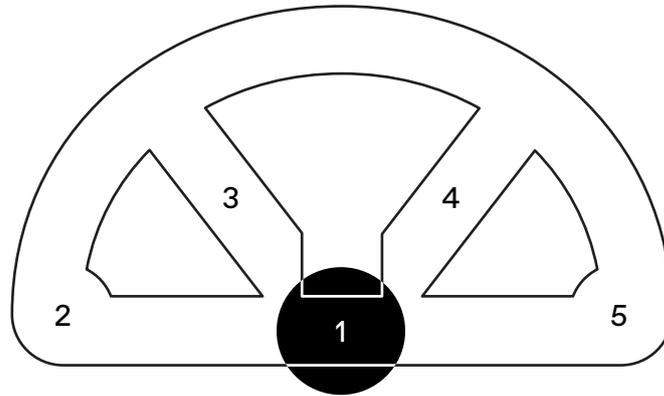




Responding to Percy Grainger's experimental practice, Interactive Composition and Animation students at the University of Melbourne have collaborated on multimedia installations throughout the Grainger Museum.

The animation students first prepared visual works inspired by Grainger's ideas on 'free music', as well as the diagrams he used for his Free Music machines. They then collaborated with the Interactive Composition (iC) students to create audio-visual artworks. The animators analysed the sound compositions to extract data from the audio files, and used this data to animate their visual designs, breathing motion and life into the collaborative artworks.



## **Natalie Saunders (Animator) | Remy Castan (iC) & Sam Daniher (iC)**

**NS** I was fascinated by the formula of waves. Inspired by Grainger's concept of a 'free music' instrument, I created a wavy interaction artwork that has its rise and fall contrasting to the high and low bass of music. The artwork is a creation of lines that manipulate the 3D surface of waves, with particles of clouds of dust and ambient light together to form the atmospheric ocean at night.

**RC** I decided to incorporate the fact that Grainger enjoyed being around water as a child into my work. As the brief outlined that there should be both arhythmic and rhythmic approaches, I decided to go down the route of having a section that is 'flowy' and defined by the foley sounds of water, and starkly contrast it with an EDM section. This also feeds into the considerations of volume and dynamic range.

In response to Natalie's animation, which is a visualiser that responds to frequencies, I provided individual stems of the lows, mids and highs. The contrasts in rhythm

provide stimulation for the animation, as it responds very differently when the pulsing starts. The kick becomes extremely prevalent in the animation, and the constant pulsing also provides an interesting visual experience.

**SD** Inspired by the idea of ‘free music’, I wanted the motif of this piece to be something I had no control over. Using the Meta Synth CTX plug-in, I generated eight seconds of synthesis using an image. The image I used was inspired by the moments in which I personally feel free; therefore, an image of mountain biking was what I built my piece around. I wanted my piece to explore how we can create order through chaos: how we can start to control the ‘noise’ of life, and make it what we want it to be. Being a progressive ambient house track, the linear story conveys this feeling of finding and building order and eventually letting it go again, which is how I viewed Grainger’s intentions when creating ‘free music’. Furthermore, I wanted to draw on Grainger’s connection with nature, and use that shared love for the natural world in this track by using natural sounds and instrumentation that didn’t feel mechanical or harsh.

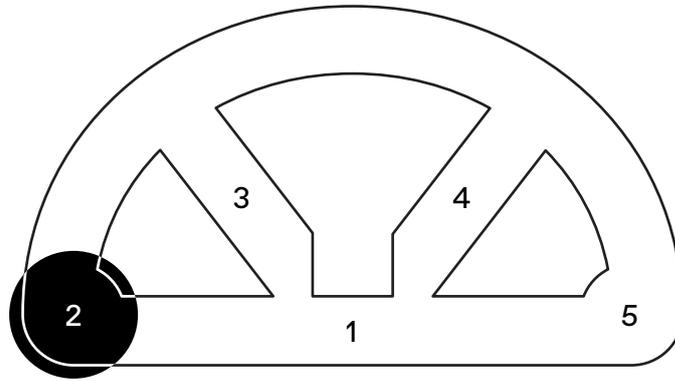
**Leon Tran (Animator) | Lachlan Rae (iC)  
& Erin Sherlock (iC)**

**LT** This animated piece responds to Percy Grainger’s ‘Sewing Machine’ sketch, an image that resonated strongly with me. My mother would sew a lot when I was a child, so this piece is a nostalgic reflection on the textiles that surrounded my family home. I used floral textile patterns –my mother’s favourite – to create this audio

reactive animated piece, which captures the essence of my childhood feelings, whether sad, fun, or boring.

