

Cambridge Creation Lab (2022)

Interview with Ivaana Muse

IVAANA MUSE: Quoting from your *Short Abstract in Computational Algebra*:

No competition among numbers – this I have observed. It is like in a steady and perfect queue: each stands its own place and never tries to pass over that coming after or before, just for the sake of being the one, the first, the last at once. A buzz of chat rises as I count. They are polished to the touch, polite. They glance up as I call the roll. The whole world gives a strange feeling as I count. The imprecision of feelings is rounded down to fingers. Big things crackle and crumble like frozen snow under my feet.

Your imagery here plays with a “box” full of “alive or dead” numbers: the accumulation of imprecise emotions pervade numbers that peek from a “stack” of algebra. The tension between the apparent and the hidden, between the present and the absent past and the creation of a disorderly order is textured into a perpetual flow of words. Can you elaborate more on this?

FEDERICO FEDERICI: The piece you quote is excerpted from a short fiction I conceived as a somewhat special *leaflet for creative users*, an invitation to meditate on the manifold processes of computing as generative phenomena akin to writing. The choice of such a counterfeit mathematical style should however be plausible enough not to make the whole affair less realistic. An ironic intent is implicit in all this of course.

Numbers, whose existence is a clue of the intrinsically relational structure of the universe, get here reified and almost personified. This is supposed to draw attention, with maybe not too rigorous an approach, to how pristinely abstract they are.

Numbers demand a bent to speculation not unlike that involved by asemic writing. As a pure symbol, a number in fact retains an aesthetic value whose content remains elusive, though, and that becomes even trickier when non-integers are involved.

How to forgo objects to visualise numbers? Images obviously impinge on concepts: 2 *flowers* are not the same as 1 *flower* + 1 *seed*, while the idea of twoness is subsumed in both. It is a matter of basic algebra: $2x$ is not the same as $1x+1y$. We could talk for hours about semiotics in this sense.

For this reason, musical notation is of great relevance in my works. Each number is a note and the way you mentally depict it is the way you imagine that note played on a specific instrument in, with what follows in terms of both empirical and emotional resonance.

Many people identify numbers with 1, 2, 3, (...). What about 1, 3, 1, 2, 5, 7, (...) instead, or other random sequences which point at infinity? One might as well think of 4.1, 4.01, 4.001, (...), which defines 4 by accumulation. From my perspective, the latter instance prototypes a density of signs about something impermanent, some signification maybe, to be focused and fixed.

Numbers stem from a finite alphabets of symbols, through which the universe is accounted for. In the end, writing is an additive practice too: a “word” is added to another and then another one again up to some point.

So, the number sequences are lines, the arrays are stanzas and so on. Moreover, any pattern may be reinterpreted as a digital image, or converted into sounds.

Do numbers rhyme? Of course they may do, intrinsically, since rhyming is first and foremost a relational issue.

IVAANA MUSE: From your background in physics and biophysics, cybernetics and neural networks, how did you get to the world of asemic writing, of experimenting with symbols, glyphs and shapes? How do you think your academic background redoubles the enigma of memory where the typographic process almost acquires a biophysical or molecular meaning?

FEDERICO FEDERICI: To set up an experiment and collect data are the first steps of a procedure which any scientist is familiar to. The thing does not end with numbers, though, whatever they stand for: voltage, particle counting, etc.

The technical specifications of all the devices and the obtained outcomes are always presented in the scientific papers after precise graphic conventions, which make them appear beautifully inspiring and meaningful in their being so unusual.

Data plotting highlights a number of information which would be hard to extract, at a glance, out of a spreadsheet. A graph can show the relationships between couple of variables, help predict the result under different conditions, suggest adaptive strategies in future experiments and so forth. It is at least a study for the portrait of the phenomenon under investigation: nothing decisive, but nothing unnecessary either. I especially love scatter plots, since they present the situation the way it is, without attempting any arbitrary connection between the dots.

My typographic approach may oftentimes be traced back to a personal adaption of standard scientific notations, with letters in place of dots, squares or other glyphs. In the end, each word is a pattern in which independent symbols are connected through the specificity of signification.

A page disseminated with letters is a noisy field of sign interferences. Sometimes the same effect is achieved by means of purely asemic textures. My hand then resembles some old mechanical plotter, driven by unintentional statements which never lead to totally random gestures, though. A single mark or a line may be scarcely meaningful in themselves, but the overall entanglement retains some signification.

