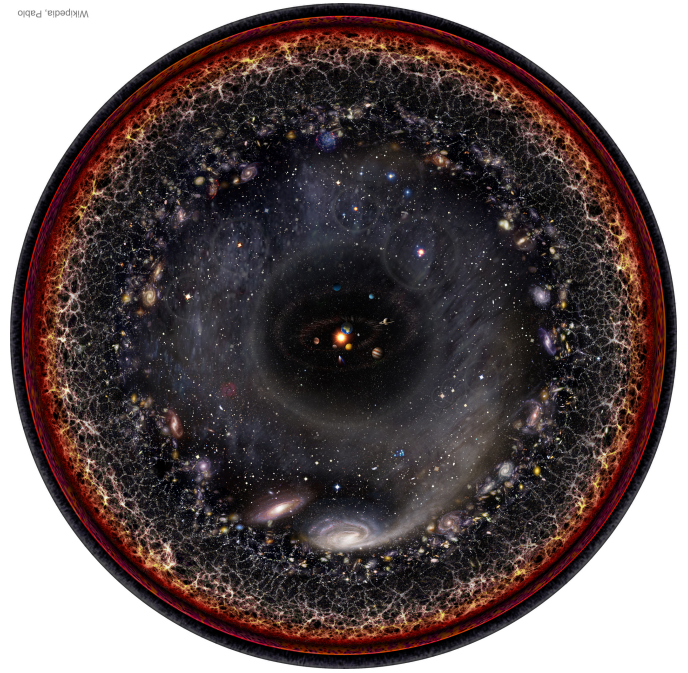


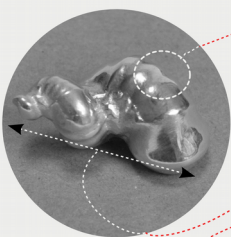
Wikipedia, Fabio



The Data Sublime



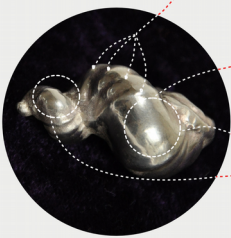
A Poetics of Data



1) A deduced measure of the quality and length of sleep affects the surface patterning of the shell

2) The average diastolic pulse affects the overall length of the shell (z)

3) The number of steps walked per day defines the number of growth segments (shell rotation steps)



4) A measure of anxiety introduces a growth disturbance on the exterior of the shell pattern

5) A measure of air pollution affects the scaling & length of the recurring growth disturbance

<https://unbias.wp.horizon.ac.uk/fairness-toolkit/>

<http://proboscis.org.uk/5302/digital-alchemy/>

[poetry/](#)

<http://proboscis.org.uk/5098/lifestreams-tactile->

<https://www.manifest-data.org/about>

[entangled/](#)

<https://gileslane.net/2015/10/03/reciprocally->

[https://www.blasttheory.co.uk/projects/the-](https://www.blasttheory.co.uk/projects/the-invisible-hand-on-profiling-and-personalisation)

[invisible-hand-on-profiling-and-personalisation](https://www.blasttheory.co.uk/projects/the-invisible-hand-on-profiling-and-personalisation)

[2015/visualise-lifestreams/](https://visualise-lifestreams/2015/)

<http://proboscis.org.uk/projects/2011->

Links:



The Data Sublime & A Poetics of Data

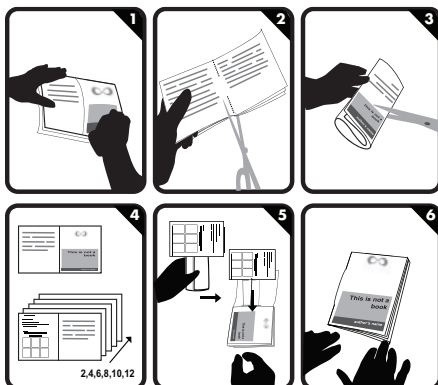
Giles Lane

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<https://bkltr.it/354ygR>

3

At the seminar I presented the *Lifestreams* data manifestation project (2012) which demonstrated how we could use our senses of touch and proportion to engage people with otherwise abstract and ephemeral information being collected about their life patterns and behaviours. The project also offered an alternative vision to the emerging “Quantified Self” and Internet of Things narratives in which complex human behaviours are often reduced to a set of data-driven variables that can be processed from sensor data. This also seemed to be an Orwellian vision that promised all kinds of benefits on the basis of a worryingly narrow perspective.

