Pound's Transmissions: Modernist typography and experimental notation

Recording instruments: rhythmical systems and perfect notation

What typography could register, and what poetry was thought capable of notating, was susceptible

to technologically charged optimism and technologically stimulated misgivings in the 1910s. Writing

in 1918, Ezra Pound sounds a cautionary note as to what both poetry and music have the power to

record:

> Music is not speech. Arts attract us because they are different from reality; yet differ in
> some way that is proportionate to reality. Emotions shown in actual speech poured out
> under emotion will not go into verse. The printed page does not transmit them, nor will
> musical notation record them phonographically; but, for all that, a certain bending of words
> or of syllables over several notes may give an emotional equivalent.[1]

Pound's alliance of print literature, musical scores, and sound technology typifies a language where

books and manuscripts are conceived as a form of recording apparatus. Pages, like antennae,

transmit. Yet at the same time the very machinery whose lexicon has infiltrated how Pound talks

about art is a pejorative adverb. This simultaneous ingestion of and aversion to technological

language is symptomatic of Pound's technological poetics, where poetry's proximity to machinery is

enticing for a poet pursuing a programme of radical reform but where a mechanical poetics is still

eyed with revulsion.

Though he styled himself as a latter-day troubadour, thereby invoking a bardic freedom

from print and paper, one of Pound's most enduring contributions to Modernist literature was his

pioneering experiments with typography, with the spacing, lay-out, and disposition of the page.

Mimicking damaged codices and fragmented papyrus, Pound's early lyrics already acknowledge the

ephemerality of oral poetry, and the troubadours whom Pound ventriloquizes, like Cino da Pistoia,

are often senile and have forgotten snatches of their own songs. Rashes of ellipses dramatise the

lacunae and omissions in those early poems, where these personae fail to preserve and transmit

their own verse. These extensions of a Browningesque punctuation prefigure the much more radical

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visual language Pound will innovate in his lyrics of the 1910s and in the *Cantos*, where he elaborates a grammar of broken lines, unorthodox word spacing and line spacing that later poets, like E.E. Cummings and Charles Olson, see as the wellspring of the typographical experiments of Modernist verse. The cardinal importance of Pound's typography to the history of Modernism was that he was trialling visual devices which would become the stock repertoire of generations of poets, from Pound's peers like Mina Loy and William Carlos Williams, to the Black Mountain Poets and British Modernists like David Jones, to the late-Modernist verse of Geoffrey Hill, Susan Howe, and J.H. Prynne. Experimenting with typography has become second nature to scores of contemporary poets, but this legacy of High Modernism was chiefly bequeathed by Pound and his decision to break with the perennial conventions of the lay-out of verse. Although Pound did experiment with typeface and font-size in works like his deluxe 1932 translation of Guido Cavalcanti's *Rime*, this article will focus on typography in terms of spacing, lay-out, and the splitting of the verse-line, visual choices made by the poet rather than the printer and which Pound (like Williams, Moore, Olson and other Modernist poets) all understood as part of a typographical poetics that they were themselves in control of. Pound's eminence as a poet is not just that he broke the pentameter, as is so often reiterated, but that his typographical investigations question what a verse-line is at all, as words and phrases are cut up and prised apart so that what Browning or Swinburne would have *seen* as a line is no longer sharply visible. Lineation stops being guided by metre and so becomes guided by the spatial imagination of the poet. As poets like Pound plot the design of their pages, typography and poetics become inseparable.

What this article will argue is that Pound's experiments with typography were part of an ambitious project to record and preserve the voice of the poet by innovating a complex visual language conceived of as a systematisation of rhythm. This project is catalysed by the vertiginous sonic possibilities offered by the abandonment of accentual-syllabic metres in much Modernist verse, as well as a concurrent fear that such rhythmic freedom needs to be solidified and ordered. Not least amongst the reasons why we ought to attend more closely to Modernist typography is that

throughout the last century poets like Pound, Williams, Olson and Levertov claimed that free verse could only be properly marshalled through mise-en-page, and that prosodic progress was to be realised through manipulating the printed page. Utilizing the possibilities of typography, I will claim, was seen as a modus by which Modernist verse could keep step with advances in acoustic technology and the advent of the phonograph, through overhauling the storage capabilities of poetry. Pound, this article will claim, though his critical musings often intersect with those of other experimenters like Marinetti and Apollinaire, was the leading light of a typographical revolution particular to Anglo-American Modernism, distinct from the pictorial stylings of *calligrammes* or the vociferous sloganeering of *parole in libertà*.

Pound's sense of a technical hitch in affective transfer, that '[e]motions shown in actual speech poured out under emotion will not go into verse. The printed page does not transmit them [...]', articulated in the mismatch between the production process of pouring emotion into the mould of verse as if in a foundry and the aerial precisions of modern acoustics, is unusually pessimistic, and hinges on a distinction between real and aesthetic emotion that is uncommon in Pound's prose. Five years earlier, Pound's faith in what the printed page could transmit was much more sanguine. Pound repeatedly volunteers accounts of the composition of his lyrics as the effort to record momentary densities of feeling, and in 1913, the year of the poem's publication, he narrated the genesis of 'In a Station of the Metro':

> I tried to write the poem weeks afterwards in Italy, but found it useless. Then only the other night, wondering how I should tell the adventure, it struck me that in Japan, where a work of art is not estimated by its acreage and where sixteen syllables are counted enough for a poem if you arrange and punctuate them properly, one might make a very little poem which would be translated as follows [...][2]

The punctuation of this very little poem is unremarkable if we take it that Pound is referring to commas and full-stops, but its punctuation of the page in its original printing in *Poetry* is striking:

> The apparition   of these faces   in the crowd   :
> Petals   on a wet, black   bough   .[3]

In Pound's account a radical diminution in poetic scale is justified if that space is allotted with sufficient acuity. The typography of this hokku more than just underscores the rhythm-units of these lines, it opens up apertures. The space between 'black' and 'bough' is not the most natural juncture, while the preceding consecutive stresses of 'wet' and 'black after three unstressed syllables invite a pause. Even more conspicuous is the spacing between words and punctuation marks at the end of both lines. In effect, Pound's typography creates spaces in the voicing of this poem that but for this lay-out would not otherwise exist.

Pound's wording in the 1913 article is notable for its confidence in how sound can be manipulated. Syllables are spoken of as if they have no cohesive force of their own, no inherent adhesion at the level of the word or phrase, but rather are monadic particles to be arranged and disposed at will. Pound speaks of them as if they were graphical counters rather than phonetic units. Just prior to the discussion of 'Metro', Pound makes an even more audacious assertion of what level of control the poet can exercise:

> I knew at fifteen pretty much what I wanted to do. I believed that the 'Impulse' is with the gods; that technique is a man's own responsibility. A man either is or is not a great poet, that is not within his control, it is the lightning from heaven, the 'fire of the gods,' or whatever you choose to call it. His recording instrument is in his own charge. It is his own fault if he does not become a good artist – even a flawless artist.[4]

Poets have perennially spoken of their instruments, whether barbitos, lute, or lyre, but those are the vessels of unmediated poetic performance, of the oral culture of pastoralised bards. But a *recording* instrument is an instrument of notation rather than performance— or rather both at once. For recording instruments belong to the age of the phonograph, where the production and storage of sound are no longer discrete processes; as Friedrich Kittler articulates: 'Unlike Gutenberg's printing press or Ehrlich's automatic pianos in the brain metaphors of Taine and Spencer, [the phonograph] alone can combine the two actions indispensable to any universal machine, discrete or not: writing

and reading, storing and scanning, recording and replaying.'[5] Its typographical notation inscribing patterns of sound that are otherwise inaudible, 'In a Station of a Metro' is one such recording instrument, a poem apprised of the idea that the writing and production of sound are no longer discrete processes.

