

Graphemechanical Spaces: Poetry, From Speech to Writing

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Abstract: As a conceptual poet with an interest in physics, I have often found that what is usually described as ‘science poetry’ has a tendency to appropriate scientific concepts and terminology as metaphor for an altogether different subject. This runs the risk of presenting the scientific references in an inaccurate/incorrect context, ultimately misrepresenting those ideas and creating poetry at the expense of science. The focus of my work is instead to approach science – physics, in this case - through the medium of poetry in such a way that both the science and the poetry are given equal standing, with neither one taking precedence over the other. My emphasis is interdisciplinarity, seeking to identify and emphasize similarities between the two as well as their reciprocity, demonstrating not only how science can be explored through poetry, but also what poetry can learn from the scientific perspective. Heavily influenced by ideas put forward by Derrida in *Of Grammatology*, I have become interested in differentiating between poetry as an act of speech, and poetry as an act of writing. Combining this with elements of Einstein’s theories of relativity, I explore how constructing poems intended to exist solely as writing (not as speech) enables the writer to liberate and fully utilize the space of the page/screen as a dynamic element of poetics. This alternative perspective grants a spatial freedom in positioning, overlaying, orientation, color, size, etc., which is limited in writing as speech, through the inability of speech to be accurately replicated. This essay introduces the theoretical framework behind my approach in the two poems which follow, ‘ $E=MC^2$ ’ and ‘Freefall: The Happiest Thought’.

Keywords: physics, writing, speech, poetry, Derrida, Einstein

What is the ‘graphemechanical’? I have coined this term as part of my own work on the combination of physics and poetry, both of which require, in varying yet significant ways, a consideration of ‘space’, the discussion of which is far from simple. Space may appear, in the day to day world, as something that is just ‘there’, passive, static, in the background; a stage onto/into which things fit. This was Isaac Newton’s view of space: fixed at every point, unchanging, a screen backdrop against which objects executed their numerous dynamics. It proved, however, to be a false assumption, as demonstrated by the theories of Albert Einstein in the first two decades of the twentieth century. Special and general relativity revealed space to be a dynamic and fluctuating series of relationships between objects. These theories demonstrated that space is affected and changed by the presence and motion of matter, and further that such shifts occurred not only as a phenomenon of spatiality, but also

simultaneously of time: time and space being dynamic and inseparable.¹ This is something that, in science, has been established for the best part of a century.

Writing, as practice, always involves the use of space: the page, the screen, etc.: a physical set of dimensions within which writers operate. Whether producing an essay, a piece of prose, or a poem; each writing process involves some consideration of 'space'. Charles Olson notes this in 'Projective Verse':

If a contemporary poet leaves a space as long as the phrase before it, he means that space to be held, by the breath, an equal length of time. If he suspends a word or syllable at the end of a line he means that time to pass that it takes the eye - that hair of time suspended - to pick up the next line. If he wishes a pause so light it hardly separates the words, yet does not want a comma - which is an interruption of the meaning rather than the sounding of the line - follow him when he uses a symbol the typewriter has ready to hand.²

However, it often seems that (in mainstream works, at least) writing remains trapped in what we may term a 'Newtonian' attitude to the space of the page. Even Olson's perspective falls into this trap, to a degree, through its emphasis of the role of speech. In the opening pages of *Of Grammatology* (1967) Jacques Derrida writes:

With an irregular and essentially precarious success, this movement would apparently have tended, as towards its *telos*, to confine writing to a secondary and instrumental function: translator of a full speech that was fully *present* (present to itself, to its signified, to the other, the very condition of the theme of presence in general), technics in the service of language, *spokesman*, interpreter of an originary speech itself shielded from interpretation [. . .]. We must think of a new situation for speech, of its subordination within a structure of which it will no longer be the archon.³

Without moving into the problem Derrida poses between writing and speech, consider the core idea that is posed in these few lines: the liberation of writing from speech. It is this privileging of speech that results in a Newtonian view of space - the page or screen - prevailing in poetry, as speech is historical, sequential, and by its nature it has few spatial aspects. Often, a piece of poetry is written with the intention of being read, with its 'sound' in

¹ Albert Einstein, *Relativity – The Special and the General Theory* (La Vergne: BN Publishing, 2010).