After the seminar, Marina invited me to Oxford to speak to her research group in Human Centred Computing about the *Lifestreams* project and my work in general. From there we began a conversation and collaboration that has continued over the past five years; most recently resulting in the *Unbias Fairness Toolkit* – my contribution to the two year *Unbias* research project (of which Marina was a Co-Investigator).

Background

In February 2014 Professor Marina Jirotko and I met as participants at Blast Theory’s annual two day seminar, *Act Otherwise*. The theme was “The Invisible Hand: On Profiling and Personalisation”, exploring many issues around the generation and use of “Big Data” in artworks and by artists as well as more generally in culture and society. We found ourselves sharing a healthy skepticism about the way “Big Data”, number-crunching and data visualisation are often presented as a ‘final’ and over-arching narrative to understanding modern life; as an “end to theory”. We both found this triumphalist narrative – that data-driven computation can comprehensively explain everything – to be troubling and misguided, especially as it seemed to be spreading across many other disciplines and fields of practice. The implication that both research and culture could thus be transformed into quantifiable commodities to be analysed and neatly compartmentalised purely by computational means was another major concern.

Perhaps by learning to appreciate the data we generate through our machines in such a way, we could learn additional techniques to appreciate the way that nature encodes 'data' in all its organic and inorganic forms – as a living experience of perception, not only through an analytics of extraction and separation.

To create any form of poetry or art is not easy: it is not the direct or unambiguous product of straightforward rules. To paraphrase Walter Benjamin, the energy to create "lies in improvisation. All the decisive blows are struck left-handed" (*One Way Street*). That is not to say that great craft does not require constant practice and experiment – that programmatic exercises (think of practising musical scales), rituals and habitual activities are not a fundamental part of the making. Many of these are often used to surrender oneself into a *fugue* state, from which the actual work may emerge. Too often, such states are elusive, fleeting and all that one is left with is the cross of making. But this dross might also become

the material of a re-forged piece, worked over again and again, made and re-made until its creator judges that it has reached a state that is *sufficient* to share.

What do we gain from a poetics of data in addition to its more common articulations? A weaving together of harmony and dissonance, rhythm and inconsistency – a way of encompassing adaptation and irregularity within a transcendent whole. A way to enhance our cognitive abilities by challenging us to flex other senses in meaning-making, to enhance our capacities by widening the frames in which we encounter and engage with data.

A poetics of data is about engaging with its qualities, not just its quantities.

Giles Lane
London, October 2019

The category of the sublime in literary theory and aesthetics refers to encounters with phenomena that are excessive – too much to handle – and which inspire awe or dread in the subject. What renders the experience sublime is our ability to, nevertheless, address this vastness or dreadfulness and to incorporate it into a perceptual register for meaning or sense-making. It has been a hugely important and influential category of perception in the Humanities for almost three centuries – as well as having roots in Roman-era Greek philosophy (Longinus' *On the Sublime*, 1st century AD). Edmund Burke was one of the earliest English philosophers to write about it (in *A Philosophical Enquiry into the Origin of Our Ideas of the Sublime and Beautiful*, 1756), followed by the German philosopher Immanuel Kant (in *Observations on the Feeling of the Beautiful and Sublime*, 1764), then Arthur Schopenhauer, Georg Hegel, Rudolf Otto and others since (notably Jean-François Lyotard).

The Data Sublime

We also developed two proposals that were not realised, but which coalesced some key ideas and thinking which have never-the-less flowed into other projects and activities. Both proposals revolved around ideas I was beginning at the time to crystallise – *reciprocal entanglement* and the *data sublime*. An early proposal in 2014 addressed Big Data and the Quantified Self via the data sublime, whilst the other (in 2017) focused on issues at the heart of developing Quantum Technologies. Marina's research group is a part of the NQIT Hub, conducting studies into Responsible Research and Innovation (RRI) in the quantum field.