'[T]he first articulate return of the selfsame voice' that recording instruments channeled, claims Douglas Kahn, and the 'machinic fusion of orality and literacy', propelled Modernist writers to totalising visions of their technical powers; a prosodic hegemony 'during the heyday of imperial expansion'. The manifold possibilities of typographical manipulation lead Pound to think like an architect of systems.   Corresponding with Harriet Monroe in 1913, Pound both insists that his experimental spacing be adhered to and indicates that 'In a Station of the Metro' is not an isolated essay in typography, but part of a global scheme:

> Dear Miss Monroe: I'm deluded enough to think there is a rhythmic system in the d—stuff, and I believe I was careful to type it as I wanted it written, i.e., as to line ends and breaking *and capitals*. Certainly I want the line you give, written just as it is.
>
> > *Dawn enters with little feet*
> > > *like a gilded Pavlova*.
>
> In the "Metro" hokku, I was careful, I think, to indicate spaces between the rhythmic units, and I want them observed.[6]

The spacing of 'Metro' is atypical in Pound's early career, but the line-breaking of 'The Garret, the poem here referred to, is ubiquitous in the poet's lyrics; it is a resource Pound turns to again and again. The delusion referred to might be read as the undercurrent of the ambition here exhibited. Systematizing prosody, reworking how the printed page communicates without any recourse to literary tradition, invites the self-reproach of hubris. Pound, though, is not alone is advancing such hubristic claims for how typographical experiment might renovate the communicative medium of poetry. In the year following this letter to Monroe, Filippo Marinetti publically announces his own typographical system in an article free of Pound's admixture of self-doubt:

> By means of one or more adjectives isolated between parentheses or set next to words-in-freedom behind a perpendicular line (in clefs) one can give the different atmospheres of the story and the tones that govern it. *These adjective-atmospheres or adjective-tones cannot be substituted for by nouns*. They are intuitive convictions difficult to explain. I nevertheless believe that by isolating, for example, the noun *ferocity* (or putting it in brackets, describing a slaughter), one will create a mental state of ferocity, firmly enclosed within a clean profile.[7]

Marinetti, referencing the greater diagrammaticity of the musical score with its lines and clefsis more audacious than Pound in his belief in the linguistic bonds that can be unloosed in reordering the space of the page. Marinetti's proposals are an extreme version of Pound's sense of the control that can be exerted in co-opting the arrangement and punctuation of syllables, regardless of natural phonological pressures. Syntactical links and grammatical class, the sinews of language, can be dissolved and reengineered simply by sectioning off and segmenting the body of text. The title of Marinetti's article, 'Geometric and Mechanical Splendour', is telling for, in his linguistic imagination, spatial ordering and technological progress are twinned. The gay abandon with which Marinetti sweeps away cultural inheritance in favour of a mechanistic year zero is consonant with his belief that the spatial language of typography can cut up and re-suture the tissue of poetic language. More cautious though he is, Pound's rhetoric of 'the flawless artist', rhythmic systems wired through typography and the free arrangement of syllables, conspires in the notion that typography might be the instrument of a quasi-technological mastery of poetic language, the means to systematizing rhythm or a reengineering of syntax and grammar.

The systematicity of typography Pound alludes to in 1913 is the heir of a rhythmic idea he has been nurturing since at least 1910: the concept of absolute rhythm, first vocalised in the introduction to *The Sonnets and Ballate of Guido Cavalcanti*:

> When we know more of overtones we shall see that the tempo of every masterpiece is absolute, and is exactly set by some further law of rhythmic accord. Whence it should be possible to show that any given rhythm implies about it a complete musical form, fugue, sonata, I cannot say what form, but a form, perfect, complete. *Ergo*, the rhythm set in a line

of poetry connotes its symphony, which, had we little more skill, we could score for orchestra.[8]

This passage typifies Pound's insistence in the early 1910s that rhythm in art can be perfected, and that artistic mastery is achieved through engineering a flawless concinnity of sonic attributes. But importantly, in Pound's conception, this harmonious soundscape is not realized by heuristically tinkering with dynamics and tempi, adding a *forte* here and a *rallentando* there, but through rhythm alone. The verse line is deceptively linear; latent within it is a polyphonic score; each line is a symphony in miniature. This notion that the poetic line is pregnant with other dimensions takes root in Pound's imagination. Bringing this musicological seed to fruition in *The Treatise on Harmony*, Pound reflects that 'In 1910 I was working with monolinear verbal rhythm but one had already an adumbration that the bits of rhythm used in verse were capable of being used in musical structure, even with other dimensions.'[9] Analytical geometry, with its monolinear equations denoting spatial constructions, is a favoured metaphor for the work of poetry which Pound first articulates in his review of the scientist turned literary critic Hudson Maxim in 1910 and which he reiterates in 'The Wisdom of Poetry' and *Gaudier Brzeska*.[10] Similarly as he discovers Arnaut Daniel at this time, the cadential nuance which catches his ear is Daniel's quasi-polyphonic rhymes set in monolinear verse, achieved through stanzaic repetition, and his 1911 translation of 'Canzon: Of Incense' uses experimental line-breaking to figure this polyphony. The deconstruction and stratifications Pound exerts on the verse line owe part of their genesis to this eccentric musicological conviction that the singular poetic line defined by conventional typography is an optical illusion, that encoded within it is the spatial breadth of a symphonic score.

This preoccupation with scoring and perfect recording is not just a musicological and prosodic hobby horse. Absolute rhythm is as much a psychological and affective theory as it is a stylistic one, as Pound makes clear in 'I Gather the Limbs of Osiris':

> *Rhythm.* – I believe in an 'absolute rhythm', a rhythm, that is, in poetry which corresponds exactly to the emotion or shade of emotion to be expressed. A man's rhythm must be interpretative, it will be, therefore, in the end, his own, uncounterfeiting, uncounterfeitable.[11]

A unique rhythmic signature is allied to a unique emotional signature. This key association in Pound's prosody between rhythmical and emotional quiddities is nourished by the assumptions of psychophysics in the late nineteenth and early twentieth century. Ian F. Bell has unearthed the unacknowledged debt of Pound's critical thought to Hudson Maxim's *The Science of Poetry and the Philosophy of Language*, and Maxim's tome, constructing a theory of poetry from 'natural' phenomena, exposits this tenet of sonic affect from the outset: 'All sounds are nerve stimuli and are, consequently, emotional stimuli. All vocal sounds, then, used as signs of ideas in all languages, are nerve stimuli, and emotional stimuli, independently of the thought exprest.'[12] Maxim's utilitarian claims that sound is a mood-inducer and his sharp demarcation between the musicality of verse and the intellection of poetry will have less bearing on Pound's thinking, and Pound singles out Maxim's crudeness of taste in his 1910 review. Maxim, however, quotes a key source for his idea of sonic affect, William James's *Principles of Psychology*, at the beginning of his own work, and if we attend to James's articulation of this concept, the proximity of psychophysical thought and Pound's absolute rhythm becomes apparent:

