'An Object with No Predecessors'?
A Computational Reading of J. H. Prynne’s
For the Monogram

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J. H. Prynne’s 1997 book For the Monogram arguably marks the beginning of what has been termed his ‘late style’: a period of avant-garde poetic output characterised by a shift towards monolithic blocks of text featuring highly disrupted syntax and a vocabulary drawn from a range of increasingly technical and specialist fields. This paper considers whether such ‘high-tech’ writing requires a similarly high-tech approach to reading, describing efforts to interpret the poem using a custom-built computer program linked to the Google Books database. In particular, it examines the theoretical implications of such rudimentary machine reading in light of existing interpretations of the poem by Simon Jarvis and Peter Middleton, focusing on the peculiar aesthetic implications of exponential technological development and arguing that For the Monogram is a text which anticipates and even acts out its own mechanized dissection. Through a complex incorporation of sources ranging from Mother Shipton to computer programming manuals, Prynne anticipates and disrupts any attempt at computational processing, leaving a text which is paradoxically both immune to and deformed by technological progress.

Keywords: J. H. Prynne; For the Monogram; Google Books; Digital Humanities; Peter Middleton; Simon Jarvis

Published by Rod Mengham’s Equipage press in 1997, For the Monogram is both typical and, arguably, inauguratory of what is sometimes called J. H. Prynne’s ‘late style’. The book is short, running to just 20 pp., and sits uneasily between the categories ‘poem’ and ‘sequence’, consisting of fourteen individually paginated blocks of text, each sixteen lines in length. (For convenience, and for a number of more important reasons which will be considered below, I will refer to the work as a sequence.)
As in later books, the blocks are relatively consistent in width, and they are all untitled, marking the start of a wholesale avoidance of titles—which Prynne refers to derisively in a 1964 interview, echoing his interviewer, as ‘handles’—lasting until 2010’s Sub Songs. For the Monogram has not received significantly more critical attention than any of Prynne’s other books of this period, which is to say it has not received much attention at all. One of the most substantial and sustained attempts to tackle the sequence is Simon Jarvis’s 2003 article for the online magazine Jacket, a piece which runs to just 3,500 words and bills itself (over-modestly) as ‘a notable Failure’. What is it, then, other than the general obscurity of Prynne’s late work, that has prevented scholars from engaging seriously with For the Monogram? A clue might be found in the third poem in the sequence, which seems to have been quoted and cited more times than any other:

Select an object with no predecessors. Clip off its roots, reset to zero and remove its arrows. At each repeat decrement the loop to an update count for all successors of the removed object ranking the loop body at next successor to the array stack. Count back up left and right scan, test for insert loops using 0 0 as sentinel pair. Such as of figures in space, if (set if true) a product goto top list, an object otherwise (if else) remaining the same. As a quantum (put > zero) parse to occupy inner sense more by recursion count to null, and reset. Match for error to run output and restrict condition if at one then also next. There is a bright blue light flashing over the exit plaque. Connect atonal floats via path initial to hydrated silica screen occlusion ice batched out and bent through diode logic gates.

For critics eager to demonstrate the supposedly alien character of Prynne’s late poetry, specifically its incorporation of conventionally non-poetic diction, this particular
poem is a helpful tool—this is the use to which it is put in Ian Brinton’s *Contemporary Poetry* (2009), a book written largely for students. As Brinton points out, quoting Peter Middleton, the poem makes ‘the new communications technology part of [its] field of reference, semantic, visual, and lexical, all broadly at the level of content.’ Unfortunately, as in so many readings of Prynne’s later poetry, this is where discussion stops. Scholars trained in the profession of English Literature are quick to identify what makes poems such as this unusual and are generally able to make educated guesses about the origins of their language; however, with very few exceptions, they are reluctant to engage with that language on the broad ‘level of content’ to which Middleton refers. When semantic judgements are made, they are very often of an abstract, second-order character: the deployment of a particular vocabulary is read as a statement, but the actual propositions made using that vocabulary are ignored. (In many cases, the supposed impenetrability of these baseline propositions is itself interpreted as a second-order statement.) What if ‘the new communications technology’ could itself help to bridge this gap?