**LR** Like Grainger saw landscapes and imagined a soundtrack of 'free music', my intention was to capture the different ways an idea can be communicated, with specific reference to waves (an homage described by Grainger to St Kilda Beach). I tried to explore different ways in which people interpret the same stimulus. The opening is traditional: a piano plays a modal line over a mixed meter, a tribute to Grainger's inspiration of English folk tunes (modality: Molly on the Shore) and Debussy (mixed-meter). The morse code rhythm overlays then add an interesting arhythmic idea. The addition of drones from a beach/record player emphasises tradition, then piece then morphs into a digital setting: sliding pitches and swelling synths (Grainger's ideas of 'free music'), and cascading sporadic notes like stones skimmed across water. The ending mirrors the opening, with sound sources changed but roles preserved, a contemporary interpretation. The shifting mood of this piece reflects the movement away from tonal music.

**ES** My piece uses a synthesised drone that develops texturally throughout the piece. Everything else is created through playing the flugelhorn: my breath through the horn, tapping on the instrument, and the valves moving up and down – all of these sounds form the weaving melodic layers. To create a work that not only worked with the concept of 'free music', but also with the animation, I made sure my sounds were textually diverse and sat across the frequency spectrum. I also varied the density and dynamics so as to affect the programmed responses in the animation.



## Sasha Gorman (Animator) | Thomas Fernando (iC)

**SG** Drawing inspiration from the tightly interwoven relationship between Percy Grainger's drawings and musical compositions, this artwork seeks to create a captivating visual composition, born from music. Each rise and fall in the frequency of the refrain produces a new 'stitch' against the blank canvas of the screen, creating a vivid tapestry of colours and sounds.

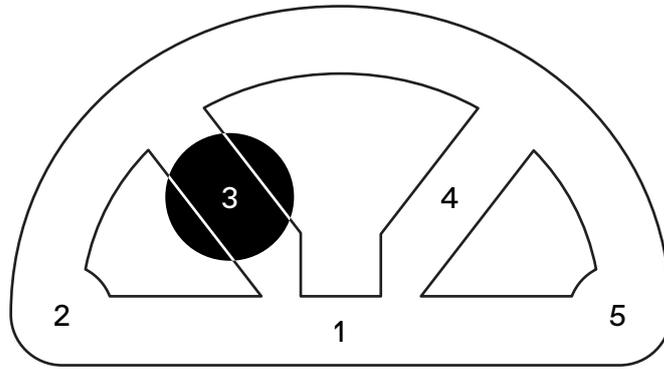
**TF** Grainger's 'free music' was inspired by the 'rise and fall' of Australia's landscape and waves across water, with instruments gliding freely between pitches. I applied these principles to produce a sonification of a raging storm. I wrote for an orchestra, organising instruments into groups or 'voices' based on family and register. To create a sense of extreme timbral contrast, I used extended and unconventional playing techniques within each instrumental family.

The frenetic chatter from the strings mimics the sound of rainfall. Guttural brass swells and clusters imitate the sound of thunder. Shrill high woodwind and brass rips are used to evoke imagery of lightning, while cymbals and tam-tam are scraped and bowed to produce piercing tonal colours.

## **Ruby Ricci (Animator) | Archie Cumper (iC)**

**RR** Based on Grainger's work 'Kangaroo Pouch', I have taken the basic structure of circles and main colours of the work and created a particle system that will move and react to different frequencies and levels of music. The resulting work transforms a simple image into a moving animation: 'Kangaroo Particles'.

**AC** Grainger was a pioneer of 'free music': music that is not limited by tempo, pitch or any structure, rather focusing on the actual sound of each element. However, Grainger was also a sado-masochist and had complex and contradictory views on race, so I wanted my piece to directly interject these ideas. Influences from African American hip hop and UK drum and bass are the foundation, with drum patterns and sounds directly correlated with these influences. To respond to the brief influence of 'free music', the piece begins with a completely randomised synth pattern, with a sound recreated from one of Grainger's 'free music' instruments. Changes in tempo, pitch, key, timbre, cut-off, arpeggio patterns are placed through the piece to conform with Grainger's 'free music' ideals.



## Sorin Telkes (Animator) | Asher Bates (iC)

**ST** There is something deeply fascinating in the expression of nature and machinery in art, introducing the complete transparency of order and precision into a world we connect with through complex, abstract experiences and emotions. Likewise, Percy Grainger's work around 'free music' attempts to translate our unique interactions with our surrounding environment through calculated austerity and purpose, resulting in an outcome I found to be severely (dare I say) monotonous. In response to the ulterior predictability of repetitive, controlled sound, I borrowed from Grainger's heavy use of ink as a visual, and created a completely self-generative piece that paints disparately intricate and organic patterns with each new generation. It focuses on embracing the appeal and eclecticism of natural imperfection and inconsistency, breaking away from those anticipated constraints of technological mediums to offer a more candid approach to expressing the human condition.

