

concile Benjamin and Heidegger becomes insupportable. As the art historian Georges Didi-Huberman explains in his remarkable recent book *Survival of the Fireflies*: ‘as a reader of Heidegger, Agamben seeks the horizon behind every image ... and that horizon inevitably shapes the metaphysical cosmos, the philosophical system, the juridical corpus or theological dogma’. Hence the ‘kingdom’s glory’ that Agamben discusses in his most recent texts on Judeo-Christian themes. Didi-Huberman is absolutely correct in his claim that Agamben’s reliance on the Heideggerean concept of the ‘limit’ – the very messianic, eschatological limit Derrida never hesitated to remind us to avoid – renders him blind to the subtleties and promise of Benjamin as a philosopher of images and induces him to present a conservative, ‘hopeless’ vision of contemporary experience.

It is clear that the most insightful and advanced work on aesthetic philosophy is not to be found within Agam-

ben’s work (including the forthcoming English translation of *Creation and Anarchy: The Work of Art and the Religion of Capitalism*). Yet he must remain our contemporary, if only for the fact that he remains so untimely. As Agamben puts it in his essay ‘What is the Contemporary?’, a contemporary is one who ‘perceiving the darkness of the present, grasps a light that can never reach its destiny; he is also the one who, dividing and interpolating time, is capable of transforming it and putting it into relation with other times. He is able to “cite it” according to a necessity that does not arise in any way from his will, but from an exigency to which he cannot not respond.’ Perhaps it is Agamben’s tragic flaw that while giving such poetic voice to the definition of the ‘contemporary’, he is unable to embody that concept himself. As he imagined, he was unable to see his limit. But we can.

Jae Emerling

## The minimus poems

Nathan Brown, *The Limits of Fabrication: Materials Science, Materialist Poetics* (New York: Fordham University Press, 2017). 296pp., £32.00 hb., 978 0 82327 299 0

As its starting point, Nathan Brown’s excellent new book *The Limits of Fabrication* asks disarmingly simple questions: how are poems made, and what are poems made of? He takes these questions in the most literal way imaginable: as his subtitle ‘Materials Science, Materialist Poetics’ implies, he is interested in the nano-particles that constitute the ink of the print, the paper of the page, as well as, conversely, in nano-technology as a form of writing, which Brown shows that it manifestly is. But Brown is also able to scale up, and to work ‘literally’ in an even more literal manner. A bravura close reading of an Emily Dickinson poem in which Brown shows how the poem semiotically mobilises the diverse pen strokes by which its letters are formed shows just how seriously he takes the substance of the letter, or, as he puts it, the ‘subgraphemic dimension of writing operating prior to signification’. Throughout, his study makes salutary use of the path-breaking work on proto-semantics notably pioneered by Steve McCaffery. The two approaches are coherent – just as materials science examines how matter is put together on the nano-scale, so Brown examines

how poetry is put together on a scale smaller than the sentence, the word, or even the letter. But that coherence both gives the game away and leads Brown to his most interesting questions of all, because to liken nano-technology to proto-semantic enquiry is to operate by analogy, and therefore not materialistically at all.

Brown is well aware of this, and of its necessity. One of the book’s most fascinating aspects is its understanding not only of the ideological weight that ‘materialism’ is often made to carry, but even more importantly, that ‘materialism’ itself is not empirically defined. Which is to say that matter cannot dispense with the idea. And therefore, it cannot dispense with poetry.

As Derrida definitively demonstrated, the ‘letter’ itself is as much an ideality as a material mark, and without this ideality on which the grapheme depends, there can be no ‘subgraphemic dimension’ at all. This is part of the stakes of one of Brown’s most important contentions: that a ‘materialist poetics’ must do more than simply attend to the well-worn notion of the ‘materiality of the signifier’, but beyond this, must strive to address the ‘man-

ner in which the materiality of language is predicated upon the transformation of “non-language material”.’ ‘Fabrication’ in this way also becomes a form of translation, and beyond this, a fascinating means to mobilise the concept of *scale* as a powerful tool for rethinking postwar poetry.

In his Introduction, Brown puts forward three broad goals for his book: to convey to non-scientifically trained readers the importance of materials science for anyone interested in ‘structure, form, and fabrication’; to trace ‘a tradition of constructivist, nonorganic poetry and poetics from the mid-twentieth century to the early twenty-first century’; and to use the ‘intersection of materials science and materialist poetics’ to elaborate a ‘twenty-first century materialism’. It is the second of these imperatives that lends its structure to the rest of the book, which features chapters based centrally on Charles Olson, Ronald Johnson and Shanxing Wang, along with another jointly examining Christian Bök and Caroline Bergvall.