Middleton contends that ‘the mobile phone, the internet, the personal computer, and digital image processing have had a greater impact on the way we live than any new set of technologies since the arrival of the motor car, telephone, and radio a century earlier and are genetically modifying the ways we remember and the way we read.’ This is no doubt true, but the use of the perfect tense in the first part of this sentence risks concealing the way that these new technologies are themselves developing and superseding each other at an exponential rate. One example will serve to illustrate the pace of change. Middleton’s *Distant Reading* was published in 2005, but the essay ‘New Memoryism’ was first delivered at a conference at Birkbeck College in September 2000, roughly four years before Google formally announced the launch of its ‘Google Print’ project, later to be renamed ‘Google Books’. What began as a relatively small programme to make newly-published books visible in Google’s search engine has since expanded into a huge digitization effort; Google Books now hosts a searchable database of well over 30 million titles, a figure which, if a 2010 estimate is to believed, represents roughly one quarter of all books ever published.
Google Books is undoubtedly one of the technologies most responsible for ‘genetically modifying [. . .] the way we read’ in recent years, with poetry like Prynne’s representing prime material for the trial-and-error-based approach to literary interpretation that it facilitates. It is now possible, for instance, to identify a precise source for the sentence ‘Select an object with no predecessors’ simply by typing it into the search engine, which throws up a 1986 text, *Data Structures, Algorithms and Programming Style*, by the computer scientist James F. Korsh.10,11 But what are the limits of this approach? Can it be used to gain a foothold on the elusive ‘level of content’ referred to earlier, or is it simply a quicker and more efficient way to make guesses about textual provenance? To test this thesis properly, it is necessary to accept the challenge posed by Prynne’s adoption of the language of computer programming and actually to write a computer program. Using JavaScript and the Google Books application programming interface (API), I put together a simple script intended, in the discourse of password cracking, to ‘brute force’ the poem. The script takes plain text as input—in this case, a copy of *For the Monogram* which had been scanned, run through optical character recognition (OCR) software and tidied up manually. It then strips the text of all punctuation and ‘whitespace’ and uses it to generate an overlapping list of four-word chunks: words 1, 2, 3 and 4, then words 2, 3, 4 and 5, and so on. (Four words was decided upon as the optimum length, being short enough to cast a wide net but not so short that clear sources would be impossible to identify.) Each chunk is passed to Google Books—if it returns results other than those books in which the poem itself is printed or quoted, their titles are listed and made available for inspection by hand.

One of the most useful functions of this program is to confirm sources that have already been identified or part-identified through conventional reading. In ‘The Incommunicable Silhouette’, Jarvis puts forward Immanuel Kant’s *Critique of Pure Reason* as an important precursor to the text, using as evidence Kant’s frequent use of the term ‘monogram’ in that work and the phrase ‘the scheme of a pure | sensible outline’ in the second poem—not a construction used by Kant, but one which Jarvis takes to be a reference to his transcendental schema.12 Jarvis’s argument is
strengthened by a number of verbatim borrowings which are identified easily by the computer, but which, lacking a key vocabulary element such as ‘scheme’, are more difficult for human readers to pick up: ‘such as of figures in space’; ‘an object | otherwise [. . .] remaining the same’; and ‘occupy inner sense more’. All three are taken from the chapter titled ‘The Schematism of the Pure Concepts of Understanding’ in the Kemp Smith translation, a chapter which Jarvis himself mentions. A similar pattern of repeated borrowing is identifiable in the case of the Korsh book, with the phrases ‘remove its arrows’ and ‘all | successors of the removed object’ also being taken from this source.

While confirming previous educated guesses about source materials, the results listed here also shed light on For the Monogram's formal organisation: specifically, the question of whether the text should be considered a sequence or a single poem. All direct quotations from the First Critique occur in Poem 3, as do all quotations from Korsh; this consistency seems to support the case for considering this particular text block as a more or less coherent whole in which epistemology and computer programming are set up to counterpoint each other. Coherence can also be identified through features other than the co-location of quotations from different texts, with Poem 7 being a clear example. When run through the Google Books API, this poem threw up a match which at first seemed accidental: the phrase ‘out | out to show’ matched a score for the composer Steve Reich’s 1966 piece Come Out, printed in an essay by Sumanth Gopinath in 2009, more than a decade after the publication of For the Monogram. After further investigation, however, a pattern of reference to the piece became clear. Come Out uses a recording of Daniel Hamm, one of the ‘Harlem Six’ arrested for the murder of a police officer following the Harlem Riot of 1964. Describing an attempt to demonstrate to police that he had been beaten, Hamm says, ‘I had to, like, open the bruise up, and let some of the bruise blood come out to show them.’ Reich loops the final four words, first on two separate tape recorders, then on four, and lets them slip out of sync in playback, a process which at one point results in the phrase ‘out out to show’. Crucially, Prynne’s poem mimics both the vocabulary and the repetitious character of the piece:
come out to flay'; ‘fixture to show them'; ‘Clip act out | out to show'; ‘coals out to show'; ‘this vivid failed bruise'; ‘You got scarlet out to show it'; ‘come out for out now’.

