

## *Moulted Spaces*

[Lecture for the Darmstädter Ferienkurse, 6 August 2021]

Today I would like to talk about a part of my compositional research that I have been working on for the past few years which is still developing and incomplete. The topics and questions I'll talk about have arisen while composing some of my recent music and continue to be inspired by artists whose work connects with or forces me to question my own.

Like many composers, I have been fascinated with how to represent time and space in music, and how form and the sonic material that we use are extremely related. If you were to analyse all the fugues written by Bach, you would notice that they are all different, and that their form changes depending on the material used (in this case the subject of the fugue).

I used to think about my sounds as complex, handmade, personal objects, but for a long time it didn't interest me which boxes I put my objects in — I was not bothered by the fact that no matter which sonic material I used, the form of my pieces was always A-B-A', or A-B-C. But the more experience I gained and the more complex sounds I could create, the more aware I became of the fact that form can completely reshape the material you use — which means it can weaken or strengthen it. As I was working on shaping my sounds, I started to analyse the energy that those sounds carry, trying to build a surrounding space that fits them, and them only. Instead of only focusing on my objects, I started to think about the box that contains my objects.

In 2011, during a conversation, Pierluigi Billone told me that he sees form as the space that surrounds the sound, which is not far from Luigi Nono, who said, "Il suono legge lo spazio" — sound reads space.<sup>1</sup> During the past years, I have had many conversations with my colleagues about form and time, and the notion of space was somehow always present. A few years ago, Rebecca Saunders was talking to me about her orchestra piece *Void*, which she was composing for the Witten festival. She knew that the acoustic of the hall where the piece would be performed was very dry and not suitable for such a piece, so she told me that she was bringing the space with her, she was composing the space which she thought would fit her sounds. Like also in Luigi Nono's music, space is not only seen as form, but becomes material itself.

If the form of Bach's fugues changes depending on the sonic material he uses (the subject of the fugue), that implies that an object affects the space that surrounds it. But is there a way to give agency to form as well, so as to create a constant exchange between the sonic material and the space that surrounds it?

Sound is an abstract world, and I constantly struggle to find the right words to describe it. In order to overcome this struggle, I normally try to find a concept or a metaphor that can help me navigate the abstract realm that sound is, and most of the time, relying on metaphors helps me not only to understand better my sonic material, but also hands me new, sometimes completely unexpected perspectives which lead me to sonic territories that I haven't explored before.

If we think about how space affects sonic material and vice versa, we can look to works of visual art and literature that can serve as metaphors to understand this relationship. For example, British visual artist Rachel Whiteread and

---

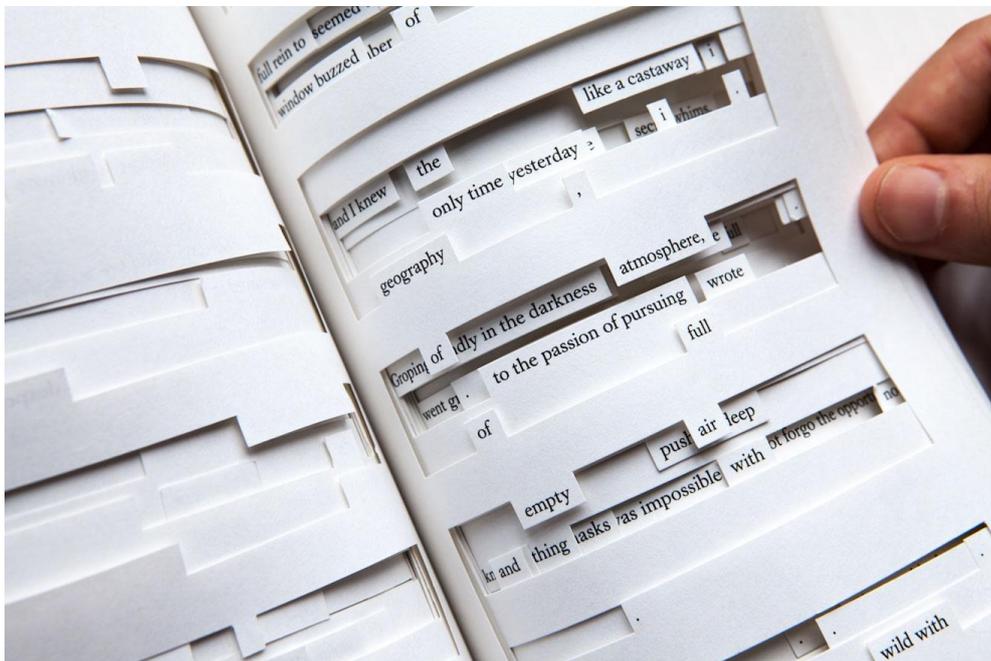
<sup>1</sup> Luigi Nono, *Scritti e colloquia*, Angela Ida De Benedictis and Veniero Rizzardi eds., Milan, 2001, pp. 339–40.