> To begin with, no reader of the last two chapters will be inclined to doubt the fact that *objects do excite bodily changes* by a preorganized mechanism, or the farther fact that *the changes are so indefinitely numerous and subtle that the entire organism may be called a sounding-board*, which every change of consciousness, however slight, may make reverberate. The various permutations and combinations of which these organic activities are susceptible make it abstractly possible that no shade of emotion, however slight, should be without a bodily reverberation as unique, when taken in its totality, as is the mental mood itself.[13]

James's metaphor of the sounding-board, a one to which he returns repeatedly in this chapter, betrays a key interdependence in psychophysics and art. Not only is Pound's absolute rhythm ballasted by the psychophysical framework James erects here, but psychophysics grounds its science in a musicalization of the human body. Indeed, Alexandra Hui's recent monograph, *The Psychophysical Ear*, has demonstrated that this reciprocity between psychophysics and music

developed throughout the latter half of the nineteenth century and into the twentieth.[14] Psychology, trying to establish itself as an empirical science, needs some measurable quantum to record the vagaries of emotions, and the quantum it adopts is rhythm. Rhythm, understood as an infinitely variable spectrum of frequencies, records and concretizes an infinitely variable spectrum of emotions, so that such affective nuances, rather than being the airy speculations of the psychologist or the poet, can be measured or registered.

Emotional vibrations, though, can be most evidently concretized, solidified into empirical data, in the form of a written record. John Durham Peters, in his history of the idea of communication, *Speaking Into The Air*, has claimed that the gamut of the body's idiosyncrasies was broadened by the recording capacities of new media: 'Just as the photograph and the phonograph allowed for new personal phantasms in the late nineteenth century, they also revealed hitherto unexplored worlds, incidentals of motion and action that were never visible before—the gaits of horses and humans, the varieties of human earlobes, or the split-second expressions on the face. Media spelled not only disembodiment, but a new focus on bodily singularities.' The phonograph, the recording instrument which already furnished theories of consciousness in the later nineteenth century, has an iconic weight here, in that it realizes the first example of a non-artificial notation of sound; with its oscillating stylus, it spools out reams of non-symbolic writing. James's sounding-board, a wooden plane overwrought with strings, visually evokes the wirework of a printed stave, but the psychophysicists who preceded him often explicitly thought of the body as a score to be notated. As Hui notes, ' Like the kymograph, which recorded blood pressure through a stylus on a graph on a rotating band of paper, [Ernest] Mach believed that the ear drew (zeichnen) the sound waves in the fluid of the inner ear labyrinth.'[15] Jean-Marie Guyau, the French philosopher, utilises the phonograph to model a psychophysical theory of memory and affect as a kind of inscription: ' Upon speaking into a phonograph, the vibrations of one's voice are transferred to a point that engraves lines onto a metal plate that correspond to the uttered sounds – uneven furrows, more or less deep, depending on the nature of the sounds. It is quite probable that in analogous ways,

invisible lines are incessantly carved into the brain cells, which provide a channel for nerve streams.'[16] In the quest to bring the human psyche and its emotions into the realm of empirical measurement, then, psychophysics begins to conceive of the body itself as a kind of phonograph, a recording instrument that inscribes its notation in the flesh. Indeed, Rainer Maria Rilke, in his 1919 essay 'Primal Sound', contemplates a hybridic fusing of the human body and the phonograph. Just as Pound fantasises about a poetic mastery through perfecting the recording and typography of verse, Rilke prophesises that 'the perfect poem' can only be engineered through experimental notation. New scores for verse, Rilke posits, lie in the creases of the skull, and he imagines that if the stylus of a phonograph were to trace the coronal suture atavistic sounds would come forth.

Impressionism, Futurism and passive mimesis

Via absolute rhythm, psychophysics undergirds Pound's thinking about typographical notation and recording, but it also foreshadows a concurrent hostility to what an aesthetics of recording might connote. Despite the debt Pound's prosody owes the legacy of psychophysics, when Canto XXIX imagines sound being imprinted in the body it is in a vision of anomie and listlessness:

> Languor has cried unto languor
>   about the marshmallow-roast
> (Let us speak of the osmosis of persons)
> The wail of the phonograph has penetrated their marrow
> (Let us...
> The wail of the pornograph....)
>   The cicadas continue uninterrupted.[1]

These lines figure the malleability of the body, its squidgy susceptibility to be impressed upon by sound, as the wax of cultural uniformity. Marrow echoes marshmallow in its spongy lack of resistance, and the phonograph is imaged as a pornograph, radiating demotic sounds with promiscuous ease, the prefix porno- deriving from the Greek for prostitute. The mass impression of musical records which the phonograph facilitates is duplicated in the osmotic reproduction of personality. This passage summons up the ghost of Rilke's marriage of bone and phonograph, but

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[1] Ezra Pound, *The Cantos of Ezra Pound* (New York: New Directions, 1996)

crucially Pound reverses the direction of the dataflow and with it the agency in question. Whereas Rilke's phonograph follows the wavy lines of the skull, transcribing ancestral messages deeply ingrained in the human form, Pound's phonograph is shaping the marrow after its own image, making the body a passive record of ambient demotic culture. The irony is that Pound's own lines are complicit in this mode of phonographic inscription: they are born out of Pound's own sense of the malleability of the page. Their fractured typography, their breaking of lines, abrupt aposiopesis and halting indentations, mould this soundworld so characteristic of the *Cantos* where voices are amputated in mid-flow and interpenetrate in a form of vocal osmosis.

Neverthless, this critique of sound recording has a long prehistory in Pound's writings, and one which complicates the typographical aesthetics which Pound envisages in the early 1910s. It is tempting to interpret the typographical system which Pound announces to Harriet Monroe in 1913 as poetry's answer to the phonograph, a graphical notation capable of registering the faintest quantitative rhythms or intonational quirks. Just as the phonograph could inscribe frequencies and noises unrecordable in standard musical notation, so poetry which pressed every space, indentation, and capital into service could graph rhythms liberated by the abandonment of accentual-syllabic metres. But, contemporary to his sketching of the printed page as a flawless recording instrument, there is an antipathy towards the replication of sound, which, in the case of the Futurists, seems to be directed against typographical experiment. This conflict is encapsulated in the apparent paradox that, though he assimilates the lexicon of acoustic technology in his critical prose, though he is preoccupied with preserving, recording, and notating sound in poetry, Pound is almost unremittingly hostile to recording machinery, contemptuous of phonographs and pianolas.