As it happens, this very same intertextual link was identified by Middleton in his essay ‘Dirigibles’, though I had not read it at the time that I wrote the first draft of this article and had never heard *Come Out* until encountering the apparent reference. What does it mean to have rediscovered this link through the recursive searching of a massive database—a database which, while certainly foreseeable, would presumably have seemed a relatively distant possibility at the time of the poem’s composition? Moreover, does the (re)discovery have any interpretative value in the context of a conventional reading of *For the Monogram*, or is it simply a curiosity to be pored over by specialists? I believe that this sort of automated textual archaeology is, absolutely, of interpretative value, and that the clearest way to see this is through studying the reciprocal effect that new disclosures have on existing theories of source material. In the case of Poem 7, it is not difficult for a reader to detect references to the body, and particularly to both surgery and industrial meat production: in the course of a repeated ‘b-’ and ‘br-’ sound patterning, there are references to bones, blood, brains, bruises and brisket, while the poem also focuses on the processes of cutting and peeling. Adding *Come Out* to this constellation of concerns is analogous to the insertion of a new explanatory variable in a multiple regression model: under the sign of state violence to vulnerable young bodies, our grasp of the poem’s ‘meaning’ becomes tighter. Nevertheless, it is important to admit that we remain in the orbit of the sort of abstract, second-order reading discussed at the beginning of this article, in which actual propositions are passed over in favour of the broader statements made by the use of certain vocabularies or reference to specific text-external fields.

Before exploring some of the other sources exposed by *For the Monogram*’s computational disassembly, I would like to turn, deliberately, to an ‘actual proposition’ made by the text—one which seems particularly relevant to the question of how, exactly, the sequence is to be read. There is a regrettable tendency in criticism of Prynne’s poetry to search for coded acknowledgements of the work’s obscurity, as
if the discovery of such an admission would absolve the critic of the task of actually reading the poems; the most famous example is the beginning of the 1966 poem ‘The Numbers’—‘The whole thing it is, the difficult | matter’—which, as Thomas Roebuck and Matthew Sperling note, has too often been used ‘to launch a somewhat sterile debate on “difficulty” in poetry’. Even so, there are points in Prynne’s work at which the temptation to read for meta-language is practically irresistible. One such point is the beginning of Poem 12 in *For the Monogram*:

> Prior guesswork loses the things in your power by broken reach in seeking to verify the check-out lag at the till. Glow to offence rating, narrow axis tapers into counting lucky hits, rueful charge card assent.

A quick and admittedly speculative attempt at paraphrase: meaning is compromised (‘lost’ as a ‘thing in your power’) by any attempt to match up ‘prior guesswork’—the initial construction of some notion of what the poem or sequence is ‘about’—with the semantic state of affairs which obtains at the work’s conclusion, the ‘check-out’ or ‘till’. There is ‘lag’ between the two, making any attempt to reconcile them a ‘broken reach’. If the affronted reader, whatever their ‘offence rating’, persists with this sort of inadequate strategy, the already ‘narrow axis’ of their reading will ‘taper into counting lucky hits’, shaping incidental features of the work into patterns which confirm their ‘prior guesswork’. This is the interpretative equivalent of buying on credit, with a ‘charge card’, a fact of which the lazy but nevertheless ‘rueful’ reader can hardly be unaware.

If this reading is anything close to accurate—and as long as it remains sufficiently local to avoid being undermined by its own conclusions—then Prynne seems to be making an important statement about the way his late poetry is to be read, or not read. Concluding ‘The Incommunicable Silhouette’, Jarvis reveals a ‘hunch’ that the famed difficulty of this work
emerge[s] from an attempt to pay scrupulous attention to some single quite discrete object, experience or phenomenon and, instead of allowing the functional directives of divided intellectual labour to govern the presentation of that object, continually to exhibit the connexions and fissures between such languages from the demands made upon them by the complexity of the object itself.  

