

Microbiology and the Modern Novel: D. H. Lawrence’s *The Rainbow*

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But Lawrence had never looked through a microscope, never seen biological energy in its basic undifferentiated state. He hadn’t wanted to look, had disapproved on principle of microscopes, fearing what they might reveal; and had been right to fear. Those depths beneath depths of namelessness, crawling irrepensible – they would have horrified him.¹

In this intriguing passage from Aldous Huxley’s novel, *Eyeless in Gaza* (1936), it is the anonymity of the unseen ‘biological energy’ that ‘would have horrified’ D. H. Lawrence; the incessant movement, immeasurability, and impersonality of matter seen through a microscope, in ‘its basic undifferentiated state’, is a probable cause of fear, a horrible imagining. The grammatical construction of the conditional perfect tense (‘would have had’) in the final supplementary clause foregrounds the hypothetical nature of Lawrence’s imagined close encounter with biological energy. According to Huxley’s reading, Lawrence had ‘disapproved’ of microscopes ‘*on principle*’, based on an adherence to some form of moral code, perhaps a sceptical attitude towards the artificially enhanced study of the environment that threatened to make human beings’ experiences of nature more detached. Of course, the confident statement that Lawrence ‘had never looked through a microscope’ may be speculative and entirely fictional. The passage is, after all, mediated through Anthony Beavis’s fictional perspective, and it would be presumptuous to take this statement in blind faith as indisputable biographical truth. It is possible, and perhaps tempting to think, that Lawrence had, however, confirmed his disapproval of microscopes, and his fear of ‘what they might reveal’, to Huxley. At least, this fictional repudiation of the optical instrument acts as an avowal, suggesting that Huxley and Lawrence had discussed microscopy together. These conversations could have taken place in early 1928, during the winter holiday Lawrence spent with Aldous and his brother Julian at Les Diablerets, Switzerland.² Lawrence may have rejected the intensified modes of scientific visualisation brought about by the changing conditions of

¹ Aldous Huxley, *Eyeless in Gaza* [1936] (London: Chatto & Windus, 1942), p.360.

² Though they had first met in 1915, Huxley and Lawrence later became close friends in 1926, during a period in which they were both living in Italy. See Brad Buchanan, ‘Oedipus in Dystopia: Freud and Lawrence in Aldous Huxley’s *Brave New World*’, *Journal of Modern Literature*, 25.3/4 (2002), 75-89 (p.84).

perception in the twentieth century. Although Huxley suggests that Lawrence’s late work *The Man Who Died* (1929) lacks scientific sophistication, Lawrence was no stranger to modern biological research and to the incorporation of detailed microscopic descriptions into the novel. The most obvious example is an exhilarating extended section of *The Rainbow* (1915), in which Ursula Brangwen, working ‘over her microscope with feverish activity’ in the botany laboratory, observes an ‘alive’ and moving ‘unicellular shadow’.³ Through Ursula’s epiphanic experiences in the research laboratory, Lawrence mediates a specialised scientific mode of seeing, integrating it into the wider patterns of vision in the novel, and developing intergenerational connections between the Brangwens. Does Lawrence, as Huxley’s text insinuates, make a blind approach, by attempting to represent this microscopic world without having experienced it directly himself? Why does Huxley’s narrator claim that Lawrence had ‘never looked’ through a microscope due to a ‘fear’ of the microscopic? By reading *The Rainbow* with a renewed attention to microscopes and the microscopic, I argue that Huxley’s doubtful claim is a misreading, a blindness to Lawrence’s scientific insight.

The competing pulls between physical and intellectual commitments in Lawrence’s writing, which Raymond Williams observed in *The Country and the City* (1973), remain important to this current consideration of Lawrence’s interest in microbiology and microscopy:

[Lawrence] was pulled, deeply, between a physical commitment, which he described more intensely and convincingly than anyone in his generation, and an intellectual commitment, which made him respond and reason in a critical world. There is the world of the flower, as he so often described it, but there is also the world of the cell under the microscope, giving a new insight into the deepest living processes.⁴

Critically, though, Lawrence’s intellectual engagement with ‘the world of the cell under the microscope’ and his attentiveness to ‘the deepest living processes’ in *The Rainbow* have been largely overlooked and unrecognised as significant features in his development of the novel. Focusing on his representation of a unicellular organism, a scientific object that marked a transition point between plant and animal, offers a different way of understanding animal life and the contradictions between conscious and unconscious beings in his work.