Phonographs and pianolas, as well as cinematographs and photographs, incarnate an aesthetics of replication that Pound recurrently exorcises from the critical standpoints with which he wishes to be identified. With characteristic interdisciplinarity, Pound's critique is often inattentive to the technical idiosyncrasies of these new media machines, or whether they are engineered for the eye or the ear. Indeed, the word that best crystallizes Pound's synthesis of these different

technologies is a one pre-eminently associated with painting: impressionism. The term, for Pound, certainly incorporates, and indeed originates in, the paintings of the French Impressionists, but it accrues a much more elastic and potent connotation over the course of Pound's criticism. Reviewing Ford Madox Hueffer's *High Germany*, a book of poems, in 1912, Pound writes:

> Mr Hueffer's cadence is good because it fits the mood of his work. His flaw is a flaw of impressionism, impressionism, that is, carried out of its due medium. Impressionism belongs in paint, it is of the eye. The cinematograph records, for instance, the "impression" of any given action or place, far more exactly than the finest writing, it transmits the impression to its "audience" with less work on their part. A ball of gold and a gilded ball give the same "impression" to the painter. Poetry is in an odd way concerned with the specific gravity of things, with their nature[...] The *conception* of poetry is a process more intense than the *reception* of an impression. And no impression, however carefully articulated, can, recorded, convey that feeling of sudden light which the works of art should and must convey.[2]

Even as he insists that impressionism is the property of fine art, Pound's review acknowledges that an impressionist aesthetic is contagious. Impressionism isn't here an art of cataractous haziness and colouristic blurs, rather it is one that aspires to exact mimesis, to impress its images on the viewer's retina. It is an art that is the germinal form of cinema, already imbued with a technological impulse to record. Pound's fear is that poetry like Hueffer's is susceptible to this impressionist impulse, whilst being unable to compete with these rival technologies. That -graph suffix which is appended to cinematographs and phonographs, unlike the now familiar locutions cinema and gramophone, is indicative of how these machines seemed to rival writing, to offer a kind of script which records 'far more exactly than the finest writing.'

In his 1914 article 'Vorticism', Pound schematizes a far-ranging distinction between his own recording aesthetics, exemplified in 'In a Station of the Metro' and those of Impressionist art, which he claims as the precursor of the surface art of Futurism:

> In a poem [like 'In a Station of the Metro'] one is trying to record the precise instant when a thing outward and objective transforms itself, or darts into a thing inward and subjective. This particular sort of consciousness has not been identified with impressionist art, I think it

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[2] *Contributions to Periodicals*, I, p. 71.

is worthy of attention. The logical end of impressionist art is the cinematograph. The state of mind of the impressionist tends to become cinematographical. Or, to put it another way, the cinematograph does away with the need of a lot of impressionist art.

Impressionists and Futurists, compared with symbolists and vorticists, who are glossed as 'expressionism, neo-cubism, and imagism gathered together in one camp', hold to irreconcilable epistemologies: the former 'think of [man] as that toward which perception moves, as the toy of circumstance, as the plastic substance *receiving* impressions', while the latter 'think of him as directing a certain fluid force against circumstance, as *conceiving* [...]'.[3] In other words, what Pound charges Impressionism and Futurism with, is that they conceive the viewer or the reader as a *tabula rasa*, a wax tablet to be inscribed, a malleable surface upon which images, sounds and ideas can be impressed. Futurism, whose 'free expressive orthography and typography' are meant to record 'the facial mimicry and the gesticulation of the narrator' in the words of Marinetti, is decried as 'accelerated impressionism'.[4] All the graphical wizardry of Futurism is just turbo-charged replication, poetry trying to outdo the speed of a film reel.

Pound's critique of impressionism, then, evolves into a critique of notation, of art, emulous of technology's mimetic efficiency, trying to become a hyper-receptive surface. In his 1917 article 'Arnold Dolmetsch', Pound implicitly links the fastidiousness of Impressionist canvas with the decline of modern notation. Arguing that Dolmetsch has exposed the prescriptiveness of modern notators, Pound goes on locate the same trend in fine art, specifically Academicism and Impressionism:

> It seems to me that in music, as in the other arts, beginning in the eighteenth century, and growing a poison from which we are not yet free, greater rigidity in matters of minutiae has forced a break-up of the large forms; has destroyed the sense of main form. Compare academic detail in one school of painting, and minute particularization about light and colour in another.

Then, near the end of the article, canvas, page and score seem to be superimposed:

> We turn to the printed page; the eye is confused by the multitude of ornamental notes and trappings, lost in the maze; each note is written as importantly as any other. And "Modern"

[3] *Contributions to Periodicals*, p. 467.
[4] Marinetti, *Selected Writings*, p. 100.

music is so much a fuzz, a thing of blobs and of splotches – sometimes beautiful, and
probably the best of it is more beautiful to those who know exactly what fixed lines it
avoids.

The filter through which Pound judges the musical score here is painting: 'blobs and splotches'

conjure up the stippled Impressionism of a Seurat or a Pissarro.[5] The genealogy of the congested

staves of modern sheet music is traced back to the meticulous brushwork of Impressionist canvas.

What is even more remarkable about Pound's chain of associations in this article is that a

musical score is manifestly not an artwork in the way a canvas is: a score is meant to be played; a

canvas is the artwork itself. But Pound speaks here as if musical beauty could be apprehended

simply by surveying the disposition of the score, as if notation were an aesthetics in its own right.

This is a recurrent trope in Pound's music journalism, where performances are appraised as if they

demonstrated their own notation. Pound lauds Debussy's music because ' There is no "printer's fat"

in it', and scolds British pianists because 'rhythm is not made by cutting a piece of paper called a

"bar" into little sections called notes.' Indeed, in one review, Pound satirically imagines the virtuosity

of the modern pianists, whose histrionics he consistently derides, coupled with the mechanical

appendages of the pianola as mechanizing notation entirely:

[...] if for some time it is necessary to train acrobats to play Bach-Busoni for pianola records,
surely human invention will lead to, and has already discovered, a means for making the
records direct. The future composer will do his work, not with a pen but a punch.[6]

This punctured, rather than scripted, score, the counterpart of the striations and grooves of the

gramophone, summates Pound's critique of 'accelerated impressionism', of what art becomes in an

aesthetics infiltrated by phonographs and pianolas. Viewing Pound's typographical innovations as

phonographic, as a positivist advance to perfect sound recording, as uncomplicated markings of

sound, becomes problematic. Mechanistic scoring, treating the printed page as a surface onto which

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[5] *Ezra Pound and Music*, pp. 47, 49.
[6] *Ezra Pound and Music*, p. 96, 232, 81.

sound is imprinted, is symptom of artistic degeneration, of poets capitulating to a more efficient, but fundamentally passive, mimesis.

Phonoscopy: l'Abbé Rousselot, the post-Mallarmeans and experimental typography

In spite of Pound's antipathy towards Futurist typography and his critique of a phonographic use of the printed page, his experiments in mise-en-page intensify in poems like *Homage to Sextus Propertius* and the early *Cantos*, with the *Malatesta Cantos* marking a drastic break with conventional poetic layout. With his relocation from London to Paris, Pound finds a literary milieu where typographical experiment, in the wake of Guillaume Apollinaire's *calligrammes* and the rediscovery of Stéphane Mallarmé's *Un coup de dés*, is far more conspicuous and well-established than in Anglo-American letters. The ferment around visual poetry in 1920s Paris elicits from Pound his first, and indeed most sustained, public statements about mise-en-page, and by 1925 he will speak, with reactionary unease, as though experiments in printing are endemic in contemporary literature.

Mallarmé's radical work, *Un coup de dés*, despite Pound's inattentive reading of it, has a talismanic force, which he sees exerted on his French contemporaries and whose historical importance cannot be ignored. In one of his 'Island of Paris' dispatches for *The Dial* in October 1920, Pound relates the poem's rediscovery, deploying its publication date to discredit the Futurists' claims of typographical innovation:

> The young and very ferocious are going to "understand" Guillaume Apollinaire as their elders "understood" Mallarme. They have raked up Mallarme's Jeu de Dés, which was published in an Anglo-International periodical called Cosmopolis before the Futurists had cut their eye-teeth.