In Jarvis’s model, conventional reading strategies, trained precisely to obey ‘the functional directives of divided intellectual labour’, will clearly be inadequate to the task of reading For the Monogram—they will be exactly that ‘broken reach’ that cannot but end by ‘taper[ing] into counting lucky hits’. But if Prynne’s late poetry is not to be abandoned as absolutely unreadable, then some new strategy must be developed which is capable of approaching the work in a movement which mirrors its own ‘scrupulous attention’ to its ‘single quite discrete object’. It is my contention that this strategy is outlined, albeit negatively, in the pages of For the Monogram itself. Slightly earlier in the essay, Jarvis notes a congruence between Kant’s ‘absurdly optimistic’ notion that ‘an architectonic of all human knowledge would not even be difficult’ and the sanguinity of participants (Google among them) in ‘the current scramble for monopoly over information technologies.’ He goes on to argue that

[...]he drastic technical development of Prynne’s work since Brass, as well as its persistent, even absurd, determination to keep up with technical developments in the most disparate fields, such as computer languages and biochemistry, is what we might think of as a counter-architectonic working within and against the existing databanks.

The point of Prynne’s late poetry, argues Jarvis, is ‘a search for the monogram, the sketch, outline, figure or programme of the engines of mutation themselves: so as to make their refiguring imaginable.’ While I am ready to subscribe to the general tenor of this argument, I believe that Jarvis’s concept of the ‘counter-architectonic’ requires further clarification if it is to be of real explanatory value. Specifically, it is necessary to describe how exactly the work’s ‘determination to keep up with technical
developments' relates to the manifestation of those developments in the real, non-poetic realm of blood and silicon.

*For the Monogram* is, I would like to argue, a text which anticipates and even acts out its own mechanized dissection. The preoccupation with surgery in Poem 7 has already been described, and there is a similarly clear focus on bodily distortion and non-coherence as a result of what seems like military hardware in Poem 10. Weaponry is raised much more specifically in Poem 9, where the phrase ‘pressed candles require a first fire’ appears to have been lifted almost verbatim from A. Bailey and S.G. Murray’s 1989 *Explosives, Propellants and Pyrotechnics*. So far, so much ‘prior guesswork’. Yet there are other, much more important indicators that *For the Monogram* is a work gazing forward to its own violent destruction. In the very first poem of the sequence, a text which might be expected to ‘set the tone’ for the remainder of the work, an object is described as ‘floating across bars in black? In green | flash scraping ionic burn?’ Staying within the field of weaponry, this might be identified as the view through a sniper’s scope, with the ‘bars’ as a reticule and the colouring referring to the distinctive green tinge of night vision equipment. Once again, however, the computer is able to pick up a textual reference—‘in black, in green’—where a human reader might be thrown by the intervening question mark, or the apparent reference to the optical phenomenon of the ‘green flash’. The source—admittedly only potential—in this case is a text known popularly as ‘Mother Shipton’s Prophecy’, said to have been written in the 15th or 16th century by a legendary prophetess named Ursula Southeil, or Mother Shipton (though in fact fabricated in the late 1800s). The poem is reprinted in full below, in the version found in William H. Harrison’s *Mother Shipton Investigated*:

Carriages without horses shall go,  
And accidents fill the world with woe.  
Around the world thoughts shall fly  
In the twinkling of an eye.  
The world upside down shall be  
And gold be found at the root of a tree.
Through hills man shall ride, 
And no horse be at his side. 
Under water men shall walk, 
Shall ride, shall sleep, shall talk. 
In the air men shall be seen, 
In white, in black, in green; 
Iron in the water shall float, 
As easily as a wooden boat. 
Gold shall be found and shown 
In a land that’s now not known. 
Fire and water shall wonders do, 
England shall at last admit a foe. 
The world to an end shall come, 
In eighteen hundred and eighty one.\[33\]

For the modern reader, this text obviously bears the one key hallmark of spurious prophecy: verifiability built on vagueness. As such, it might be said to mirror the ‘charge card’ approach to poetic interpretation laid out earlier—disciples of Mother Shipton, like conspiracy theorists or devotees of Nostradamus, are ‘counters of lucky hits’ par excellence. Nevertheless, its implicit citation by Prynne 116 years after the supposed apocalypse serves to re-invest it with specific meaning. The third and fourth lines in particular—‘Around the world thoughts shall fly | In the twinkling of an eye’—having presumably already predicted the electric telegraph, the telephone and shortwave radio, now seem to refer unequivocally to the internet, and by extension to ‘the current scramble for monopoly over information technologies.’ For the Monogram is a text which understands the world’s direction of travel as it hurtles simultaneously towards the universal fungibility (though not accessibility) of information and an irresistible multiplication of the blacks and greens of night vision and military camouflage.