These are preceded by an important theoretical chapter which establishes much of the grounds for the readings which will follow. Here Brown begins with one of the central points stressed by theorists of nano-

technology: that on the nano-scale, the distinction between living and non-living, organic and inorganic, does not obtain. This allows Brown to recalibrate Heidegger’s famous distinctions in *The Fundamental Concepts of Metaphysics* between stone, animal and human with relation to *Dasein*, but not along the usual lines: the question here is not what separates human from animal, but rather what partitions the ‘inorganic’ stone from them both. Brown shows that nanoscale materials science is fabricating materials which while certainly not ‘living’ are nevertheless not ‘worldless’ in the manner of Heidegger’s stone; rather they ‘challenge Heidegger’s distinction between modalities of non-living and living being’ by virtue of their receptivity and responsiveness to their surrounding environment. For Brown, the implications of this with regard to biopolitics, for example, is not to argue that nano-science has ‘created life’, but rather to question what defines ‘life’ as such if inorganic matter can mimic it. Combining these reflections with Jean-Luc’s Nancy work on the same Heideggerian questions, Brown proposes the ‘inorganic open’ as a way beyond the ‘biocentrism’ of Agamben as well as the anthropocentrism of Heidegger.



Brown's problematisation of the organic/inorganic opposition stands him in very good stead in the subsequent two chapters on Black Mountain poetics, where he is able to significantly remap the terrain by way of his rearticulation of the dominant categories that have tended to chart it heretofore. His chapter on Charles Olson in particular should be required reading for anyone in the field, as here Brown's overlapping theoretical interests coalesce to provide outstanding results. In the bluntest of terms, Brown argues that counter to appearances Olson is a poet of the inorganic, the object and the minimal as much as and sometimes more than the maximalist 'I', which would project its verse outwards from the organic guarantee of life and the vital which is the poet's own breath. To do this he stresses Olson's own idea of 'objectism', and the ways it is informed by Whitehead's rethinking of the object as such. Olson's best readers have always wanted to pressure his too easily overlooked statements in 'Projective Verse' defining 'objectism' as getting rid of the 'lyrical interference of the individual as ego' and asserting 'man is himself an object', but few if any have done so as successfully as Brown. His argument is that rather than assert the rights of life over death (or over the strange undead non-life which Heidegger attributes to the stone), Olson proposes the task of saving the 'object from objectification' – with the object here clearly also including 'man' – by viewing it in terms of Whitehead's views on relationality. For Brown this also differentiates Olson from the Objectivists, for whom the core issues were epistemological and not ontological, as Brown argues they are for Olson. In this view, Olson is no longer primarily the poet of the 'organism, the biological body' but rather that of the 'conger of particles' that Olson mentions in 'In Cold Hell, In Thicket'.

The power of Brown's intervention here is not only theoretical; pragmatically, it opens the way for seeing what was always on display: Olson as a poet of the little, the minimal, the particular in every sense of this word; a major poet not of size and space but rather of scale. Brown is convincing in arguing that often for Olson the body too, as object, is seen in a similar light, *contra* all totalising organicisms: 'a body is a collective rather than a system, an object constituted of and among objects'. He is less so when attempting to read Olson's privileging of the breath along the same lines, arguing that breathing 'manifests the non-coincidence of the body to itself, its

participation in an outside'. While this is certainly the case, Brown doesn't convince me that it operates so in Olson's own configuration, where its regulatory function seems closer to the ideological bio-normativity so often attributed to the heart beat. Indeed, inspired by Brown's own work, I would tend to read Olson's embrace in this instance of an organicism which Brown has shown to be recused elsewhere as a symptom of his otherwise materialist desire to explore the *fabrication* of meaningful language out of air – a demonstrable subcurrent running through 'Projective Verse' in many places.