I address the issue of textuality as if I dealt with a strange universe of elements, in which consonants, vowels and punctuation make up an alphabet of fundamental particles: words are atoms or compounds and sentences get combined into ever more complex fibres or strings of signification, up to the living body of the text. This may be seen as the legacy of my studies in biophysics and cybernetics. Or is it true the opposite?

IVAANA MUSE: How does silence translate in your works? How do you express *remembered silence*?

FEDERICO FEDERICI: Silence and vacuum are often implied in my works, but rarely as a plain “lack of” something. The hypothetical absence of matter generates silence, inner silence in a way, too: no vibrating structures, no light-matter interaction, no bright/dark contrasts and so forth. If sound needs a medium, the absolute lack of matter prevents its propagation. Would such condition determine both perfect silence and perfect vacuum? From my perspective, the issue is rather more complicate than it appears, no matter

whether in the field of physics, writing, music, or any other form of art.

First of all, vacuum is not “a space without anything in it”. Our knowledge of the universe has lead us to conceive of it as a seat of all-pervading interactions, a place wherein the equivalence between energy and matter is set. As Einstein himself stated, “space-time is not necessarily something whose existence can be considered in itself, as something independent of the actual objects of physical reality. Physical objects are not *in space*, but they are *spatially extended*. The concept of “empty space” becomes thereby meaningless.”

Matter is not anything distinct from space, but some sort of property of it: that is the very point I have been working on for years. If you consider “signs” as the counterpart of “matter” and “signification” as the set of the “all-pervading interactions”, you immediately see how a blank page or a silent place have very little to do with the sense of vacuum and of silence I have been investigating. When I hint at a page or a place, I do mean everything we consider as such, from a sheet of paper to a freshly opened file.

To adapt what Rosalind Krauss states about the concept of medium, silence and vacuum are *relational media*, i.e., they do not exist other than in the relationship established. They are not neutral means delivering signification.

Time, the second mainstay of the universe, is subsumed in the idea of *remembering silence*. The very fact that you put the question means that silence and vacuum are not anything immutable or eternal. In 2019, I attempted to express this concept in *(First) Attempt of Rhyming Silence*. In this visual poem, the dots pierce the surface of the paper, presenting themselves as the negative of some material or ideal medium, or ink it more or less intensely. The pattern thus expresses silence as a gradation of meaningfulness, which may vary over time. The choice of using dots is connected to the definition of an abstract mathematical space in terms of objects labelled as points, of which no additional information are required, except for the relationships which connect them.

IVAANA MUSE: In «Coffin Bell – A Journal of Dark Literature» I love the conceptual drawings of the *Black Old Suns*. What I found most interesting are the various symbols that you have incorporated-could be associated with satanism or Judaism, or the eye of the God Horus, mandalas, runes, Hindu yantras, Taoism. The list is endless. How did you conceive of these drawings and the varying intensities, rhythms and vibrations of black?

FEDERICO FEDERICI: The *Black Old Suns* are computer-generated tables in the wake of [The Way I Discovered the Berlin Wall Has Fallen](#). Both books exist only as the code generating them. The conceptual drawings in question are meant to illustrate the hypothetical catalogue of a universe brimming with likely phenomena, from the intergalactic scale down to the world of quanta.

This kind of projects shifts the problem from writing to engineering some set-up capable of passing on numerical values to a typesetting environment. Here, they get interpreted as parameters of functions designed to produce plots.

I generally use a combination of Arduino and LaTeX which I find rather flexible to my purposes.

The book is the outcome of multiple linguistic levels, after a precise hierarchy: *activation of sensors* → *data collection* → *numerical elaboration* → *symbol recombination* → etc.

Each phenomenon corresponds to one such cycle.

The writer drops the traditional role of reservoir of the text and gets engaged in that of an experimenter. While keeping the full control of everything, the final result proves to be

somehow unpredictable.

It is up to him to create the snippets that drive the devices and elaborate the data. Every fluctuation in the physical property investigated corresponds to a new page produced.

I may define this procedure as a sort of *applied writing*, out of an upstream theoretical effort.

IVAANA MUSE: *Random Dead Access Memory*: using paper, ink and typewriter, this asemic exploration seems to have many narratives mystically woven into each other. I love what you say about asemic writing:

They often behave like smugglers, creeping along the guarded frontier of meaning, with their bags crammed with somewhat secret or confidential schemes, scripts, preparatory notes or sketchbooks. There may no longer be codes to draw signs from: language restlessly reinvents itself in the common forge of form and meaning.