Further evidence of For the Monogram’s textual self-consciousness is provided in Poem 10, in which Prynne makes a clear reference to Wallace Stevens’s 1952 poem
'Prologues to What is Possible'. Stevens’s lines 'A boat carried forward by waves resembling the bright backs of rowers, | Gripping their oars, as if they were sure of the way to their destination' are distorted into a violent and grotesque parody:

 [...] enter green mourning tents in burned faces
arms and bodies charred resembling the bright backs
  gripping and bending, to weep there.

With the figure of the ‘green mourning tents’, we are once again in a military or refugee camp; given the tendency of Prynne’s poetry to react quickly to ‘current events’, we might even locate it more precisely in the former Yugoslavia. But what is the significance of this unacknowledged quotation in general, and particularly of the bathetic transformation enacted by its new context? A clue can be found in a recent prose work by Prynne, Concepts and Conception in Poetry (2014), which consists of a detailed commentary on the Stevens poem, as well as notes on two passages from Wordsworth. To provide a comprehensive account of Prynne’s argument in this pamphlet would be beyond the scope of this article; nevertheless, we may note his conclusion, which is that the poem is able to ‘pick up and even toy with its own strands’. More fully:

The ‘meaning’ of this poem, or even a meaning or meanings for it, is thus not overtly declared. The method of fluid abstraction prevails over particulate description, the landscape (seascape) and the schedule of colours and visual imagery, drawing these into a domain of conceptualised potential meaning [...] which responds to ideation by constant promotion to higher levels of abstraction, so that motions of thought float closely between and within currents of the description but are not specified or captured by them.

If this delicate and fine-tuned autonomy is the achievement of Stevens’s poem, then its ironic citation in For the Monogram seems to represent a deliberate and demonstrable failure of that achievement. To be sure, this is also a work in which
meaning is ‘not overtly declared’—but only because there are so many pretenders to
the title, pieces of language and other miscellaneous fragments of semiosis thrust-
ing themselves in from all sides. The experience of reading *For the Monogram* is not,
as Stevens has it, ‘like being alone in a boat at sea’, but more like swimming in a
crowded shipping lane—and this is an experience of which the text itself is aware.

To put it bluntly, *For the Monogram* is a poem written by a human in the
knowledge that it will, at some point, be read by a computer. This brings us back to
what I believe is meant by Jarvis’s ‘counter-architectonic working within and against
the existing databanks’—not a Wachowskian sci-fi cliché in which The Human Spirit
is pitted against the ruthless logic of the machine, but a more ambivalent movement
of strategic undermining and sabotage. One of the discourses in *For the Monogram*
that has not yet been noted is that of mathematics, specifically graph theory, as when
in Poem 13 we read about ‘a non-trivial path from the vertex back | to itself’.37 In
mathematical terms, a graph is a group of objects (vertices) connected to each other
in various configurations by a series of theoretical lines (edges); the first real work
in the field is considered to be Euler’s paper on the Königsberg Bridge Problem,
which was in turn spurred by the researches of Leibniz, whose *Theodicy* provides
the epigraph for *For the Monogram*. Despite this historical pedigree, graph theory
was in the late 1990s (and to some extent still is) an exciting field, due primarily
to emerging practical applications which had the potential to revolutionize data-
base technology, offering an alternative to the strictly hierarchical rows-and-
columns model that had obtained up to that point. This new horizontal approach
might be taken as a metaphor for the structure of *For the Monogram*, each poem,
sentence or word a vertex and the strands of meaning a set of provisional and
precarious edges tying them together.

Technological metaphors for what is essentially political resistance are, of course,
inherently flawed—however symbolically or formally democratic a new technological
development, capital’s effective control of research and development ensures that
there is always a repressive application waiting in the wings. This is certainly true in
the case of graph databases, whose suitability for modelling social relations has led
to their adoption by intelligence agencies such as the US National Security Agency (NSA) and GCHQ in their efforts to interpret the vast swathes of metadata collected under programmes such as PRISM.\textsuperscript{38} Still, Prynne is not careless enough to remain bound by the restrictions of a single metaphor, and the fate of the graph database does take us close to the heart of \textit{For the Monogram}'s sceptical understanding of technological development and its effect on poetic language. What a computational reading of this sequence reveals is, ultimately, its own insufficiency.