Given Lawrence’s own engagement with both the implications of microscopy and the tradition of the English novel, it is my contention that Lawrence reflected on the draft of his fourth

³ D. H. Lawrence, *The Rainbow* [1915] (Cambridge: Cambridge University Press, 2013), pp.411-412. Further references to this edition are given after quotations in the text, unless otherwise stated.

⁴ Raymond Williams, *The Country and the City* [1973] (London: Verso, 2016), pp.385-386.

novel, *The Rainbow* (1915), and revised the text to develop a more striking aesthetics of microbiology fit for modern twentieth-century fiction. Lawrence heavily revised drafts of *The Rainbow* in March and April 1915, changing and inserting representations of the microscopic world. In relation to Lawrence’s unsettled status as a literary modernist, Michael Bell has suggested that Lawrence’s ‘critical reaction to the tradition of the English novel was no less radical for being from the inside’, as the ‘preparation for an unpublished book on Thomas Hardy proved to be a way of thinking through the central expression of his metaphysical vision: *The Rainbow* and *Women in Love* (1920)’.⁵ Expanding upon the growing critical interest in Lawrence, technology, and the non- or post-human, I want to tie Lawrence’s process of ‘thinking through’ a vision of the novel to a microscopic attentiveness, tracing the transition from his earlier, more anthropocentric and conventional novels, to the more radical, non-human focus in *The Rainbow*. This entails reading for representations of microorganisms and the microscopic world that allows us to move still further beyond familiar interpretations of Lawrence’s fiction, as this new attention enabled him to move beyond the ordinary scale and limits of both the human and the non-human in the novel.

Although I do not have the space to outline my argument in detail, I want to point towards one significant late revision to *The Rainbow*. Lawrence metaphorically describes Ursula and Skrebensky’s kiss as having ‘knitted them into one fecund nucleus of the fluid darkness’, an intimate act that blends sight and touch, generating an exquisite moment of ‘bliss’ in ‘the nucleolating of the fecund darkness’ (p.417). The April 1915 draft shows that Lawrence crosses out ‘drenching, complete torrent’, favouring instead ‘nucleolating of the fecund darkness’, thus inserting technical scientific vocabulary into the final full-length draft of the novel (Fig. 1). This modified metaphor not only extends the phenomenological experience of microscopic sight beyond the bounds of the laboratory, it also revives and refines the reader’s perception of the subvisible world, making darkness visible in a new light. With the addition of ‘nucleolating’, the kiss brings touch and sight together, as to represent this intimate act Lawrence turns to the language of microbiology. The explicit act of looking through a microscope in the botany laboratory inflects the broader representation of touch and physical intimacy. As Worthen’s footnote in *The Rainbow* points out, there is no precedent in the *OED* for Lawrence’s germination of the adjective ‘nucleolated’ into a dynamic verb, a term that means ‘furnished with a nucleolus’, a minute rounded body within the nucleus of a cell. By transposing the adjective into a verb, and magnifying the metaphor to move within the nucleus itself, Lawrence displays his familiarity with

⁵ Michael Bell, ‘Lawrence and modernism’, in *The Cambridge Companion to D. H. Lawrence*, ed. by Anne Fernihough (Cambridge: Cambridge University Press, 2001), pp.179-196 (p.180).

the latest scientific terminology (perhaps even showing off his desire to be perceived as modern with the interpolated ‘nucleolus’ reference).⁶ Lawrence makes the microscopic active by rendering visible the ‘agitation of atoms’ that is occurring in the fertile and unfathomable darkness. The repurposed use of specific, emerging scientific vocabulary suggests that Lawrence approximates Connie Chatterley’s stance in *Lady Chatterley’s Lover*, in which she detests ‘ready-made words and phrases’ that suck ‘all the life-sap out of living things’.⁷ Displacing the realism of the conventional nineteenth-century novel, then, the technical and dislocating language of microbiology offers Lawrence a new way of articulating intellectual and sexual experiences.