**AB** I drew inspiration from one key quote included in the Grainger Museum's exhibit *Experiments in Freedom: Grainger's Free Music*: "Grainger imagined

a type of music in which melodic lines glided freely across any pitch.” Inspired by this quote, I have taken an unorthodox approach to melody throughout the piece by incorporating pitch fluctuations that are not beholden to any particular mode or scale. The mechanical recreations of Grainger’s designs tend not to produce pleasing melodies; thus, I did not feel a need to approach this piece with the aim of creating a pleasant listening experience. Rather, I have created something reminiscent of Grainger’s ‘free music’. I chose to source audio exclusively from a semi-modular instrument (PULSAR-23) as a nod to Grainger’s Free Music machines, which feels, in a way, a strange cousin of the modular voltage-controlled synthesisers first seen three years after Grainger’s death.

### **Claudia Leonard (Animator) | Samuel Brew (iC) & Lili Wymond (iC)**

**CL** Inspired by the fascination with the ocean that I share with Grainger, this piece uses heavy noise and hallucinogenic visuals to create liquified effects. The ongoing life force of water – constantly shifting and adapting – is emphasised, as the coloured edges of the male dancer shifts with the rhythm of the music.

**SB** When exploring the exhibits contained within the Grainger Museum, I found the concepts and sounds themselves fascinating, but I was instantly most drawn to the way in which Grainger had graphed out all the markings for the instruments in flowing, sine-like shapes. Following this, almost all melodic elements are crafted initially from sine waves, using additive synthesis, white

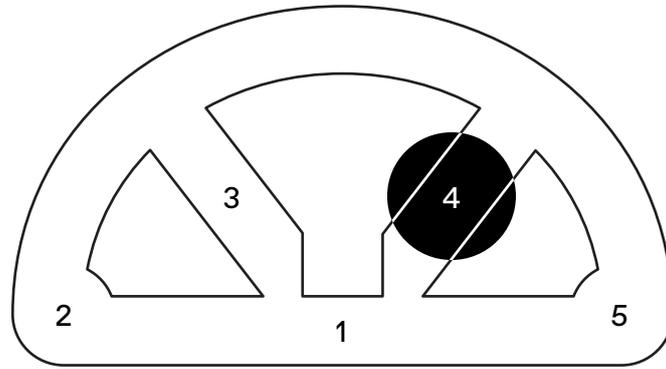
noise, and distortion to then pull out further timbral and textural qualities. I also wanted to respond to Grainger's story in discovering 'free music', which I addressed with the generative noise patch in the back half of the composition, using a sine LFO to shape it gradually to a wave-like sound, something which Grainger is on record as being inspired by. Finally, I used staccato garage-style drums to provide interesting rhythmic contrast for the animator to play with, and to bring Grainger's concepts into my own world.

**LW** My piece responds to the traditional vs experimental themes in Grainger's work by using conventional and unconventional string, wind, and brass techniques, and incorporating excerpts from my own experiments with the Korg Minilogue. Drawing upon Grainger's fascination with 'free music', the beginning of the piece introduces my emulations of Grainger's inventions, and slowly transitions to becoming more rhythmic, allowing my animator to work with textural and rhythmic contrast. I used expressive techniques such as bending, flutter tonguing, glissandos, and sul ponticello/tasto, and contrasted these harmonic lines with a wistful cello melody to illustrate the concept of traditional vs contemporary. Finally, the psychedelic synth-inspired ending was created for the animator, but I reintroduced sounds from the experimental and classical sections to tie it back to Grainger and make the ending more cohesive.

## **Kent Aldemir (Animator) | Dean Elliot (iC)**

**KA** This piece visualises and animates cell-like structures that respond to sound and music in a living and abstract way. The inspiration for the work is Grainger's concept of creating precursor machinery and new-aged musical devices. This wireframe adaptation of a cell-like organism portrays a digital recreation of how Grainger would have designed a spherical wireframe object.