Pound's careful ascription of *Cosmopolis* as an 'Anglo-International periodical' might be taken as an indication that Mallarmé had broadcast his achievement to a global audience, and that he had, as it

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were, clearly patented his discovery. In the following month, Pound translates a short sketch of

Mallarmé by the French avant-garde writer Fernand Divoire, which again emphasises Mallarmé's

singular foresight:

> Imagine the author of Un coup de dé [sic] living in our time. We should expect him really to
> produce poetic *symphonies* rich in sonorities and with distinct architectonic form;
> symphonies which would have routed the Mallarméens of 1880. Mallarmé came to the
> threshold of this art. He saw over the threshold. But all his age, all his surroundings, every
> thing that he had formed, combined together to prevent him from incubating the egg he
> held in his hand. The Coup de dé was forty years beyond the time it was written. It comes to
> us young with all the future it contained, weighted with the defects of the time in which it
> was put together. If there is among us any one who can shed his friends and disciples three
> times running. Gain: 40 x 3= years 120.

With his extravagant synchronisation of formal innovation and literary chronology and his fantasy of

a poetic maverick time-travelling in isolation from his lesser peers, Divoire, apparently reckoning

that the poem is written in 1880, calculates that *Un coup de dés* is only truly at home in 1920. It is a

guiding light for twentieth-century poetry that had the misfortune of being conceived forty years too

early. In his final 'Island of Paris' article of the year, in December 1920, Pound again refers to

Mallarmé, acknowledging the gravitational pull of the poem, and the immense promise its

typography was seen to herald: 'There are no prohibitions, there are only questions of degree.

Mallarmé's Jeu de dés is permissible, one does not perhaps consider it as a New Light or the basis for

the only possible poetry of to-morrow.'[17] Pound, unsurprisingly, is not willing to wager the course of

all future poetry on one work. His own poetry never quite reaches Mallarmean heights of graphical

complexity, but *Un coup de dés* remains an extreme and tutelary presence in Pound's poetical

firmament whose force magnetises the less dramatic efforts of the post-Symbolists with whom

Pound socialises, poets whose mise-en-page is demonstrably similar to his own. This propensity to

view typographical experiment as territorial, as marking one out as belonging to one poetic school or

another, is a recurrent tic in Modernism. *BLAST*, it should be remembered, is at pains to

anathematise the Italian Futurists even as its bold capitals and belligerent type gestures towards

Marinetti's manifesto. Marinetti himself disavowed the looming presence of Mallarmé's *Un coup de dés* with the assertion 'Combatto l'estetica decorativa e preziosa di Mallarme', and Apollinaire's manifesto 'L'Antitradition Futuriste' is an ambiguous attempt to heal the schism between the Italian and French avant-garde despite their typographical kinship. Typography thus has a signatory force in Modernism: the poets who experimented with it feared that it, perhaps because of its very *graphicness*, would align them with aesthetic currents from which they wished to remain distinct.

Divoire's claim that were Mallarmé living in the 1920s he would be composing poetic symphonies gestures to one of his principal legacies for French poetry of the 1910s and the 1920s. Apollinaire's 1914 essay 'Simultanéisme-Librettisme ' in *Soirées de Paris* depicts his contemporaries as striving to break free of the solo line of lyric poetry and construct polyphonic textures native to music, their principal means of achieving this being typographical. Apollinaire remarks that Henri-Martin Barzun, one of the founders of *simultanéisme*, a movement dedicated to creating stereoscopic, polyphonic textures in painting, theatre, and literature, will remain unable to break free of monolinear succession in his poetry so long as he employs 'des lignes typographiques habituelles'. Barzun is contrasted with the poet Blaise Cendrars and the artist Sonia Delauney:

> Blaise Cerdrars et Mme Delauney Terck ont fait une première tentative de simultanéité écrite où des contrastes de couleurs habituaient l'œil à lire d'un seul regard l'ensemble d'un poème, comme un chef d'orchestre lit d'un seul coup les notes superposées dans la partition, comme on voit d'un seul coup les éléments plastiques et imprimés d'une affiche.[18]

Mallarmé's 'Préface' to *Un coup de dés* had propounded the idea that the printed page should be read as a score, but that supposed the reader was a recitant modulating his delivery according to spatial oscillations of words and phrases. Apollinaire, quite differently, takes the musical score as a model of stereoscopic reading, where, like superimposed staves and instrumental lines of sheet music, a page striated with chromatic contrasts can facilitate a simultaneous experience of counterpointed lines of verse.

This endeavour amongst the French avant-garde to amplify poetry to symphonic proportions persists in the writers that Pound frequents and reports on in the early 1920s. Pound had himself averred that the verse line encoded a miniaturised symphony in its rhythmic intricacies 'which, had we little more skill, we could score for orchestra', and, as we have already seen, speaks of Arnaut Daniel as achieving a species of polyphony in poetry through stanzaic rhymes, a dimension Pound graphs with experimental line-breaks.[19] Pound's interest in poetry becoming polyphonic is confined to Daniel, and in his musicology he obstinately opposes the idea that music has a vertical dimension, arguing that even harmony should be thought of in terms of horizontal lines. Moreover, though he may have come across coloured staves in his research into Gui d'Arezzo, the tenth- century pioneer of notation to whom he frequently alludes, it is unlikely he would have been interested in the chromatic stereoscopy of the *simultanéistes*. Rather the type of poetic symphonies to which Pound is privy in 1920 are still realised by solo recitation, and do not venture into the synaesthetic counterpoint or poster-art to which Apollinaire and his circle is drawn.

In his 'Island of Paris' article of December 1920, Pound summons up Arnaut Daniel and his polyphonic rhymes as a contrast to André Wurmser, whom he hears reciting his poem 'Denise' earlier that year:

> Thus in a *grenier* on l'Isle St Louis, in a gathering of young men for the most part allied to Lettres Parisiennes and to René Doyen's revue Connaissance I heard André Wurmser read his Denise, with perfectly modest doubts as to whether it had any literary value whatsoever, but with an execution which demonstrated that he had thought perhaps more about verbal orchestration or at least felt more than any one else in Europe. I found there was nothing historic in this, he had apparently not heard of Arnaut Daniel, or the Provencal rhyme sequences [...] his Denise compares to Arnaut Daniel's work as a Beethoven symphony to a Bach fugue; the modes are not mutually exclusive.

Wurmser's poem in this account is not symphonic in the sense of being an orchestration of multiple voices or attempting a kind of simultaneity, but it does pose a typographical quandary:

Wurmser had considerable doubt as to whether any graphic representation of his *opus* was possible, it departs from the modern modes, it approaches the *chantefable*, he lifted and lowered his voice, he sang, and the whole thing with its four distinct sections or movements made an entirety, of extreme interest to any one who had sufficient musical and verbal knowledge to follow it.[20]

By virtue of its intonational suppleness, its oscillation between speech and song, and the idiosyncrasies of its voicing, Wurmser's poem is deemed unprintable. Crucially, like Dolmetsch's conception of the musical work, the poem's performance is not considered a free variable where tone and pitch are accidentals at liberty to vary from delivery to delivery; this recitation, in all its suprasegmental complexity, *is* the poem itself. Pound reiterates that his idea of *melopoeia* is not simply the rhyme and metre of a poem, but the total acoustics of a poem, including whether it is to spoken, chanted, or sung. As Pound is venturing into the uncharted vocal terrain of *The Cantos*, a polyglossic epic where the boundaries between song and speech, epistle and lyric, one voice and another are more unstable than ever, it is clear that Wurmser's problem applies to his own, much more ambitious, *chantefable*; and, when tasked with accounting for the typography of *The Cantos* in 1939, Pound refers to not only 'facilitating the reader's intonation', but hopes that in due course he will be able to mark 'breaks into song'.[21]