The more data that is collected and the more efficiently the poem’s sources are identified, the more obvious it becomes that there is an interpretative gap at the centre of the reading corresponding to Jarvis’s ‘single quite discrete object, experience or phenomenon’. This is not to say that this object can be grasped through some sort of intuitive leap, nor that computational approaches to reading lack value altogether. The point is, ultimately, a phenomenological one, having to do with the process of interpretation as much as with the end result. Using a computer’s processor and memory to read is never quite the same as using one’s own brain, precisely because it implies the outsourcing of the act of \textit{processing} and its separation from decisions about meaning.\textsuperscript{39}

This point is derivable from any reading of the poem, even the most scrupulously hygienic, text-internal exercise in ‘practical criticism’. Yet it is bound to come across more forcefully in the course of a reading which accepts what \textit{For the Monogram} tries so strenuously to say about itself: namely, that it is both one thing (a poem) and another (fragments of pre-existing language). From this perspective, the value of a computational interpretation is essentially performative, insofar as its separation of processing from understanding dramatizes a fundamental split which already exists in the text itself, as it does in every text. Facing the poem’s hidden centre, Jarvis describes it not only as ‘some single quite discrete object’, but also, potentially, as an ‘experience or phenomenon’.\textsuperscript{40} Is it possible that what sits at the heart of \textit{For the Monogram} is the ‘experience or phenomenon’ of poetic creation itself, the presentation of which Prynne refuses to allow to be governed by ‘the functional directives of divided intellectual labour’? This would certainly give a new meaning to Jarvis’s
contention that the poem continually [. . .] exhibit[s] the connexions and fissures between [its source] languages from the demands made upon them by the complexity of the object [i.e. poetic creation]. In fact, those 'connexions and fissures' would themselves be the objects, rather than serving as phenomenal manifestations of some deeper truth. In this sense, *For the Monogram* really could be said to 'pick up and toy with its own strands', and the gap between processing and understanding, source text and deployment, would be something like the hinge between finger and thumb which makes it possible.

**Competing Interests**
The author declares that they have no competing interests.

**Notes**
1. Peter Orr interviews Jeremy Prynne, *The Poet Speaks* (London: British Council, Recorded Sound Department, 6 January 1964).
2. Simon Jarvis, 'The Incommunicable Silhouette', *Jacket*, 24 (November 2003), [http://jacketmagazine.com/24/jarvis-tis.html] (accessed 15 July 2014).
3. J. H. Prynne, *For the Monogram*, in *Poems*, 2nd edn (Tarset: Bloodaxe, 2005), 417–30 (p. 420). To facilitate the use of different editions, subsequent citations will be given in the form *For the Monogram*, [poem number].[line number[s]].
4. Ian Brinton, *Contemporary Poetry: Poets and Poetry since 1990* (Cambridge: Cambridge University Press, 2009), p. 111.
5. Peter Middleton, ‘New Memoryism’, in *Distant Reading: Performance, Readership, and Consumption in Contemporary Poetry* (Tuscaloosa, AL: University of Alabama Press, 2005), 137–59 (p. 154).
6. Middleton is, admittedly, one of these exceptions—he said ‘Dirigibles’, also included in *Distant Reading* (pp. 160–98), considers *For the Monogram* in much more detail.
7. Middleton, p. 139.
8. ‘Google Books History’, *Google Books*, [http://www.google.co.uk/googlebooks/about/history.html] (accessed 15 July 2014). The text of Middleton’s essay printed in *Distant Reading* includes a reference to an internet search made in October 2002 (p. 150), suggesting that some changes and additions were made to the first draft.
9. Leonid Taycher, ‘Books of the world, stand up and be counted! All 129,864,880 of you’, *Google Books Search* (5 August 2010), [http://booksearch.blogspot.co.uk/2010/08/books-of-world-stand-up-and-be-counted.html] (accessed 15 July 2014). The scale of the project is matched by the secrecy with which it is carried out, as a 2010 film by artist Andrew Norman Wilson makes abundantly clear (‘Workers Leaving the Googleplex’, *Vimeo* (14 October 2010), [http://vimeo.com/15852288] (accessed 15 July 2014)).
10. *For the Monogram*, 3.1.
11. James F. Kosh, *Data Structures, Algorithms and Programming Style* (Boston, MA: PWS, 1986).
12. *For the Monogram*, 2.2–3.
13. *For the Monogram*, 3.7, 3.8–9, 3.10.
Immanuel Kant, *The Critique of Pure Reason*, trans. by Norman Kemp Smith (London: Macmillan, 1993).