In a rather different contact, I had read some scientists say that, when you die, the brain cells die, so there is no memory after death, thus is not possible to find memory in dead neurons. Your piece seems to contradict this visually to me: tell us about it and about the enigmatic fragments furtively seeking attention.

FEDERICO FEDERICI: The idea for this series about alleged dead machines stems from the consonance between RAM (Random Access Memory) and REM (Rapid Eye Movement). RAM is volatile, while recent studies have investigated the role of REM sleep for spatial and contextual memory consolidation.

The extreme difficulty in isolating living cell activity, compared to the reliability of short-term memory in any hardware, again puts forth the contrast between the mathematical or electronic models of artificial neural networks and biological systems.

A “dead” machine would be supposed to share with the living the experience of dying. It should thus exhibit a certain degree of consciousness, being not merely a broken machine to be repaired or one set offline.

A switched off device is neither asleep, nor dead. The stored data can be retrieved at any moment, but this is just one of the three components of memory, which actually includes encoding and consolidation too.

In both the artificial world and the biological one, memory depends on various processes at the neuronal level: those that model synapses and spines and those that change the strength of synaptic connections. The representation of memory needs a delicate phase of consolidation against disturbing influences which might undermine the process. Several studies prove sleep to be crucial in this regard, for it is a reversible state of latency in the processing of external stimuli.

At present, no dead machine exists, but artificial networks tend to ever better simulate natural ones.

In the work you mention, I have combined partially erased printed circuit boards with an asemic repertoire of lines. This aims at depicting both electrical stimuli delivered from disconnected wires and scattered memory traces about to decay. The asemic tangle suggests attempts to recall fragmented episodes, failed owing to divergent or lacking details, interferences between signals, or processes pertaining to non-declarative memories.

Asemic writing naturally subsumes these dynamics since it evokes the very idea of vulnerability of language.

The partial reactivation of language invariants do not suffice to stabilise the content of the

message. The eye movements while reading, trained to text recognition and other associative mechanisms, are now faced with a sort of repeated priming, which always remains just below the threshold of signification, though.

IVAANA MUSE: From what I understand, *Asemic B-Sides* was inspired by an essay written by Pavel Florenskij, in which icons are hinted at as doors. What is your perspective and how do you explain that the lines get more intense, more random, or more clustered or even estranged at times? Are these tables supposed to serve as a threshold between the visible and the invisible world?

FEDERICO FEDERICI: I started conceiving of this series after observing how an excess ink from the nib seeps through the paper, or the way the back of a sheet get engraved, almost to suggest a tactile experience of reading, hitting hard on the keys of the typewriter. Holding the same piece in my hands after several days, it appeared to me double-sided.

Ink gets absorbed as blood of writing. Over-painted and over-textured tissues are thus brought forth, more evocative and blurred in some places, more defined and denser in others. The text resonates from within that piece of matter, of which it is the new sap that revives thin organic films.

The very concept of two-dimensional textuality is questioned. The text does not wholly belong to either surface. Nor is it the hindrance at the threshold of signification. It gradually becomes a vanishing presence that points beyond, behind, to a further space of sense. Signs poignantly exhibit how fragile they are by taking roots in the depth to become inseparable from the body of the text. Signification is the breath of life in a living organism.

IVAANA MUSE: *Ten Olivetti Tables* is for me a conditioned sorting out of rhythmic and arhythmic structures and an emancipation of words from the compositional whole of presence and absence. These visual textures so to speak of *breath* or *roomoor/identities/murmur/deereed/rumore/dooroot/* or the play of the word *a-lone* in some manner is reminiscent of James Joyce's *Finnegan's Wake* where words become symbols and suspend the reader's senses in a productive state of tension. Please share how you conceived of this and how you improvised on these visual motifs.

FEDERICO FEDERICI: With these tables, I did not mean to express actual facts, but to meditate upon the exile of/from signs. To this purpose, I planned to arrange words within strict patterns, which would serve as a real syntax, thus achieving more formal a control than in purely asemic works.

I have addressed *exile* (*exilium* → *ex solum* → out of one's *land*, i.e., out of one's *language*) as a premiss of writing, which may occasionally even come out of a play with words.

I wanted to break the typical totem of any self-contained system of signs. The choice of the language transcends what the word refers to, yet it impinges on how reality is alluded to, owing to the process which shaped that very language.