Whilst I have since written about reciprocal entanglement in relation to quantum technologies, the ideas behind the *data sublime* remained unpublished in proposal documents. The purpose here is to bring them out into the light as they have a renewed relevance to the new project I am embarking on ([Materialising Data, Embodying Climate Change](#)).

the movements of dancers. It allows us to communicate and experience feelings – innate things which are inexpressible, incalculable in themselves, yet somehow connect us and give us access to the experiences and feelings of others. A kind of dark energy perhaps, not something we can directly measure, but which is nevertheless real and pervasive. A kind of knowing that remains tacit rather than explicit. Often it resorts to ‘apophysis’ – describing what is not to indicate that which is ineffable or indescribable. Revealing presence through absence... the shape of something monstrously huge through the sublime. An incompleteness that allows us to invest its gaps and lacunae with something of ourself; an invitation to become enmeshed within a whole that is never finished, that expands as others share how they engage with it too.

It is often said that great works are the ones which we can return to, and in each encounter, find something new. Perhaps that newness is actually always already within ourselves – it is we who

expand and increase in relation to the work, not the other way round. Perhaps this is why perfection is said to be abhorrent and why craftspeople through the ages have often introduced intentional flaws and irregularities into their work. A deliberate incompleteness, preserving a space for the ineffable and unknowable.

But, I hear the objection raised, all this is mere metaphor. I beg to differ: it is as intrinsic a feature of conscious deliberation and action in the world, as the data manifestations we created for *Lifestreams* (and will be creating in our work at the Manifest Data Lab) are expressions of data – not representations of it. These are not metaphors of data, but reifications – they *are* the data, simply expressed in physical forms that we can experience through additional senses to those we generally use with screen-based representations. It is up to us to devise the grammars of sensory engagement that enable us to ‘read’ and make sense of our encounters with them. Some grammars could be shared, others kept private.

awareness of the entanglement itself. It is, of course, always relational between the person and the thing they are encountering.

Artificial Intelligence, Machine Learning, Big Data, Algorithmic Decision-Making are the latest issues *du jour*, about which we are so often told that the data is too big to understand, the algorithms too complex to represent and the decision-making processes too opaque to be grasped by mere humans. Might it be possible for us to make sense and meaning of such vast quantities of data and computational processes in ways that affect our social and cultural aspirations for society beyond the purely instrumental? We could consider the speed and quantity of the data being generated, both individually and socially, as a *monumental* encounter. Such an encounter could then be approached as a moment of the ‘sublime’; an encounter where artistic practice may offer us alternative opportunities to assimilate and make meaning from it.

What the sublime offers us is a conceptual mechanism by which we can recuperate an almost overwhelming encounter with things which are too massive or complex to calculate, measure or fully comprehend. It allows us to make sense, to make meaning of an encounter with the ungraspable. It describes an ontological encounter that transforms something from being *numinous* (or unknowable) into something phenomenological – which we can incorporate into a narrative experience and a type of knowledge. Joseph Addison’s description in 1704, “The Alps fill the mind with an agreeable kind of horror” (from *Remarks on Several Parts of Italy etc. in the years 1701, 1702, 1703*), captures the internal ambiguities of the sublime – that horror can be at all agreeable – which make it such a powerful perceptual register of recuperating the excessive. Such a rupture and intertwining of perceptual and critical abilities within a person’s consciousness could, perhaps, be figured as a form of entanglement between oppositional states and phenomena – the sublime being the moment of

I have been exploring this idea of a *data poetics* through digital materialisation and manifestation in projects such as *Lifestreams (2012)* and more recently in the Manifest Data Lab. I've written before in detail about the '[tactile poetry](#)', created by expressing data about our bodies into talismans that we can develop a tangible relationship with. Talismans that can act as mnemonics or reflective objects that remind us of aspects of our habits and behaviours which affect our health and wellbeing over and *through* time – not just in the series of fractured, fragmented moments in which we glance at the digital display on a 'smart' phone or watch. Like Proust's *madeleine*, or the chink of a teaspoon which defy rationality and even reason.

used to experiencing it on screens, via spreadsheets, tables, graphs, counters, dials or the linear waveforms of measuring devices. Poetry and poetics are time-honoured ways in which people have communicated things that are beyond just measurement – emotions, feelings, beliefs. Things which are at the very limit of description. Things which defy rationality and even reason.

on a saucer, they help us connect out of the mundane discontinuity of daily life into a place of reverie with ourselves.

I have also likened this approach to working with data as a form of '[Digital Alchemy](#)': treating data as a material with which to encounter the numinous and transform the self. A process that does not seek to break apart into individual bits and atoms the delicately intertwined and mutually influential patterns of matter that constitute Life; but that comes to an appreciation of the essence of the subtle forces that bind matter *together*. To appreciate the powerful bonds of relationships between elements that, through connection itself, provide sense and meaning to being and becoming.