² Charles Olson, 'Projective Verse', in *Postmodern American Poetry – A Norton Anthology*, ed. by Paul Hoover (New York: W. W. Norton & Company, 1994), pp. 613-21 (pp.618-19).

³ Jacques Derrida, *Of Grammatology*, trans. by Gayatri Chakravorty Spivak (Baltimore: Johns Hopkins University Press, 1997), p.8.

mind - in a very literal sense – and then read aloud or spoken. Much poetry is written as speech, in which the writing merely acts as a means of recording an ‘absent’ speaker, allowing the speech to exist in the meantime until it is picked up and spoken again. According to Olsen, though poems may be written down, they are, effectively, built for speech. In this sense the space of the page is kept as a permanently suspended and passive object, a stage that is not permitted to move while the actors - words - perform on it: the page and its space are oppressed.

In the case of poetry as written speech, we begin at the start of the poem, read along the line from left to right and move to the line beneath, in sequence (in English). This necessity, which is prescribed by the writer’s reproduction of speech on the page, means that the full potential of the page is narrowed along a similar scale to that of visible light when compared to the entire electromagnetic spectrum: that is, we perceive a very small segment of a much larger range. But what of writing, writing liberated from speech, writing that exists as writing that cannot be spoken out loud? To do the same would cause significant aspects of the writing to become lost due to the inability of speech to reproduce them. This, in essence, is what ‘grapheme-mechanical’ writing refers to: writing that exists as writing, or not at all. The term ‘grapheme-mechanical’ is a portmanteau word, a merging of the words ‘grapheme’ (the smallest unit of written language), and ‘mechanical’ (having to do with machinery, in this case ‘textual machinery’). In doing this, in removing the preference of speech, the page as a space is opened up. Instead, the poem (or writing) itself aims ‘to spatialize the historical narrative’, to borrow Edward Soja’s terminology.⁴ As Soja explains:

Today, however, it may be space more than time that hides consequences from us, the ‘making of geography’ more than the ‘making of history’ that provides the most revealing tactical and theoretical world. This is the insistent premise and promise of postmodern geographies.⁵

⁴ Edward Soja, *Postmodern Geographies – The Reassertion of Space in Critical Social Theory* (London: Verso, 1989), p.1.

⁵ Edward Soja, p.1.

The viewing of the text - the poem - as a 'geography' rather than a 'history' is central to the grapheme-mechanical perspective. It draws our attention to the numerous properties that writing possesses which speech does not, further separating the two. This allows writing to free itself from 'mere' representation towards a view that shifts the position of privilege away from the 'poet as speaker' and onto the poem as a physical object.

In *My Mother Was a Computer*, N. Katherine Hayles draws our attention to the succession of the terms 'speech', 'writing', and 'code', which she refers to as 'the three major systems for creating signification'.⁶ Within the posthumanist⁷ context in which she writes, these are all heavily related to the transmission and storage of information, presented as a hierarchy, with speech at the bottom and code at the top. The ordering of the hierarchy reveals an evolution of information from the temporary, to the permanent, to the operational.

Speech, as Saussure stated, has at its command 'in contrast to visual signifiers [...] only the dimension of time'.⁸ Another way of stating this is that speech has only temporal permanence (what has been spoken cannot be unspoken), it is spatially impermanent. Therefore, speech can only be a means of transmitting information; not of storing it, as storage itself (whether physical, psychological, or electronic) is always measured in units of capacity: of space not time. Writing, as Hayles notes:

Unlike speech (before recording technologies) is not confined to the event of its making. It can be stored and transmitted, published in dozens of countries and hundreds of different editions, read immediately after its creation or a thousand years hence.⁹

Writing is, in contrast to speech, storable; it possesses a degree of both spatial and temporal permanence. The writing becomes a physical object, accessed visually, and makes it possible

⁶ N. Katherine Hayles, *My Mother Was a Computer* (London: University of Chicago Press, 2005), p.47.