Though Wurmser may think his poem is singularly oral and inassimilable by the medium of print, Pound is more optimistic about the typographical advances of the post-Symbolists. Indeed, Pound, in this article, betrays an exceptional attentiveness to the mise-en-page of his contemporaries and a sophisticated level of theorisation of what it manifests. After the comparison of Wurmser and Daniel, Pound introduces an even more unexpected point of reference:

The art of fitting words to tunes is not to be confused with the art of making words which will be "musical" without tunes. All of which statements will greatly bore Mr Cummings, but it can't be helped; English and other criticism is constantly vague and entangled for the lack of a few such uninteresting dissociations.[22]

This allusion to Cummings, three years before the publication of his debut collection *Tulips and Chimneys*, is strikingly prescient. Pound is likely to have first encountered Cummings in the five

poems published in *The Dial* in January 1920 and the seven poems published in the same review in May 1920. From this handful of lyrics, Pound has already figured Cummings as the most conspicuous proponent of typographical experimentation in English and thought of him in relation to the mise-en-page of the post-Symbolists. Further, Pound has already elaborated an incisive critique of Cummings's poetics, although its exact terms are ambiguous. One reading would be that Cummings's typography is trying to generate musicality by itself, rather than record the desired recitation of the verse or notate a possible musical accompaniment. This distinction is of capital importance because a species of typography which does more than simply record or notate a pre-existent musicality is incongruous with Pound's fundamentally phonocentric conception of poetry.

Considering how Wurmser's *chantefable* might be recorded in a manner faithful to the fluctuations and contours of its soundscape, Pound explicitly synthesizes his preoccupations with typographical experiment, musical notation, and voicing, concerns implicitly interlinked from some of his earliest lyrics, but never before consciously amalgamated in his critical prose:

> Every one has been annoyed by the difficulty of indicating the *exact* tone and rhythm with which one's verse is to be read. One questions the locus of degrees, *sic:* at what point is it more expeditious to learn musical notation and to set one's words to, or print them with the current musical notation, rather than printing them hind-side-to and topsy-turvy on the page. And musical notation? [sic] Has been of all man's inventions the slowest to develop, and people have tried various devices from our very unsatisfactory own, to the circular bars of the Arabs, divided, like unjust mince-pies, from centre to circumference. Yet Souza has in Terpsichore presented a method of printing which might record a good deal of Wurmser's orchestration, and there are possibly changes of voice, manners of speaking, and intonation which are not expeditiously transcribable by the present convention of "music": minims, quavers, tonic sol fa, and the like. All of which is a very nice play-ground for "technical kids," but it cannot be dismissed in its entirety as unworthy of the serious author's attention.

The example of Robert de Souza's 'method of printing' which Pound gives is as follows:

—Songes . . .
            or sur bronze,
                        gong ! –

The rhythmical and tonal precisions of modern poetry, in Pound's estimation, are not communicable through conventional typography; the poet is obliged to either incorporate musical notation in his verse or innovate methods of unorthodox printing. Pound's opaque phrase here, 'the locus of degrees', which follows on from his assertion about Mallarmé's *Un coup de dés* that 'There are no prohibitions, only questions of degree', expresses a paroxysm of spatial and experimental uncertainty: these are both degrees of experimentalism on a scale where Mallarmé's poem is an extreme outlier, and degrees of prosodic and typographical measurement.[23] By what notational or diagrammatic gauge can the poet transmit his voicing? Pound's vision of the mise-en-page which he and his contemporaries make recourse to is one of vertiginous disorientation, of a text 'hind-side to and topsy-turvy'. Even musical notation, though, does not offer a stable or neutral diagrammaticizing. Branches like Arabic notation have fostered their own alien geometries, with crossed circles 'like unjust mince-pies', and Western notation, which Pound already believes has corrupted modern music, is impervious to the subtleties of voicing. Underlying this passage is the implication that an insatiable refinement of prosody undertaken by both French and English poets has led to a realisation of the insufficiency of conventional printing and the inadequacy of current notation. The printed page is no longer a trustworthy map. Pound may ascribe this revelation to Souza, but the French poet's 'method of printing' is unmistakeably similar to his own typography, those stepped lines homologous to a form of mise-en-page he has exploited since the early 1910s. In the mid twentieth-century William Carlos Williams and Charles Olson will likewise come to believe that the topography of writing needs to be reoriented, even if that entails the dizziness of entering a foreign typographical space; Williams by calling for a regular, stepped, triadic line and Olson by claiming that typography is a form a notation, a 'stave and bar' for the poet. [24] Cautious though he is of being seen as too experimental, of being labelled a 'technical kid' like Cummings or Souza, Pound anticipates, by several decades, those revolutionary calls in later Modernist verse, and stakes out the distinct terrain of a Modernist typographic poetics.   That the printed page was an ossified convention, incapable of authentically communicating sound, was not only a realisation that

Modernist and post-Symbolist poets reached. Having exhorted his readership not to dismiss the technicalities of typography, Pound immediately segues into a seemingly remote and unconnected discipline, as if the transition were perfectly self-evident:

> I admit that many people did "dismiss" l'Abbé Rousselot; it is, for example, impossible to imagine God's own Englishman with one tube pushed up his nose, reciting verse down another, and God's own Parisian, and God's own supporter of the traditional alexandrine made a good deal of fun of the phonoscope; until M l'Abbé made such handy little discoveries for the locating of boche cannon, and for the locating of submarines, and until his star pupil was so amiable as to locate hostile air craft.[25]

Jean-Pierre Rousselot is often hailed as the father of experimental phonetics, and was a French linguist who invented the phonoscope, a mechanism comprising tubes affixed to the speaker's nostrils and mouth, a revolving cylinder, and a stylus inscribing the vibrations onto a paper graph. Pound's interest in Rousselot has been documented by scholars like Richard Sieburth and Michael Golston in relation to radio recordings and racial rhythms but neither point out that Rousselot first appears in Pound's critical writings as a direct comparison with experimental typography, as the coda to an article on the graphical innovations of Mallarmé, Cummings, and de Souza.[26] Rousselot's experimental phonetics transforms linguistics, hitherto a historical study like philology, into a science by bypassing the authority of alphabetic writing, by no longer trusting that print authentically registers sound. A 1901 article by Rousselot that announces the advent of experimental phonetics tracks the existence of previously unimagined consonant sounds in certain French dialects like *le parler Marseillais*, and having graphed them with the aid of the phonoscope, concludes:

> Il existe des *z*, *j* forts, medio-sourds, nasalisés, et des nasales a début sourd. Les qualités propres à ces consonnes, échappant a l'oreille et n'étant révélées que par l'expérimentation, n'ont pu être notées dans l'écriture [...][27]

Rousselot's experimental notation not only supersedes conventional writing, it reveals, validates and gives visual form to sounds otherwise lost to both ear and eye.

