**Baylee Brits.** 2017. *Literary Infinities: Number and Narrative in Modern Fiction*. New York/London: Bloomsbury, 224 pp., £ 85.00/\$ 115.00.

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https://doi.org/10.1515/ang-2021-0016

In her study on *Literary Infinities*, Baylee Brits takes an unusual approach to literary modernity, tracing the connection of narrative construction and number. With an eclectic focus on the work of three writers, Jorge Luis Borges, Samuel Beckett and J. M. Coetzee, all of whom she broadly categorises as modernists, Brits uncovers the presence of numerical transfinite structures in modernist fiction. Her central thesis is that the presence of number helps these texts to achieve a heightened formalism and particularly a "formal self-referentiality" (181) that Brits describes as allegorical in Paul de Man's sense. She finds this 'transfinite allegory' at the heart of a modernist "generic literature" (182) – a literature that, like transfinite numbers, "may have *measure but not determination*" (3; original emphasis). For Brits, the engagement with number in these texts is tied up with an

inquiry into the limits of representation and as such in line with a wider modernist project. Numbers are particularly interesting in this context due to their semiotic properties: "a number *presents nothing other than itself*. In other words, a number does not possess a referent or signified, but rather is itself the signified" (182; original emphasis). As such pure forms of presentation, numbers eschew some of the representational shortcomings of language perceived by many modernist writers. It is Brits's endeavour to trace the ways in which this peculiar status of number was exploited by those writers, in whose works she sees a "genuine link between the mathematical and the literary" (2) where neither domain co-opts the other, i.e. where mathematics is not merely the source for metaphors, but has a genuine co-presence in a text. This means she is not interested in any of the various meanings infinity has taken on in cultural history – be it the connection of the infinite and the sublime or more straightforwardly religious connotations of infinity –, but solely on the numerical constructions that undergird both literary texts and mathematical approaches to the infinite.

In her first chapter, Brits addresses the relationship of modern literature and mathematics, where the infinite appears as "common orientation" (23) of these two domains. The mathematical idea at the centre of her study is Georg Cantor's revolutionary nineteenth-century introduction of actual infinity into mathematics, an achievement that can be seen to mark the beginning of modernity in mathematics. Cantor not only broke with mathematical tradition by treating infinity as an actually existing mathematical entity (rather than as a never-to-be-reached limit), he was also able to prove that different orders of such actual infinities exist and named the numbers denoting these infinities 'transfinite numbers'.<sup>1</sup> Importantly, Brits finds "two forms of 'doubling' and paradox in Cantor's work" (34–35) that may be transferred to other contexts: first, Cantor's distinction between the absolute infinity of god and an actual infinity that is realised in transfinite numbers allows for the mathematical transfinite to become an allegorical abstraction of the absolute infinity of God, as Brits claims. Second, self-referentiality plays a key role in Cantor's diagonal argument that proves that the real numbers form an uncountable set, i.e. that the cardinality of the set of real numbers is a larger infinity than that of the natural numbers.<sup>2</sup> Both forms of 'doubling', through allegory and self-reference, are pertinent to the construction of what Brits calls the literary transfinite.

It is through the analysis of French philosopher Quentin Meillassoux's reading of Stéphane Mallarmé's poem *Un coup de dés jamais n'abolira le hasard* (1897)

<sup>1</sup> For a more comprehensive explanation than is possible here, see e.g.: Eli Maor. 1987. *To Infinity and Beyond: A Cultural History of the Infinite*. Boston, MA: Birkhäuser. 53–65.

**<sup>2</sup>** Cantor's proof utilises index numbers to (self-referentially) construct a 'new number' beyond the infinity of natural numbers. For an annotated version of the proof, see e.g. Maor (1987: 60–65).

that Brits finally arrives at her central concept of the 'transfinite allegory'. Allegory itself relies on a fundamental duplicity, which is, she argues, precisely the structural feature that makes possible the inclusion of number, and in particular of the transfinite, in literature. Crucially, Brits finds such allegories above all at the formal level – as 'formal allegory' in de Man's sense, that is, as "an instance where the text allegorizes its own formal processes" (44) –, when she identifies "processes of counting and quantification" (48) that structure the modernist fiction that is in the focus of her study. A transfinite allegory is then

an allegory for which the a-logos – the other 'order' or text contained within a fiction – is not some other story or moral truth but instead a representational, descriptive or imaginative limit or a conditioning factor for language. Importantly, this is not some romantic 'neverattainable' infinitude, but one that is materially available within the text: the *a* logos is manifest in the stories or novels, not alluded to or felt. (183; original emphasis)

It follows that Brits's readings are themselves necessarily double, as they juxtapose literature and number, the text and mathematical principles mirrored in that text. Where these texts may serve to illustrate forms of infinitude, those in turn structure reading – such is the doubleness of the transfinite allegory.

This notion of the transfinite allegory is put to the test in the second chapter, which presents an extensive analysis of three short stories by lorge Luis Borges. In "Funes, His Memory" (1942), according to Brits, Funes undergoes a movement from an ordered "chronometric existence" to an "irrational [...] vision of 'infinite' detail" (69): after the protagonist's accident that enables him to remember his entire past in meticulous detail he attains a 'transfinite' memory. This is linked to Funes's attempts at numbering his memories, which are doomed to fail because there is no underlying ordering systematic to these memory numbers that defy quantification. Therefore, Brits concludes, "Borges here presents a form of experience excluded from prose precisely because it operates without any metric, or is, in set theoretical terms, 'uncountable'" (66). As the narrator of "Funes" in an act of narrative self-referentiality thematises the imperfection of his own recollection at the very beginning, the story "embed[s] existence-outside-of-representation through narrative recursion, an 'uncountable' consciousness within a 'countable' one" (68) – this is its transfinite allegory. For Brits, the story is then about the limits of representation in language and in numbers. After uncovering similar versions of transfinite allegory in Borges's "The Library of Babel" (1941) and "The Lottery in Babylon" (1941; Brits gives the title repeatedly as "The Lottery of [sic] Babylon"), she comes to the conclusion that "Borges's stories allegorize their own processes of composition by bringing into relief their own 'enigma': an infinite presentation rather than a finite representation" (87) – in Borges, the modernist search for a stable relation between the linguistic sign and the

world leads to mathematics and the preoccupation with number and transfinite allegory.