But even if one concludes Olson is more a poet still straining against organicism than one who has definitively broken with it, Brown's argument for the significance of the anti-organicist aspects of Olson's thought certainly holds good in the following chapter on Ronald Johnson and Buckminster Fuller, two other major figures of Black Mountain College. Here Brown decisively intervenes in the opposition between organicist or 'open field' poetics and proceduralist ones, which has dominated work in postwar American poetry to this day. In a fascinating discussion, Brown stresses the importance of the concept of the pattern to both Fuller's thought and the nanoscience which is, in places, explicitly indebted to it, as well as the objectist objection to the pattern on the part of Olson and even more, Creeley. He then turns his attention to Ronald Johnson's *Ark*, a work heavily indebted to Fuller's structural-architectural ideas as well as to Olson. This chapter is at the heart of Brown's entire project, because by showing the ways in which Johnson (and other writers) and nano-scientists are *both* post-Fullerian in fundamental, structural ways, the conflation 'materials science, materialist poetics' finds a historical grounding that goes beyond analogy. Fuller's importance for materials science lies in his isolation of design and pattern as fundamental elements that are also scalable, and as such, 'design' emerges as the core of the 'natural', the latter no longer seen in opposition to technology. From this perspective, Brown shows, a 'nature' poem can be one that, regardless of its subject matter, 'writes the whole qua order, pattern, completion, and design'. The implications of this are quite simply that the rule-bound, architectural, constraint-based work deriving from Black Mountain must properly be seen as no less organicist than, say, the Levertovian poetics to which it is too easily opposed. Or, as Brown puts it in a summary which should

significantly reorient work in the field, 'Johnson's fusion of procedural poetics with a commitment to the organic patterning of Nature demonstrates that the real divide in postwar American poetry is not between proceduralism and organic form'.

The implications of this for more recent poetry are explored in the chapter on Christian Bök and Caroline Bergvall. Starting with the importance of crystallography for materials science, Brown has an easy segue into Christian Bök's work *Crystallography*, whose toying with 'crystalline structure' on micro-levels continues the sort of enquiries employed by Johnson, and allows Brown to deploy his proto-semantic reading protocols to excellent effect. Among the most productive of Brown's readings here is his intuition that Bök, like Olson, is very much a poet of the body, but one not focussed on the body's 'facticity' as Olson is, but rather on its 'genericity' by way of the subtraction from it of the organic in favour of the formal model provided by crystal replication. Against this aridity, the superficially similar letter grids of Caroline Bergvall's *Goan Atom* work very differently. In terms of models of replication, we move from the crystal to gene-splicing, and from the subtractive to the performative. Brown suggests that Bergvall's interest in the 'objecthood' of the body is close to Olson in some ways, but they differ massively in Bergvall's queer foregrounding of questions of gender and sex, issues to which Olson was largely blind. One of the most interesting aspects of the section on Bergvall is its attention to her engagement with Hans Bellmer's surrealist dolls. For Bergvall, Bellmer's disarticulation of the female doll's body mirrors her own interest in thinking the 'unfixed' body as well, and again by way of a disarticulation, this time of language. Beyond this, with regard to Brown's larger arguments about objectism, the body and inorganicity, surrealist thought and practice is clearly a very fecund area for further extension of his questions.

Bergvall's feminism also brings explicitly political questions into play for the first time in the book, but it's not until the final chapter that we get to a consideration of what many readers (myself included) might have thought would be a central element of Brown's 'materialist poetics': historical materialism. Brown explores this in his analysis of Shanxing Wang's *Mad Science in the Imperial City*. Wang is in many ways an ideal subject for Brown: born in China, Wang took part in the Tiananmen

Square protests before training as a nanoscale engineer in the US, a career he subsequently abandoned for poetry. Starting with Wang's own riff on the old saw 'Think Globally, Act Locally' – 'work nano, think cosmologic' – Brown is able to bring his recurrent concern with scale to bear on the question of global capitalism, as he explores the forms of textual mapping, charting, networking and mourning constituted by *Mad Science*.

Viewing the wildly massive scaling in Wang's slogan as a way of thinking the insertion of the individual subject and its sorrow within history, Brown deploys the Marxist concept of 'real abstraction' as a means to gather together the most important elements of Wang's book. On one level, 'abstraction' enters by way of how *Mad Science* 'attempts a mathematical formalisation of historical processes and an algebraic encoding of subjective experience'; central to Wang's writing project is quite literally to replace the traditional poetic image and its primacy with equations, formulae and diagrams. These now take on the role of the 'concrete' that lyric habitually bestows on objects and images, and Brown does a fine job of theorising this in the context of the modernist suspicion of 'abstraction' in poetry that goes back to Pound. For if Wang's work is in fact concerned with the 'reality' of the 'abstraction' that underlies all capitalist exchange, then the grounding oppositions of Imagism are already surpassed (incidentally, in his Vorticist writings Pound's deployment of the algebraic formula follows analogous logic, though Brown doesn't discuss this). For Brown, then, Wang's embracing of the abstract as itself the matter of poetry enables him to overcome the political limitations of a poetry which would privilege the 'radically particular' (or, the 'nano') at the expense of the totality (the 'cosmos'), while maintaining the former – the particularity of abstraction – itself. Thus, Wang's poetics 'is not only a materialist poetics but also a *historical* materialist poetics because rather than privileging the concrete over the abstract it concerns itself with real abstraction', itself the historically situated realm of the 'mediation between collective history and the singularity of a life'.

