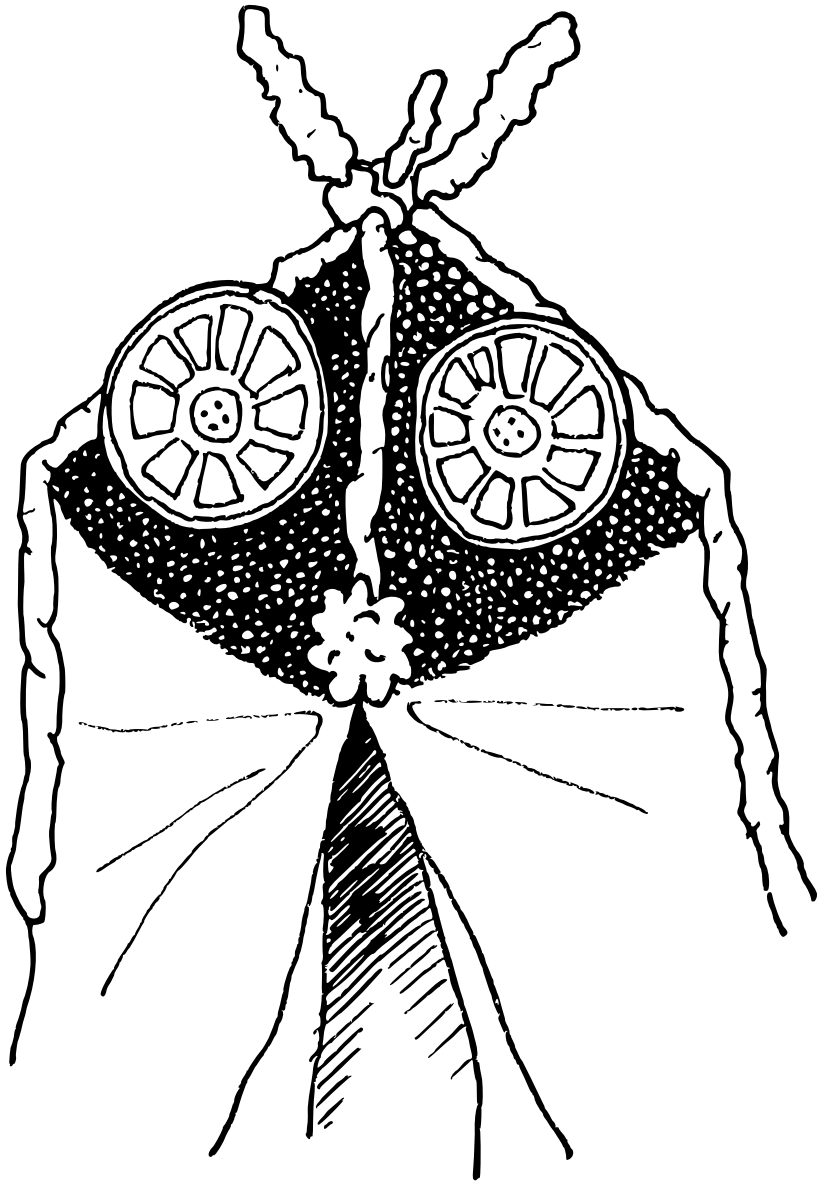
An improviser should "*distinguish agency from selfhood, distinguish rational "hetero-autonomy" from freedom in the spontaneist/libertarian sense, materialise cognitive labour in such a way as to expose the comodification of immaterial labour*"(Mattin, 2014).

As the practice of artists, and particularly improvisers embody many of the qualities of contemporary capitalism, it is important that improvisers materialise these issues so as to better understand their impact upon us.

*"Improvisation needs to generate a form of agency that goes beyond the improviser's self" (Mattin, 2014)*

Improvisers need to further embrace the undermining of frameworks, practices and morals so that we can question the parameters of our existence, by improvising with ourselves, our material conditions, and applying these reflections and practices to broader social relations. The process of negative improvisation can allow us to quickly identify any limitations and negativities of our times says Mattin (2014), and believes that it will *"generate a form of agency that would link freedom with collective rationality rather than with individual expression"* (Mattin, 2014).





**Conclusion**





Improvisation allows me to explore music and software in ways that I had not previously considered. In my frustrations with music, an expanded idea of improvisation coupled with an application of software has opened up my practice to engage with systems outside of a normally niche practice. My improvisation is no longer limited to the aesthetics and structures of a time long past, but applied to systems and the material environment that I find myself. It allows me the ability to question the limitations and negativities of my context, and lets me find new ways to navigate through them.

It is also a practice that allows me to bring together the skills, knowledges of a range of people, practices, tools, and methodologies. Interacting with others who choose to improvise, create music, or engage with software. Additionally I have re-examined my relationship with software, my musical instrument, formal training and the possibilities this affords me. Further from my own practice, I have a set of tools and ideologies that I may share with others whether that simply be in a creative collaborative sense, or adopted by others to find their own forms of liberation.

I find new masteries where once I thought there were none, engaging in completely new practices. In an effort to redefine mastery, I have altered my perception of dichotomous values like good and bad, un-finished and finished, novice and master, embracing a dialogical relationship with the objects within my collective network. This affords me the opportunity to

better understand my own position, and the positions of others within this network without needing to resolve or standardise it.

The challenge now is to apply improvisational exploration to undermine the frameworks, practices and perceived obligations of mastery, tradition or aesthetics that impose themselves upon our selves. We need to ask how we can further challenge the prescriptive methods of production and distribution. Through the fusion of software and improvisation one can interrogate their practice, and cultural existence from two fronts.

Embracing the position that open source software encourages questions, coupled with improvisation which exists against notions of prescriptive programs, emphasising activity rather than production, questions representation, and strives toward a new idea of freedom which celebrates collective rationality rather than individual expression.





**Research**



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