Poetry – whether in the form of words, music, visual arts, performance, dance – is a portal into spaces that are beyond the sum of their parts. It is always *more than* the words on the page, the notes in a score, the brush strokes of a painting, the material of a sculpture, the light projected by a film,

via sight and sound as most contemporary technologies currently deliver it. We don't just have to simplify and summarise data in linear ways to make it easier to represent visually on a screen (e.g. in a chart or diagram), we can also use our other senses – touch, sense of scale and balance, taste, smell, hearing, time and temperature.

The data sublime in artistic encounters allows for multiple sensorial engagements, where we are *reciprocally entangled* in the possibility for meaning making with the work itself, through our own consciousness. It is a route away from the reductive reasoning of standardisation, quantification and calculation that lead to probabilistic and statistical interpretations. Instead it is a route to knowledge that reinserts key human qualities of judgement and imagination that can encompass the kinds of ambiguity, diversity and the unknowable that would be routinely excised from analytical systems based on quantification alone.

What do Arts & Humanities offer?

Art and aesthetics offer different ways to conceive of what happens in complex encounters than those utilised by the sciences. When you encounter a work of art, it is the experience itself which determines your aesthetic reaction to the piece. It could be one of awe, delight, revulsion or indifference – whatever it is, it is driven by similar complex factors. Each person's own aesthetic experience is affected by the use of materials, colour, scale, lighting, sense of space and proportion as well as by their own memory, critical thought and emotion. There can be no right or wrong aesthetic experience: each person experiences a work of art in relation to the summation of their own existence.

The methodologies and critical analyses from the arts and humanities, such as aesthetics and categories like the sublime, offer alternative ways to develop new ways of realising knowledge from data and computational systems through encounters that work on multiple senses, not just

Such systems both reinforce and are the products of the standardisation of difference and diversity into a manageable homogeneity. The logic of their engineering is to drive forwards an ever deeper vision of 'efficiency' into the fabric of our everyday

made available to us.

Personal data is not only the traces of our actions in the world – contributed, sensed, detected and recorded online, but a yoke that is coming to define each one of us in ways that may often be beyond our ability to directly perceive. In the hands of governments and corporations it has become the means by which individuals, groups and even whole populations can be trammelled, their choices shaped or 'nudged' into convenient channels and pathways for 'better' governance and exploitation. Our world is increasingly managed by systems that collect, collate and analyse such data, to calculate statistical probabilities based on our past actions and behaviours and to infer what opportunities and permissions will or will not be

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lives – straining out that which doesn't fit, shaving off the awkward edges. Too often it excises difference and diversity by simply refusing to acknowledge that an individual's specific context and situation are valid parameters that require nuanced judgement in decision-making. In this way the vulnerable and excluded experience further depredations; injustices and inequality are compounded and amplified. Complexities are crudely simplified and the richness, the colourful tapestry of life is elided into a seamless standard grey weave. For some, such order may be comforting, perhaps even ideal. Yet for many, probably most of us, this is a poor bargain. A zero sum game in which we have much, if not everything, to lose.

To what part of our humanity may we look for an escape from such rigidity and reductive standardisation? For me, the answer is to make a *poetics of data* that can trigger a phase shift in how we might interact with it. A shift away from the familiar and ordered modes through which we are

London, June 2019

and connect it to their own lived experiences. In this way we will be exploring the *affordances* of a data sublime to make climate science accessible in ways it has not been before.

Evolving technologies such as Quantum Computing and AI – topics of extraordinary complexity and subtlety – run counter to mundane understandings of the phenomenal world and stretch the limits of human perception. The intangible, counter-intuitive nature or sheer vastness of the science makes it hard for people to grasp, and yet so exciting in its implications for the future. The complexity and interdependence of planetary life and natural systems (such as climate) is another sphere that often seems overwhelming in terms of the scales involved. Modelling climate systems alone require some of the most complex computational methods and powerful resources. How people can make sense of such data, often geographically and experientially remote, is one of the key challenges of our age.

The MDECC project will be attempting to explore ways in which artistic expressions of data into physical manifestations (sculptures, installations and inhabitable spaces) might offer new ways for people to make sense of such remote phenomena