

William Blake

AND THE DEBATE ON LIGHT AND COLOUR

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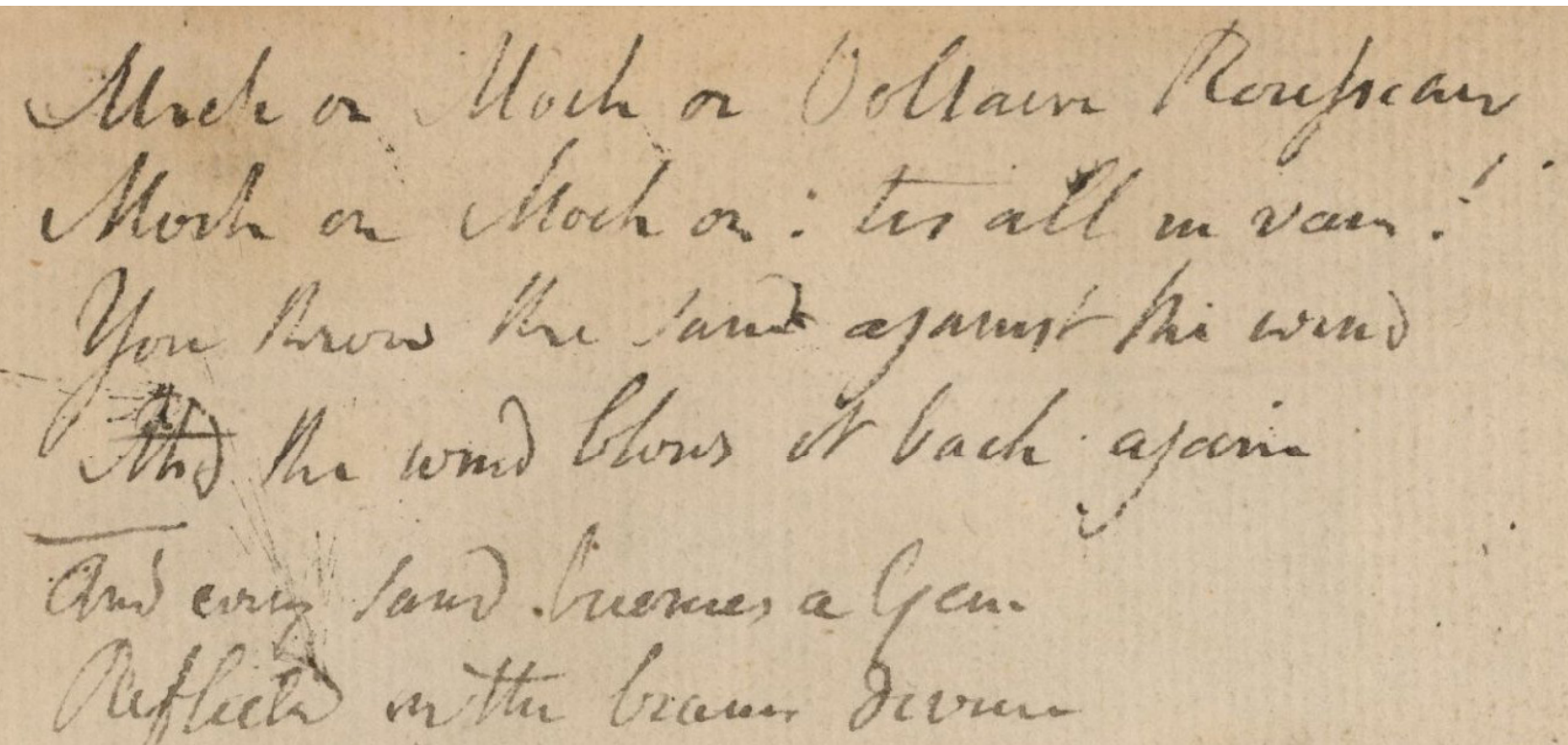


Figure 1. "Mock on"
handwritten by Blake

Mock on Mock on Voltaire Rousseau:
Mock on Mock on: tis all in vain!
You throw the sand against the wind
And the wind blows it back again
And every sand becomes a Gem
Reflected in the beams divine
Blown back they blind the mocking Eye
But still in Israels paths they shine
The Atoms of Democritus
And Newtons Particles of Light
Are sands upon the Red Sea shore
Where Israels tents do shine so bright