The phonoscope furnishes for Pound the ocular proof of the cadences he has intuited and proclaimed since the early 1910s. Its styluses inscribe a script finer and more discriminating that any other inherited notation just as de Souza's stepped lines are said to give shape to the full spectrum of the voice:

> And this little machine with its two fine horn-point recording needles, and the scrolls for registering the "*belles vibrations*" offers a very interesting field of research for professors of phonetics, and, I think, considerable support, for those simple discriminations which the better poets have made, without being able to support them by much more than "feel" and "intuition."[28]

The ungainliness of an apparatus that requires tubes to be shoved up the nose of its user is eclipsed here by Pound's evocation of its elegance. Having been dismayed by the graphical ugliness that is a by-product of the genealogy of notation, topsy-turvy type-lines and notes like unjust mince pies, Pound discerns in the phonoscope a calligraphic refinement, with its 'fine horn-point' styluses like exquisitely wrought pens and its cheap graph paper elevated to the bibliographic splendour of 'scrolls'. Paradisial visions in the early *Cantos* are often textured as a crystallisation of sound into a resplendently beautiful score:

> "as the sculptor sees the form in the air...
> "as glass seen under water,
> "King Otreus, my father...
> and saw the waves taking form as crystal,
> notes as facets of air
> and the mind there, before them, moving,
> so that notes need not move.[29]

 Waves function as an *ur*-rhythm in Pound's aesthetics: a line from the *Iliad*, 'along the shore of the loud resounding sea', emblematises Grecian onomatopoeia, Homer's accomplishment in making verse resonate with the primal undulations of the sea; likewise Virgil is held to be inferior to his Scots translator because Gavin Douglas had heard the sound of the sea and irrigated his poetry with this prosodic wellspring. The waves here, though, do not pulsate with the ebb and flow of some

natural rhythm that verse should sound out; rather they are frozen into glacial formations, their susurrations rendered static. Canto XXV, in its paean to creation infused with love and generative ardour, as opposed to the mercenary dealings of Titian, lionises art that works in rarefied schematics, graphs sketched in the ether. The sculptor who envisions a 3-D blueprint, 'the in, and the through', is set against the cloddish labour of the stonemasons who, overburdened by the materiality of their craft, entrammeled in the stone pits, confess: ' "We have gathered a sieve full of water"'.[30] Mauberley, struggling to free himself from an aestheticist morass, ditched the sieve for the 'seismograph', and the frozen waveforms that emerge here summon up the precise undulations of the scrolls of a seismograph or a phonoscope. Artistic creation, when inspirited by erotic and cerebral passion, is figured as a celestially inscribed score, a superfine spatialization, unencumbered by the matter of sound or stone.

Pound in his darkest hour turned to solace of notation and the salvific order it promised. Caged in the Disciplinary Training Camp in Pisa, where the transmission and preservation of his verse was more precarious than ever, he writes, at the close of Canto LXXIV:

> out of hell, the pit
> out of the dust and glare evil
> Zephyrus/ Apeliota
> This liquid is certainly a
> property of the mind
> nec accidens est   but an element
> in the mind's make-up
> est agens and functions   dust to a fountain pan otherwise
> Hast'ou seen the rose in the steel dust
> (or swansdown ever?)
> so light is the urging, so ordered the dark petals of iron
> we who have passed over Lethe.

The 'crystal jet' and 'bright ball' of the transcendent *nous*, the neo-Platonic schema that illuminates the Pisan Cantos is dangerously close to being mere corporeal matter, to being 'dust to a fountain pan'. Indeed, this pellucid liquidity in the 'mind's make-up' recalls the malleability of the body and languid personhood Pound decried in Canto XXIX. But what disciplines the mind's steel dust is the magnetic assumption of shape. What emerges 'out of hell' is spatial pattern. These lines are sharply

etched; the scholastic glosses are prised apart from the rest of the verse line, almost

diagrammatically, and the lines are broken by the qualifications and precisions of the thought.

Mental rigour is articulated in inscriptional exactitude; typography scoring a map of the mind, just as

poets and psychophysicists of the 1910s speculated on the brain itself being striated like a record.

The subsequent canto makes the redeeming grace of notation even more explicit as 'Out of

Phlegethon!' emerges a musical score of Clément Janequin's *Le Chant des Oiseaux*, mediated

through multiple sources, its presence testifying to the perdurability of transmission, the minor

miracle that these scraps of birdsong Janequin imitated could endure on the page.The tensity of

shape in Janequin's score is ingrained in the fibres of the Pisan Cantos, such that Pound begins to

transform the bleak landscape of the DTC into a vision of order by its assuming the character of

notation:

```
4 birds on 3 wires, one bird on one
the imprint of the intaglio depends
         in part on what is pressed under it
the mould must hold what is poured into it
                in
                  discourse
                          what matters is
to get it across e poi basta
      5 of 'em now on 2;
      on 3; 7 on 4
```

These lines echo that wrangling over the possibilities and limits of the page's notation which Pound

had voiced back in 1918: 'Emotions shown in actual speech poured out   under emotion will not go

into verse. The printed page does not transmit them [...]' At this climactic point in Pound's

cogitations on notation, his wiring of his typography is fastidiously conspicuous, so much so that it

inflects the very aesthetic principle these lines seem to espouse. To say 'in discourse what matters is

to get it across e poi basta' in prose or conventional typography might be a bluntly anti-formalist

statement, that the message trumps the medium, that statements can dispense with style, a line of

argument that the politically impatient Pound of the 20s and 30s often gravitates towards, as if exorcising his former role as verse technician in chief. The Pound who tinkered with the minutiae of his 'recording instrument', though lives on, even in 1945; for the angular bending of the lines, so that 'in' and 'discourse' hang in mid-page attests that to the necessity of shape, of typographical mould and imprint, that getting it across depends on the scrupulousness of notational finesse, just as the *meaning* these birds have for Pound depends on their place on the stave.

This spatialization of sound is adumbrated in Canto XVII, another salvific vision, and one that is positioned immediately after the Hell Cantos. The Hell Cantos had the printed body contract the contagion of linguistic corruption, expunging sound to create lines that are unspeakable, inverting the typographical conventions of censorship to record infamy by blotting out the infamous. Hell, for Pound, is the inverse of a crystalline score; it is a text mutilated by redactions, a text that deletes rather than records. Canto XVII also tries to muffle sound:

> Cave of Nerea
>   she like a great shell curved,
> And the boat drawn without sound,
> Without odour of ship-work,
> Nor bird-cry, nor any noise of wave moving,
> Nor splash of porpoise, nor any noise of wave moving,
> Within her cave, Nerea,
>   she like a great shell curved.
> In the suavity of the rock,
>   cliff green-grey in the far,
> In the near, the gate-cliffs of amber,
> And the wave
>   green clear, and blue clear,
> And the cave salt-white, and glare-purple
>   cool, porphyry smooth,
>   the rock sea-worn.[31]

These lines ring with the insistence of their soundlessness. The curvature of acoustic spaces, hollowed-out rock and the undulations of shells, is meticulously inscribed in these lines, while the apparition of sound is kept at bay. The broken lines mould an overly resonant space: the already conspicuous echo of 'she like a great shell curved' is redoubled by its parallel indentation.

Hexameters are evoked by splitting lines into 3-beat formations. The ear becomes attuned to infinitesimal nuance: the lines that begin 'And the wave' and 'And the cave' mirror each other's syntax and rhythm with their postposed adjectives and anapestic opening, but the typography cleaves in the first one, as if we are supposed to hear it differently, discern some minute inflection.