The third chapter moves on to the prose work of Samuel Beckett. According to Brits there are two ways in which Beckett's minimalism is tied to mathematics: "it relies on forms of stylistic subtraction to get 'behind' language, to remove the obfuscation from language, or, rather, the obfuscation *that is* language" (89; original emphasis) and it seeks a "new foundation" (90) for the novel form, which parallels the new foundations of mathematical set theory in the wake of Cantor's revolution. She traces this in her readings of Molloy (1951), Watt (1953) and three later texts, All Strange Away (1964), Imagination Dead Imagine (1965) and the unpublished short manuscript of "The Way" (1981). For example, Brits reads the famous 'sucking stones sequence' in Molloy as an echo of Cartesian "numerical materialism", that is, of the geometric "formalization of bodily extension" (101). The stones thus turn into a "geometric extension of Molloy's soul" (102), just as Molloy's observation of his movement of the stones becomes an act of "proprioception" and his idea to "trim" the number of stones due to the vagueness of the term 'trim' connects the entire sequence to the shortcomings of language itself (103). The underlying allegorical structure, then, builds on number to provide the doubleness of "reason and material [...], mind and extension (proprioception), language and referent" (104). Therefore, the circular form that is so typical of Beckett's work, Brits argues, does not simply replace linearity with another geometric form, but instead instils the texts with a form of "continuous deformation", which is a topological rather than a geometrical feature and an infinite rather than finite formalism (105). This move to the topological for Brits coincides with a radical naturalism in Beckett's prose, where ever so often the "generic capacities of language" (107) are foregrounded and the generic replaces the typical.

Chapter four turns to J. M. Coetzee, who himself studied mathematics at university and in the 1960s worked as a computer programmer. As Brits shows, Coetzee's work "is preoccupied with what is countable as 'one" and thus searches for "the originary, self-contained unit from which one can institute the very concept of a unit" (176). In his early novel *In the Heart of the Country* (1977), the linear numbering of paragraphs in the novel clashes with the non-linear narrative. Brits links the presence of a numerical system in the novel's paratext to the protagonist Magda's preoccupation with counting. This is connected to Magda's musings on language's power to create its own conditions of creation, since the narrator who creates language is only created by language. Since Magda, who is the narrator of Coetzee's novel, declares herself 'zero' and 'null', this raises the question of the possibility of creation out of nothingness and of whether any difference between Magda and the things she 'creates' can exist. As Magda simultaneously yearns for a universal language, Brits reads the novel, which thus "allegorizes its own nu-

merical processes", as "an enquiry into the role of language as a rule bound system" (159). Coetzee's later novels *The Childhood of Jesus* (2013) and its sequel *The Schooldays of Jesus* (2016) address similar questions: David, the character whose life is analogous to that of the biblical Jesus, "is mired cognitively and behaviourally in a nominalism that recognizes only singularities" and so struggles with both literacy and numeracy (167). In particular, he is unable to recognise any ordered sequence of numbers, since he perceives numbers to likewise have singular existence: "for David, each number is a 'one' in language and thought" (171). This equalising perspective is "inflected with the infinite" (173), or even a "transfinite subject position" (176). As the birth of Jesus is also what sets off the counting of years, David thus becomes a subjective foundation for counting and number, which constitutes "a generic account of the foundation of thought and being in concepts of number" (185).

Brits's conclusion provides a concise summary of her findings as well as an excursus on mathematical paradoxes and Italo Svevo's *Zeno's Conscience* (1923). Linking the works of the three authors that form her main case studies to Zeno's paradoxes, she concludes that "[a] fiction that replaces predicates, locations and progressive narrative enumeration with allegory of its own composition, an allegory that measures the measure of fiction, is a generic literature, with Zeno as it's [sic] 'precursor'' (193). This holds true for the works by Borges, Beckett and Coetzee she devotes her study to: all in their respective ways incorporate number in such ways as to self-referentially allegorise their own composition in a properly infinite, or transfinite, construction.

Although these analyses are creative and compelling, Brits's study is not particularly reader-friendly: it is densely written and heavily theoretical, but it occasionally lacks structural lucidity (for instance, the main theses are expressed with greatest clarity only in the conclusion), would have greatly profited from more careful proofreading and its index is erratic. For readers who do not intend to read the book from cover to cover but are interested in a particular one of the chapters on Borges, Beckett or Coetzee, stronger links in those chapters with the theoretical framework might have been useful. Thus, while sticking to the term 'allegory' throughout, Brits does not even mention her central term of 'transfinite allegory' (whose importance she stresses in the introduction, the conclusion and the theoretical chapter) throughout the chapters on Beckett or Coetzee that make up roughly half of the book. Her analyses there do uncover such transfinite allegories in the sense she describes them elsewhere in the book, but this will only be clear to readers who have read the entire study. These slight structural weaknesses aside, *Literary Infinities* is an engaging piece of scholarship that manages to shed light on ways in which literature and mathematics can have a genuine co-presence without the text cannibalising the numbers and on how some modern writers made use of such a co-presence to explore beyond the limits of what is sayable in language. As such it can prove thought-provoking for scholars of modernist aesthetics and of the interconnections between literature and mathematics.