There are, of course, indirect references to similar subject matter throughout *For the Monogram*, e.g. a use of the term ‘imperfect duty’, from Kant’s moral philosophy, in Poem 11 (2–3), and a series of references to mathematics and graph theory: ‘a shallow tree’ (9.5); ‘a non-trivial path from the vertex back to itself’ (13.10–11).

*For the Monogram*, 7.7–8.

Sumanth Gopinath, ‘The Problem of the Political in Steve Reich’s *Come Out*,’ in *Sound Commitments*, ed. by Robert Adlington (Oxford: Oxford University Press, 2009), 121–44 (p. 132).

*For the Monogram*, 7.1, 7.5, 7.7–8, 7.9, 7.11, 7.12, 7.14.

Middleton, ‘Dirigibles’, in *Distant Reading*, 160–98 (pp. 196–97).

Middleton, for one, is well aware in 2000 of the archival potential afforded by the internet: ‘The internet, although at an early stage, appears to be on the way to offering an archive of all extant printed texts as well as accompanying commentaries, and however far short it falls of this expectation, it already creates a phenomenological strain on the individual’s capacity to work with it as a form of memory’ (‘New Memoryism’, p. 147).

There is some evidence to suggest that one reference to the latter, ‘position and peel back’ (7.11), may have been taken from an instruction manual for breast implants, while the phrase ‘to show weft of’ (7.8) occurs in medical literature concerning the dissection of eyes; still, this level of precision is not necessary to identify the general surgical tenor of the poem.

Prynne, ‘The Numbers’, in *Poems*, 10–12 (p. 10).

Thomas Roebuck and Matthew Sperling, “The Glacial Question, Unsolved”: A Specimen Commentary on Lines 1–31’, *Glossator*, 2 (2010), 39–78 (p. 43). The position of ‘The Numbers’ at the very start of every edition of the collected poems has no doubt encouraged this interpretation, despite the best efforts of the 1982 paperback’s blurb to pre-empt it: ‘Much early critical response to J. H. Prynne’s work mistakenly took its cue from the first line printed in this book: “The whole thing it is, the difficult”, failing to establish that difficulty as being the ardent “matter” and the accompanying breadth of imaginative and political reference’ (*Poems* (London: Agneau 2, 1982), back cover).

*For the Monogram*, 12.1–5.

‘Glow to offence rating’ is grammatically ambiguous, potentially referring to something more like a ratio (glow:offence) than a steady movement towards a designated end-point (glow until the offence rating is reached).

Jarvis, ‘The Incommunicable Silhouette’.

Ibid.

Ibid.

*For the Monogram*, 9.15.

A. Bailey and S. G. Murray, *Explosives, Propellants and Pyrotechnics* (London: Brassey’s, 1989).

*For the Monogram*, 1.6–7.

William H. Harrison, *Mother Shipton Investigated* (London: privately printed, 1881), pp. 12–13.

Wallace Stevens, ‘Prologues to What is Possible’, *The Hudson Review*, 5.3 (Autumn 1952), pp. 330–31.

*For the Monogram*, 10.4–6.

*For the Monogram*, 13.10–11.

Doug Henschen, ‘Defending NSA Prism’s Big Data Tools’, *InformationWeek* (11 June 2013), <http://www.informationweek.com/big-data/big-data-analytics/defending-nsaprisms-big-data-tools/d/d-id/11103187> (accessed 19 August 2016).
The interface between the two—in computing terms, the ‘bus’, as in ‘universal serial bus’ (USB)—is at present represented by a highly inefficient system of fingers, keyboards, eyes and screens, constituting a powerful bottleneck in comparison to copper wire, fibre optic cables or neurons. This is not necessarily an insurmountable technical problem, as new developments in biomechatronics constantly imply, but neither is it one whose supersession can be taken for granted—it is far from clear whether, even with a functionally perfect brain-computer interface (BCI), a biological organ would be able to recognise an artificial extension as ‘itself’.

Jarvis, ‘The Incommunicable Silhouette’.

Ibid.