**DE** My inspiration for this piece stemmed from the disparity between Grainger's incredible contributions to the world of music through his idea of 'free music', and his unfortunate racial ideologies and views towards women. I first wrote a completely original, conventional-sounding piece of music with lyrics expressing my thoughts on these findings, which I then manipulated through granular synthesis to create four distinct layers of sound. The music moves between rhythmic and arrhythmic sounds while consistently changing pitch, timbre, and texture throughout. The low, bass tone at the beginning almost sounds like gunshots being fired, while the high, metallic end layer is sharp and jarring, both representative of my views towards the information. All the layers were formed to create a texturally contrasting soundscape that reflects my emotive experiences with this project, while still exhibiting the essence of 'free music'.



## **Hyelee Cho (Animator) | Abby Sundborn (iC) & Julian Smith-Gard (iC)**

**HC** This piece was inspired by the writings of Percy Grainger, and how I perceived the ego of a man with an entire museum dedicated to him. As people walk around the piece, it represents the pictures accompanying Grainger's words, with ideas spilling onto the page, hence the barrage of words that stream throughout.

**AS** I wanted to mirror Percy Grainger's approach to using human and non-human mechanisms to create music. I used unconventional instrumentation by using everyday domestic objects to create mechanical sounds with the use of contemporary digital interventions. The sample I took was cutting up paper with scissors, as well as the sound of crushing up a can. Similarly to how Grainger used electronics for his works, I used digital processing techniques to develop my own, including chorus ensemble, LFO, filter, envelope follower, and slow rise. I then multi-tracked them and edited them in Ableton.

The Animator I worked with made a visual that automatically separates the bass and the high pass

to control the speed of the particles and how quickly they move – the same for the Percy Grainger text. Our work as a whole presents human inventions in industrial modern activity.

**JSG** My inspiration for this work was to incorporate ideas of gliding pitch and harmony into a solid rhythmic base, while also exploring polyrhythmic and arrhythmic ideas through other active lines. As the animation explores how visuals react to sound in a space, using text as a way to connect to Grainger, I focused on dramatic shifts in dynamics and texture to convey a sense of space: ‘opening up’ the sound world, then closing it off in ebbs and flows.

**Moira McMahon (Animator) | Robert Feher (iC)  
& Mq Iser-Smith (iC)**

**MM** This work focuses on the less palatable areas of Grainger’s history and legacy. I believe that he held many backwards ideas about gender, race, and class, and attempted to place himself intrinsically above his fellow human beings. In the museum he created as testament to himself, Grainger wished for his skeleton to be displayed to the public. His wish was never granted until now. In this work, Grainger’s skeleton is spread wide open for all to see, not as he wished to be seen, but in a more degrading manner. Piano wire – which, I believe, he used to entrench his self-superiority – is now used to expose him for the man he was, and harks back to his love of BDSM and other fetishistic areas. It is a stark contrast to the grandiose self-image he held in his mind, and one that I hope will correct his legacy.

**RF** To create my version of 'free music', I decided to sequence four separate oscillators on my digitone, and over the course of 3.5 minutes, change the probability of the triggers. The triggers define when a note would be played, therefore the probability constantly affects the movement, pace, and pitch determinations of the synth. In addition, I used electric keys and a Sequential Prophet through reverb to define more harmonic content in reaction to the recorded probability sequences. The freeness of this was that now I could react to the previously performed sequences, and play in chords to add emotion when it felt needed. In addition, I used bass guitar as the melodic forefront, creating tonal contours around the improvisations within the piece.

**MIS** In response to the moving skeleton in a position of humiliation, my piece places an emphasis on rhythmic and percussive sounds. I used instruments that emulated the sound of bones clattering against each other, with synthesisers to add variety in timbre. The horizontal structure of the piece is 'free', as is the perceived pitch and key. Care was, however, taken to divide each sound into a specific frequency band, creating sonorous contrast and allowing my collaborator to use these frequencies as data points. The spoken audio in the piece is a reversed excerpt from the Wikipedia article on the expression 'Hoisted by his own petard', meaning defeated by one's own hubris – a further response to the accompanying animation.

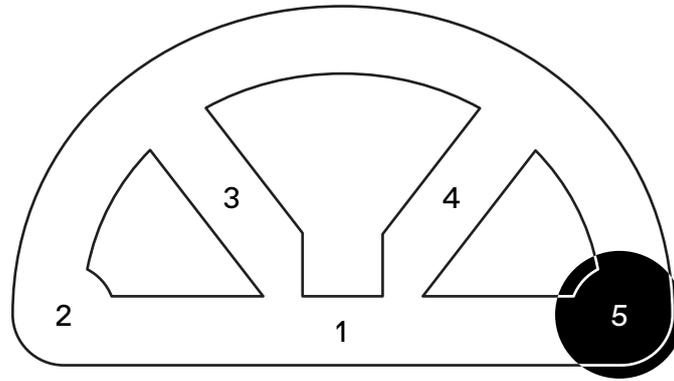
## **Maxwell Clerk (Animator) | Bridget Allan (iC) & Qinghua (Jennifer) Tan (iC)**

**MC** Considering the techniques of Percy Grainger, I found that he was particularly fond of creating music through imagery. To interpret this into my own style, I have allowed sound and song to instead lead the animation, with the sine graph style waves he would commonly use replaced by the tentacles of a jellyfish to imitate its movement through the sea.