Sound in this canto is transmuted into geological and typographical space, where sound can be moulded into shapes foreign to conventional printing. The voice is enjoined to descry intonational contours so subtle that the recitation it graphs borders on the inaudible. It is as if Pound's imagining of a superhuman soundscape impels him to inscribe an 'audition of the phantasmal sea-surge', an ideal score whose notes are too precisely inflected, too rarefied to ever be exactly voiced - sounds only readily apprehended as waveforms of a graph or in the quiddities of typographical experimentation. Though Pound, loath to be aligned with his Apollinaire's *calligrammes* or Marinetti's *paroliberismo*, would have resented the comparison, Canto XVII's mapping of a seascape to plot new worlds of sound summons up the legacy of Modernism's most daring essays in typography. Mallarmé's *Un coup de des* takes place in a metaphysically febrile tract of ocean; Marinetti's *Zang Tang Tuuum* is propelled by a 'ferry-boat-balena'; and the irradiating text of Apollinaire's 'Lettre-Océan' is motored by the distances of sea travel and the undulations of waves. 'Ondes' is the title given to a broad section of Apollinaire's increasingly asyndetic *vers libre* and the liquid type of the *calligrammes*, and waves for both Apollinaire and Pound fluctuate dynamically from being radio waves to ocean currents to the oscillations of seismography. The hybrid schema of 'Lettre-Océan' which eddies in concentric rings of words and phonemes from the central antenna of the phrase 'Haute de 300 metres' charts its own superhuman soundscape through typography, a space where utterly disparate acoustic items – 'SIRENES', 'AUTOBUS', 'GRAMOPHONES', 'LES CHAUSSURES NEUVES DU POETE' – can be registered in the augmented spectrum of the page as though they emanated from one central transmitter. The seemingly bathetic reference to 'LES CHAUSSURES NEUVES DU POETE' might be read a subtle allusion to the winged sandals of Hermes, the messenger god and an emblem of the accelerated communicative possibilities which so

bewitched Apollinaire.   Hermes also makes an appearance in Pound's vision of a superfine sound-world. Pound at times speaks of music as if it were a mode of pure intellection, an intercourse that might '"serve as communication between intelligent beings"', a kind of angelic speech.[32] When the two gods at the centre of Canto XVII converge they don't utter a sound:

> Hermes and Athene,
> As shaft of compass,
> Between them, trembled –[33]

Instead, what hangs between Hermes and Athene is a recording needle, an oscillating stylus, incising an abstract thread of sound, as if their speech, circumventing sound, were the undulations of a graph. Looking back at his Parisian years, Pound recollects De Souza's poetry, Wurmser's *chantefable* and Rousselot's phonoscope:

> [...]I am called back to an evening when Wörmser was reading something forgotten as far as the subject went, but unforgettable as to the tone. There was in those days still a Parisian research for technique. Spire wrangled as if *vers libre* were a political doctrine. De Souza had what the old Abbé called *une oreille très fine*[...] The Abbé was M. Rousselot who had made a machine for measuring the duration of verbal components. A quill or tube held in the nostril, a less shaved quill or other tube in the mouth, and your consonants signed as you spoke them. They return, One and by one, With fear, As half awakened each letter with a double registration of quavering.[34]

Recapitulating the actors of his 1920 article, Pound reimagines the phonoscope as a conduit by which the voice is directly channelled into script. Tone, pitch or duration aren't hazarded to the air, emitted as transient sounds whose notation is uncertain, but are perfectly preserved on the page. Through this fantasy of the phonoscope's capabilities, Pound imagines a truly natural writing, the organs of poetry, the lungs of the bard, funnelling breath into a quill, the body's own stylus, both inscribing the voice as an inerrant script, transcribing it into exactly synchronous signs, but also signing it in the sense of authenticating it, guaranteeing the idiosyncrasies of tone by giving them written form, making the page the poet's own signature. It is to this archetype of writing, a script

that crystallises sound into a perdurable shape and carves Pound's prosodic ambition into a lapidary

record, where the printed page and the written score solidify artistic achievement, that his

typography aspires.

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[1] Pound, *Ezra Pound and Music*, 86.

[2] Pound, *Contributions to Periodicals*, I, 147.

[3] Ezra Pound*, Personae: The Shorter Poems of Ezra Pound*, (Faber and Faber: New York, 1990), p. 251.

[4] Pound, *Contributions to Periodicals*, I, 147.

[5] Friedrich A. Kittler, *Gramophone, Film, Typewriter*, trans. Geoffrey Winthrop-Young and Michael Wutz (Stanford: Stanford University Press, 1999), 30.

[6] Pound, *The Letters of Ezra Pound*, 17.

[7] F. T. Marinetti, *Marinetti: Selected Writings*, ed. R. W. Flint, trans. R.W. Flint and Arthur A. Coppotelli (London : Secker & Warburg, 1971)

[8] *Sonnets and Ballate of Guido Cavalcanti*, trans. Ezra Pound (London: Stephen Swift and Co., 1912), 11.

[9] Ezra Pound, *Selected Prose 1909-1965*, ed. by William Cookson (London: Faber and Faber, 1973), 79.

[10] Pound, *Contributions to Periodicals*, I, 41; Ezra Pound, *Gaudier Brzeska: A Memoir* (London: Laidlaw and Laidlaw, 1939), 104.

[11] Ezra Pound, *Literary Essays of Ezra Pound*, ed. T.S. Eliot (New York: New Directions, 1968), 9.

[12] Ian F. A. Bell, *The Critic as Scientist* (London: Methuen & Co., 1981), 27; Hudson Maxim, *The Science of Poetry and the Philosophy of Language* (New York; London: Funk &Wagnalls Company, 1910), 3; *Contributions to Periodicals*, I, 41

[13] William James, *The Principles of Psychology*, 2 vols (Cambridge, MA: Harvard University Press, 1981) II, 1066.

[14] Alexandra Hui, *The Psychophysical Ear: Musical Experiments, Experimental Sounds, 1840-1910* (Cambridge, MA: MIT Press, 2012).

[15] Hui, *The Psychophysical Ear*, 95.

[16] Kittler, *Gramophone, Film , Typewriter*, 30.

[17] Pound, *Contributions to Periodicals*, IV, 103, 112, 122.

[18] Guillaume Apollinaire, 'Simultanéisme-Librettisme', *Soirées de Paris* (Genève: Slatkine, 1971), 323.

[19] Pound, *Sonnets and Ballate of Guido Cavalcanti*, 11.

[20] Pound, *Contributions to Periodicals*, 124.

[21] *Letters of Ezra Pound*, 322.

[22] Pound, *Contributions to Periodicals*, 125.

[23] Pound, *Contributions to Periodicals*, 125, 122.

[24] Williams Carlos Williams, *The William Carlos Williams Reader*, ed. by M. L. Rosenthal (London: Macgibbon & Kee, 1966), 406; Charles Olson, *Human Universe and Other Essays*, ed. Donald Allen (San Francisco: The Auerhahn Society, 1965), 57.

[25] Pound, *Contributions to Periodicals*, 122.

[26] Richard Sieburth, 'The Work of Voice in the Age of Mechanical Reproduction'; Michael Golston, *Rhythm and Race in Modernist Poetry and Science* (New York: Columbia University Press, 2008).

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[30] Pound, *The Cantos*, 118.

[31] Pound, *The Cantos*, 76.

[32] Pound, *Ezra Pound and Music*, 221.

[33] Pound, *The Cantos*, 77.

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