William Blake, Mock on (1800 – 1803)

Many readings of Goethe's *Farbenlehre* present it from what might be called a purely technical point of view, in terms of its correctness or otherwise. Mainstream accounts often present Goethe's interest in light and colour, and his controversy with Newton, as a fundamentally mistaken attempt to defend and extend a superseded scientific notion. Goethean scientists have sometimes shared this tendency to argue the case simply in terms of scientific truth. The debate 'Goethe vs Newton' would then appear as an argument between two forms of science and within a single mode of thinking and perceiving, capable of being resolved without any need to go beyond these.

Blake's phrase "Newton's Particles of Light", however, reminds us that there was more to it than this. The argument over Newton's optics was the common property of thinking Romantics from Weimar to London, not only of those who understood themselves as natural scientists, but also of figures like Blake – poet, craftsman, artist, radical, religious dissenter, and largely self-taught. This begs the question: why should light matter so much?

Here Blake's contrast – "sands upon the Red Sea shore / Where Israel's tents do shine so bright" – can help us to add context to Goethe's position and understand something of what was at stake. In the late eighteenth and early nineteenth century the European argument between established Christianity, heterodox religion and scientific positions was increasingly fought out in terms of the truth of 'cosmological' propositions: about the Trinity, about Biblical history and subsequently about geology, evolution and the historicity of Jesus. This may seem obvious to us now, even if present day US arguments along similar lines sometimes seem like 'the second

time as farce'. But it is not obvious, even within the history of mainstream Christianity, that propositional truth is the central locus of salvation: what we now call 'fundamentalism' is, in part, an argument that it should be (as opposed to, for example, paying more attention to inner experience or to action in the world).

Hence Blake's revisioning of Democritus' atoms and Newton's particles as the sand under Israel's tents in the biblical Exodus: the stakes were not just about physics, but about a whole universe of meaning. Light, with its charged meanings from Judeo-Christian texts and practice and from a long history of religiously-infused visual arts, was a strategic space in this controversy, opposing inner-generated lux to externally operating lumen¹; as Goethe is supposed to have cried on his deathbed, "Mehr Licht!" More light!

As EP Thompson² notes, Blake was already in his own day speaking from a defensive position against what had become the accepted understanding of polite society, in which scientific and religious truth were to be treated as two separate spheres.³ However,

1 Alan Wall (2013) "William Blake: lux, lumen and the lights of science". Lecture to the Blake Society, adapted for Fortnightly Review, 12 November. On the changing significances of colour in western Europe, see Robert Finlay's fascinating, "Weaving the rainbow: visions of color in world history". *Journal of World History* 18/4 (2007): 383 – 431.

2 E.P. Thompson, *Witness Against the Beast: William Blake and the Moral Law*. Cambridge: Cambridge University Press, 1993.

3 The artist Alan Moore neatly observes that this was not so much the case for the historical Newton, who "shoe-horned indigo into a spectrum which transparently had no more than three primary and three secondary colours, simply



Figure 2: William Blake, "Newton: Personification of Man Limited by Reason" (c. 1795 – 1805)

this division obscured another: if Newtonian science shared orthodox theology's centring of propositional truth as loaded with fundamental significance, the Romantic response to the first wave of the

to ensure a fit with alchemical numerology and its apparent rule of sevens" ("Blake's contempt for Newton". Royal Academy of Arts blog, 5 December 2014). Scholars like Patricia Fara argue instead that Newton was seeking a correspondence with the seven notes of the western musical scale ("Newton shows the light: a commentary on Newton (1672) 'A letter...containing his new theory about light and colours...'" *Philosophical Transactions of the Royal Society A*, 373, 2015.)

As we now know, but the eighteenth century did not, Newton was passionately interested in alchemy, and it has been recently argued that his theory of light was strongly influenced by Robert Boyle's alchemical theories (William R. Newman, "Newton's Early Optical Theory and its Debt to Chymistry," in *Lumière et vision dans les sciences et dans les arts. De l'Antiquité au XVIIe siècle*, ed. Danielle Jacquart and Michel Hochmann (Geneva: Droz), 283–307, 2010). The eighteenth-century Newton, however, was all rational ego, absent this Jungian dimension (e.g. Jason Snart, *The Torn Book: Unreading Blake's Marginalia*. Susquehanna University Press, 2006: 44 – 45).