Most of the tables, designed to unravel the workings of the language microcosm, hint at quantum physics. Splitting an atom is to split a syllable, wherein consonants and vowels act as language quarks. The complicated field of signification each word consists of undergoes spontaneous metamorphoses.

Your referencing *Finnegans Wake* allows me to stress that any translation would alter the original goal. Fundamental particles do not necessarily transform into one another, not even when they own the same energy.

IVAANA MUSE: Patterns, codes, half-parsed texts, borderless-endless perceptions, varying linguistic structures, with the interventions of breath and data, air molecules and membranes-random arrangements and erasing thoughts: how does memory shape your work?

FEDERICO FEDERICI: At least two irreducible delays exist between the words in a sentence and the experience they attempt to refer to: a physical delay and a psychological one.

Writing on paper presents the text as the ultimate stage of a process of layering, in which the fragments of previous drafts form the bedrock which the completed work rests on. Even the least legible residues contribute to the stability and balance of the palimpsest, modifying one another almost with a contrapuntal effect that goes vanishing. Erased words are thus as eloquent as the lines that cross them out.

In modern word processors, this all is shifted into a virtual space. Words get no longer physically incorporated somewhere. The text does not seem to exist as a stand-alone entity and enters a permanent migrant condition from a display to another. While every action remains reversible as long as the file is open, the past ones get permanently lost once it is closed. The background never gets saturated with signs and remains pristine, as if the text were ready to be written anew at any moment. Typing a word is almost to think it only. The working memory is not entirely superseded by automatic saving. The machine retains a precise memory of everything, without the psychological traits of the entanglement and the intensity of signs. It is up to the author to never cease elaborating the text in its most abstract terms.

Over the course of time, this technological habit has pushed me back to the old typewriters as to a way of keeping track of the text, working on it as on a living organism. The almost irreversible act of typing is quite close to experiencing life: typing even just a letter is to wound the sheet, to leave a subtle scar whose sense will belong to that body only.

IVAANA MUSE: Just completed reading your *A Private Notebook of Winds*. It was an experience that moved me deeply. I wanted to ask, why are woods wind-learning machines? The imagery of geometries of membranes secreting the memories held reminds me of an artwork titled *Translucent Membrane* by Slovenian artist Uršula Berlot and in such and such, you compel me to listen with the eye and smell with my touch. Your poetic sensibility is constantly shifting into new realms of perception with the doubled stakes of converting image into word and vice versa. Tell us about this book and share some of its metaphors and what they mean to you and the remembered and oftentimes deliberately amnesiac phrases that layer the static/moving elements in your word-visuals.

FEDERICO FEDERICI: The investigation upon a windy day on the slopes of Mount Melogno is behind the project. The book is the detailed report of it, based on an archive of short films, sounds, stanzas and a variety of natural finds.

The hand-sewn original papers now belong to the artists' book collection of the Academy of Fine Arts in Palermo, but a print catalogue has been released too, which include texts and images.

Among the tools: a shotgun microphone pointed to a birch; an ambisonic microphone and a camera mounted on a beech stump; an array of contact microphones on the bark of a chestnut to record wood vibrations; Olivetti Studio 46 typewriter; pencils and pens for drawing and taking notes.

I have always perceived the wind as a flickering of signs on a broad map. The tangle of mobile ripples it leaves on the tops of the trees is a sort of impermanent writing, an

archetypal language of signs. Different shades of colour correspond to different sound frequencies. To enter into a dialogue with the wind is to interact with it on both a physical and a spiritual level.

The environment is a language, a source for true writing. Leaves are letters of a plant alphabet. Each tree is a stanza, each twig a line, the whole woods an unending poem.

The wind is an expansive system of spiritual drives which cannot evade itself. Once it is mapped into the geometry of the woods, it contracts to primary structures: buds, leaves, bark chips and so forth. Each tree embodies strings of air and the woods gets abstracted to the point it becomes a wind lattice.

Plant articulations, fibres regarded as lines, resonate free from words, which remain unresolved and unresolvable elements in the branching of sense.

Texts seem to never come to an equilibrium. The enduring instability of the written matter determines incessant adjustments of signification up to its erosion.

As the text evolves from an almost cell stage towards more readable fragments, the latter tend to disaggregate themselves again into noises that subsume anthropophonical units.

Studying the woods on that day was more than recording their wind or writing about it. I have attempted to let the wind write how the trees have long learnt it.