**BA** In this piece, the jellyfish, which moves steadily at 30bpm, reacts to the dynamics of the music. I have put separate melody stems into the programming software so that its tentacles, body, and the ocean particles around it move and react to the song. Each line is played monophonic and solo, so that each line represents a different jellyfish leg or movement. To accentuate the dynamic range, I played with the background to foreground textural varieties, and varied the articulation of the notes between gentle and harsh. The atmosphere of this piece, created by manipulating the musical elements, represents the lush environment of being deep underwater, surrounded by marine life.

**QT** The inspiration for my piece 'The Ripples' comes from Grainger's concept of freedom and randomness, especially his idea of turning the mountain landscape into the shape of music. His understanding of 'free music' makes me think of the randomness of water and life: I see the human world as a huge water tank, where we are the random droplets entering a complex, everchanging environment. To me, the first freedom refers to the biotic

randomness as countless creatures are born into the world; the second freedom is the process in which an individual constantly accepts, rejects, or even develops the flow of label/identity in their lifelong experience. The piece is composed of two parts: 1) random drops symbolising the births of creatures, and 2) the process of individual identity applying, flowing, and changing. Surround panning and contrasting rhythmic elements were used to further emphasise the notion of complexity and reactivity in the growth of the inner self.



## Emily Peck (Animator) | Merrick Craven (iC)

**EP** This piece was inspired by the machinery Grainger used, which created shapes similar to waves. In response to this stimulus, and by including a musical composition, I explored the impact of how music can direct sound waves, and create a piece of animation.

**MC** As I did not feel positively about commemorating this man, I decided to create a linear piece using instrumentation that I thought Grainger would have disliked: orchestral instruments throughout, with linear drums to maintain the rhythm. To conform to the brief of 'free music', I used many different instruments in many different timbres, and mashed together instruments that are not placed together regularly. I also resampled my own sounds, as I believe that this demonstrates growth past the instruments and ideas that Grainger had, and onto new ones. In short, I believe that my piece doesn't really demonstrate the ideas of Grainger, and that makes me happy.

## **Matilda Berger (Animator) | Brianna Dahlstrom (iC)**

**MB** When exploring Grainger's archive, I found the materials used to create the 'Electric Eye Tone-Tool' most inspiring. The use of ink to block out light sparked the creative idea to form my design around the series of inkblot images from the Rorschach Test. Combining the optical transformation of the ink blots, I created an audio responsive animation.

**BD** To explore the theme of 'free music' I tried to break the concept down to its simplest form, and think of the most fluid way to make music. I decided that the voice is one of the most accessible, free and versatile instruments in existence, and can move in a way that Grainger desired. I used samples of a choir singing chords to build the harmonic base for my composition, and heavily manipulated them with tremolo to create a texture that I believed the animation would respond well to. Around the choir, I layered different percussive sounds built with foley recordings. I wanted to introduce these interesting textures and timbres to the sonic spectrum to further explore the idea of how someone could freely create music.

Another layer I wove through the piece was a field recording of children at a playground. Children approach creativity with freedom and curiosity, and I think this playful mindset is also one that Grainger brought to his music and experimentations with Free Music Machines. I experimented with delay and reverb through my piece, to create an interesting element for the animation to react to.

## Luca Brisbane (Animator) | April Guest (iC)

**LB** The combination of these spinning cogs and the accompanying audio is intended to be overwhelming and profusely deafening, as I aim to give the audience a sense of what it is like to research Percy Grainger.

**AG** My piece connects to the theme of 'free music' in two ways. Firstly, in terms of musical elements, I explored treating pitch and rhythm as continuous, freely flowing elements that are unrestrained by conventional systems of organisation, an idea taken directly from Grainger. I expanded this idea to include dynamics, texture, and timbre, which morph smoothly and gradually between different states. Secondly, the music was written to convey the sense of an ocean in audio form. The way sound layers modulate over time in many ways reflect how an ocean surface would bob up and down, or have larger waves moving in a similar, but increasingly exaggerated way. The dramatic and chaotic movement of these layers reflects the state of a turbulent, violent ocean. When the music is calmer and slower, it represents a peaceful, gentle ocean.