As the reading of Wang indicates, while Brown hardly refers to Derrida at all, one of the guiding principles of his book is deconstructive. *The Limits of Fabrication* can be read as a quite systematic deconstruction of several of the most fundamental and indeed limiting opposi-

tions governing work on postwar poetics: concrete/abstract, but also animate/inanimate, organic/inorganic, and, following from the last, organic form/procedural or constraint-based. Brown's work here opens many promising new paths to follow. But it's also important to stress Brown's emphasis on the concept of 'limit' itself, something to which he turns in his conclusion. There, Brown harps on 'fabrication' as artifice, which means it will 'ruin' Heideggerian positings of authenticity, among others: 'My claim is that the essence of both *techné* and *poiesis* is fabrication and that the "human" is inessential, a fabrication'. This 'rigorously *materialist*' (original italics)

position leads Brown to conclude on the non-contingent role of accident and error in the history of the invention of the 'new', and one of the great virtues of this book is that, in addition to its theoretical sophistication, it consistently foregrounds the pragmatic moments where texts are constituted, with differing investments in ideal finality, by authors, readers and critics. This itself is a form of materialism, and also, a form of limit. Within a book which, in all its rigour, forces us to think the 'rigorously materialist' as another fabrication itself.

Daniel Katz

## Rhythm is rhythm

Janina Wellmann, *The Form of Becoming: Embryology and the Epistemology of Rhythm, 1760-1830*, trans. Kate Sturge (New York: Zone Books, 2017). 424pp., £27.00 hb., 978 1 93540 876 5

Janina Wellmann's ambitious, cross-disciplinary book, first published in German in 2010, sets out to achieve two main aims. First, it attempts to retell and reframe the emergence of a somewhat neglected discourse around rhythm, form and becoming as it appears in the history of science (and embryology specifically) from around the late eighteenth century. Second, it seeks to bring out the broader epistemological implications of this discourse as it emerges from within philosophy, literature, aesthetics and musicology. Wellman organises this project by analysing the emergence of the rhythmic episteme from three perspectives: early German romanticism (in which post-Kantian literary and philosophical critique produce a 'new epistemology of rhythm'); the emergent biological and scientific focus on life and becoming ('biological rhythms'); and the subsequently transformed observational and instructional modes of visibility ('serial iconography').

In contextualising her project, Wellmann argues that, in exploring the rhythmic episteme, her book can help us see how a new epistemology of rhythm and becoming emerged long before critical theories of becoming were employed specifically to destabilise the history of ideas by later nineteenth- and twentieth-century thinkers. So, for example, whilst the young Nietzsche may have sketched out, around 1870, a 'theory of quantitative rhythm' that sought to investigate how the human body

is restructured by the rhythmical movement of music and poetry operating upon it, one of Wellman's key arguments is that rhythm thus conceived was an emergent category in the history of ideas much earlier. Other – albeit more speculative – claims to contemporary relevance are that the project may help us to contextualise more historically the radical temporalisations and spatialisations which occur in modern philosophy (epitomised by Derrida's *différance*) or the novel bodily and aesthetic demands of 'new media' also. In a book that already covers so much historical ground, however, it would no doubt be impossible to explore these contemporary derivations of becoming across philosophy and visual culture in any substantial detail. Instead, Wellmann circumvents this issue by carefully delimiting her project to a specific period: 1760 to 1830.

*The Form of Becoming* traces the emergence of the 'embryological and rhythmic episteme' across those domains of knowledge which became focussed on the 'temporalisation' or 'dynamisation' of observable phenomena from the second half of the eighteenth to the early nineteenth century. One of the key achievements of Wellmann's project is its tracking of the sheer amount of iconographical and conceptual attempts at representing 'rhythm as becoming' from multiple texts in different disciplines. Unsurprisingly, the acknowledgements reference a dazzling range of academic and scientific insti-