⁷ In brief, posthumanism, as Hayles describes, is a perspective that constitutes a privileging of 'informational pattern over biological instantiation', a decentering of the significance of *human* consciousness, and a viewing of the biological body as the original prosthesis.

⁸ Ferdinand de Saussure, 'Course in General Linguistics', in *Literary Theory: An Anthology*, ed. by Julie Rivkin and Michael Ryan (Oxford: Blackwell Publishing, 2004), pp. 59-71.

⁹ N. Katherine Hayles, p.47.

to encounter the same text multiple times (almost indefinitely). In terms of information, however, a piece of writing is still purely a form of storage; its status as an object, in many cases, makes it static and unchanging, and we are only able to either access the information or transmit it. Code, on the other hand, is designed for operational purposes. As Hayles explains:

In the worldview of code [...] every voltage change must have a precise meaning in order to affect the behaviour of the machine [...] Code has become arguably as important as natural language because it causes things to happen, which requires that it be executed as commands the machine can run.¹⁰

As well as being both storable and transmittable, code has the added capability of being able to affect its environment (physical or electronic), to actively and directly cause a change. This concept is essential for understanding the graphemechanical approach to writing.

In paying close attention to these three systems of signification, it is possible to construct pieces of writing (poetry, in this case) that can behave as both writing and code, that is, with the information of the piece encoded into both its language and structure in a way that requires the reader to perform specific operations in order to access the poem. Speech, however, from this perspective, can only be encountered in its translated form, most often as *speech translated into writing*. This ‘storage’ of speech as writing ultimately restricts the writing, as speech attempts to preserve itself (as closely as possible) through writing. However, by moving away from viewing writing as a means of storing speech, we find that it is much more capable of code-like behaviours, which affect changes within the act of reading. A footnote relocates the eye on the page: a command that performs an operational shift, instructing the reader to jump from that point to the relevant note at the bottom of the page. A piece of curved text, or text presented upside down, or in a particular shape, requires the reader to manipulate the physical object of the text, turning it around. Across multiple pages, readers can be directed to shift several pages forward or backward before returning to their starting point, thereby altering the linearity of the text. These are just a few extremely

¹⁰ N. Katherine Hayles, p.47.

simple grapheme-mechanical devices that reveal writing's ability to physically alter the act of reading: to perform a 'code-like' change, that makes use of the space of the page(s) in a very real and dynamic sense. Such devices allow writing to operate as a geography rather than limiting it to sequential linearity. Writing, from a grapheme-mechanical perspective, is permitted to go beyond the restrictions of speech, opening itself up to a variety of aspects that go beyond the capabilities of speech. Writing can be shaped on the page, it can jump from one part of itself to another, it can shift its orientation, it can visually distort itself, it can be arranged as patterns, it can be turned around and viewed from different angles, multiple writings can be presented simultaneously. This malleability is possible within a writing that is treated as writing, but is restricted when the perception of writing is limited to providing storage for speech.

At the heart of the grapheme-mechanical approach itself is a sense of relativity, of the spatio-temporal relationship between the visuo-textual elements on the page (or on the screen). Whereas 'Speech' exhibits a temporal permanence - spoken words cannot be unsaid in 'time' - it also (and conversely) possesses a spatial impermanence: it occupies no permanent space, has no 'geography' to it. Writing, on the other hand, may have a temporal impermanence: text can be effaced, erased, destroyed. However, it has a much greater spatial permanence, existing, as part of its graphic nature, as a geography. Just as the turn of the twentieth century saw the rigid and passive conceptions of space and time in Newtonian physics be overthrown by a single entity, Einstein's 'spacetime', so too should writers, of poetry in particular, learn from this and begin to explore writing's own literal spaces and times, the possibilities offered by approaching writing as a physical act, and a piece of writing as a physical object.

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