her idea of *negative space*; and the art book *Tree of Codes*, by American writer Jonathan Safran Foer both display inspiring ways of thinking about form.



Rachel Whiteread, *Untitled (Domestic)*. © Justin Gellerson

By casting the space within and around objects, Rachel Whiteread creates a negative imprint of the object itself, memorialising its space — as this picture shows, you are not looking at the stairs themselves, but at the space where the stairs were. Whiteread casts the absence of objects, their absence becomes material and the object of investigation.



Jonathan Safran Foer, *Tree of Codes*.

*Tree of Codes*, by Jonathan Safran Foer, is an art object in the form of a book, published in 2010. Foer took one of his favourite books, *The Street of Crocodiles* by Bruno Schulz, and removed the majority of the words, introducing empty spaces instead.

The artefacts created by this technique challenge the traditional reading experience allowing words to be combined with each other following more than the usual horizontal direction. Letters hide words, pages blend with each other, appearing and disappearing. The space left by the absence of the cut-out words is used as material, and the artefacts produced by this carving process constantly affect both object and form, opening to a multiplicity of readings.

In 2019, I composed *MOULT*, an orchestra piece inspired by the biological process of moulting, which is “the manner in which an animal routinely casts off a part of its body (often, but not always, an outer layer or covering), either at specific times of the year, or at specific points in its life cycle.”<sup>2</sup> This process allows animals to grow by renewing their feathers (like in birds), their skin (like in reptiles), or their entire body (like in insects). Among all animals, spiders fascinated me the most.



Australian Golden Orb weaver moulting © Stephen Mudge

When a spider moults, it sheds its exoskeleton, renewing itself and leaving behind a material imprint of its body — climbing out of a ghost or shadow of its own form. This is a vital but vulnerable process: insects stop breathing while moulting, the freshly moulted body is soft and unprotected, but the new skin gives an animal space to grow. The double temporality of the animal and its cast-off shell fascinate me: we are confronted with a physical trace of the past within the movement of the present, a vision of the self split across time. In my piece *MOULT*, I try to imagine the orchestra as an animal that can shed its skin, shedding pasts that continue to haunt the form of the piece.

Like Rachel Whiteread casts the space around and between objects, leaving behind a trace of the space the object occupied, so the spider leaves its own empty shell behind. Every time the spider moults, its past is cast — time (what it was, and what it is now) becomes tangible. As a composer, I was intrigued by this whole concept and I started to think how to create and use tangible temporalities in my music. I took the recording of my string quartet *dead wasps*

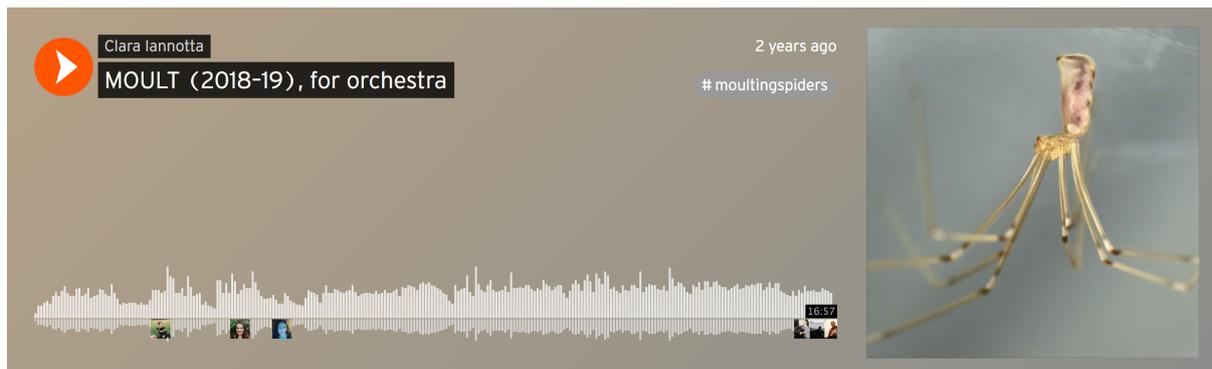
---

<sup>2</sup> Wikipedia, “Moulting”, <https://en.wikipedia.org/wiki/Moulting> (accessed 4 August 2021).