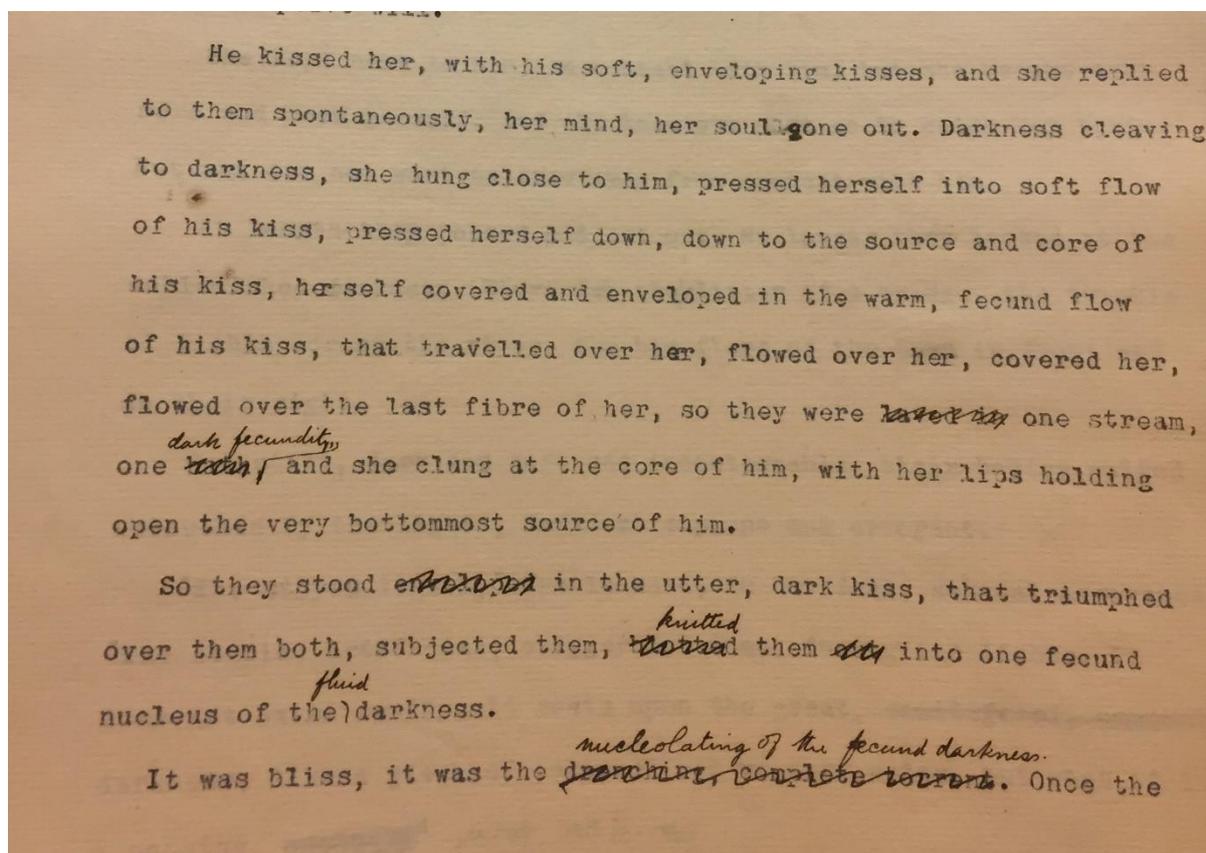


Figure 1: Manuscript draft of *The Rainbow* April 1915, p.668. Harry Ransom Center, the University of Texas at Austin, Box 16, Folders 5-7.

⁶ The *Journal of the Royal Microscopical Society* shows that research on the structure and function of the nucleolus was contemporaneous with the composition of *The Rainbow*. Microscopists and cytologists were, for example, comparing the ‘nucleolus’ of spirogyra, a green filamentous fresh-water alga, to the chromosomes of higher plants in 1913. April 1913, 33.2, p.170.

⁷ Lawrence, *Lady Chatterley’s Lover* (London: Penguin, 1960), p.98.