in the *jam-jar (iii)*, which was the latest piece composed before *MOULT*. I applied nine different time-stretches to the live recording of the string quartet and then recorded each result again on nine old cassette players. The idea of a tangible past was represented by the use of a physical object (the cassette player with its very defined and familiar, recognisable sound), by the recording of an old piece of mine, and by my navigation within the temporalities of that recording (the nine time-stretches). This process allowed me to create a physical sonic object as pre-recorded tape, and to compose the space surrounding it with the orchestra playing in real time.

The moulting process creates an exchange between the internal and external space of the animal, and it was important for me to apply the same idea to the piece by searching for sounds and techniques which could merge the tapes with the acoustic instruments. Because of the extreme time stretches that I used, the loss of resolution in the pre-recorded sounds created a lot of artefacts, adding noise, distortion, blurriness, and compression to the original recordings. In order to re-orchestrate these artefacts I had to prepare many of the acoustic instruments at my disposal, adding objects, and using techniques which would make the sound extremely unstable. By doing so, I could compose the exchange between internal and external space, allowing the orchestra at times to embody the cassettes and at times to be the space surrounding them.

Before, I said that composing a form or space around musical material can change the musical material itself. This was exactly the experience I had while working on *MOULT*. Depending on the space I created around the cassettes, how the cassettes themselves are perceived changed. By moving between the spider's internal and external forms while writing the orchestral part, I could change the perspective with which we hear the relatively continuous material of the cassettes.



<https://soundcloud.com/claraianotta/moult-201819-for-orchestra>

While I was doing these extreme time stretches to use in my cassettes, I thought about the fact that when you stretch a physical object, its material might not be consistent, which means that if you stretch it, it loses its shape and reveals the places in the material that are weaker or that have a specific quality. These inconsistent parts will stretch differently than the rest of the object — they'll break, or change their shape. Stretching means to zoom into the sound, compromising its quality by losing resolution — the computer struggles to reassemble the sounds from the data it has, and you end up with a lot of weird sounds because you're moving through the audio wave in a way it was not designed for.

What was fascinating to me, was the fact that the act of stretching was revealing the material of the physical object I was using, and that the now compromised quality of the data was creating a variety of artefacts that were changing

the shape of the overall sonic material. As I mentioned previously, in *MOULT*, I re-orchestrated the artefacts obtained in the cassettes using instrument preparations, objects, and so on. I then started to think about how to have an acoustic time stretch that happened in real time, so that I could reshape not only the temporality, but also the physical object itself.

In Jonathan Safran Foer's *Tree of Codes*, the artefacts produced by the carving process affect not only the material, but the object itself. The words, at times reduced to shredded letters, float inside the pages losing their meaning, forced to build new (at times only visual) connections. The book is not a book anymore, it becomes a sculpture in the shape of a book.

Similarly to how Safran Foer's localised process of filtering and carving words transforms the overall form and function of the book, I wanted to create a process through the production of artefacts which would affect the sonic material as well as the physicality of the instrument. I took this approach while composing the string quartet *You crawl over seas of granite*. I heavily detuned all sixteen strings of the quartet such that their physical vibration would become unpredictable, creating an unstable sonic result. Long notes were extremely difficult to sustain, and the less movement of the hands I would use, the more the sound itself would move and change.



<https://soundcloud.com/claraianotta/you-crawl-over-seas-of-granite-201920-for-amplified-detuned-string-quartet>

At the beginning of this lecture, I talked about how form can be completely derived from the material. This was very clear to me when analysing Bach's fugues, or *Tree of Codes*. At the same time, the function of the space surrounding sounds is not only to fit, and be moulded by the material, but can have an active role in shaping the material as well. In a certain way, form is not a rigid box around the sounds. It has blurry edges, and — like in the work of Rachel Whiteread and Luigi Nono — space can become the material itself, changing the sound as it reads the space.