Enlightenment asked different questions about where meaning lay: in the outer world or the inner, or in the encounter between the two? What we call the pathetic fallacy – central to Romantic literature – is precisely the sense of a connection between a character's emotional life and the natural and cultural world around them.

In this sense, Goethe's emphasis on the human experience of light and colour questions a purely propositional way of thinking. Here too, I want to suggest, there is a non-trivial English contribution to the argument. John Keats' (1819) phrase, "Beauty is truth, truth beauty" – spoken by his Grecian urn to generations to come – also stakes out a position here: what is beautiful to us is true in the world, and vice versa.

Keats' closing lines were the subject of intense debate among twentieth-century critics: appropriately enough, in terms of whether they were either beautiful or true, and whether Keats meant them.

It should not detract from our response to Keats' powerful statement, however, to also hear within it echoes of the same conflict within European culture that Blake and Goethe were responding to. All three were contemporaries, despite their very different educations: Goethe (1749 – 1832) was in his 60s when his magnum opus on colour saw its first edition (1810), though his first writings on optics date to 1791, when he was already in his mid-40s. Blake (1757 – 1827) was eight years younger than Goethe, and wrote "Mock on" at a similar age to Goethe when he wrote his first optics piece.

Keats was much younger than either (1795 – 1821); extraordinarily, "Grecian Urn" was written when he was 24. He had started out studying to become an apothecary at Guy's Hospital, but with Charles Lamb in 1817, he complained that Newton had "destroyed all the poetry of the rainbow, by reducing it to a prism".⁴ Or, as he put it later,

*There was an awful rainbow once in heaven:
We know her woof, her texture; she is given
In the dull catalogue of common things.
Philosophy will clip an Angel's wings,
Conquer all mysteries by rule and line,
Empty the haunted air, and gnomed mine –
Unweave a rainbow, as it erewhile made
The tender-person'd Lamia melt into a shade.*

("Lamia", 1820)

HAVE THE NEWTONIANS ACTUALLY WON?

If we move on another two centuries, we might agree with Keats that the eighteenth-century Newtonians appear to have won, although the argument rumbled on in art, notably with Turner, who was strongly influenced by Goethe's theories.⁵ We have seen a far-ranging separation of different types of knowledge – not only the 'two cultures' of science and culture but also within these. No-one today could possibly hope to combine as many spheres of activity as did a Newton, a Goethe or a Blake. Insofar as there are conflicts between these, we are far more likely to encounter sociobiologists, freakonomists, and other

'general theorists of everything' who try to reduce all human activity and meaning to an extension of their own, purportedly 'scientific', field of expertise, than the reverse – let alone attempts at synthesis.

And yet, the desire for integration is if anything resurgent. In more rigorous spaces of academia, a primary concern is often to develop more systematic ways of mediating between different disciplines, to find forms of interdisciplinarity that respect the specificities of particular fields while seeking a definition of knowledge that enables a non-arbitrary relationship between the two. The need for this is particularly clear in relation to the current crisis of life on earth: global warming is a challenge at once for climate science, engineering, geology, social movement studies and international politics, for example. The external, 'objective' nature of the threat forces us to think as systematically as we can while integrating the contributions of different types of knowledge in ways that go beyond waving one's own academic flag. This understanding is also shared by many of the social actors who have been involved in pushing governments to take action on climate change and whose continued engagement will be needed to make the formal agreements at Paris a reality – and to go beyond them.

In a more Goethean key, I want to suggest that contemporary nature writing – in the styles of (for example) Richard Mabey, Tim Robinson, Robert Macfarlane or Sarah Maitland⁶ – is attractive precisely because it seeks both to recognise the specificities of many different kinds of knowledge and to bring them within a common space. Exploring a forest, for example, such writers often introduce us to the geological history of Ice Age and woodland development, the ecology of plant and animal species or of soil and fungi, the economic history of coppicing and charcoal-making, the politics of National Trust or EU policy, to placenames and woodland mythology. They also speak in the first person, as they meet and respond to others in the forest – local historians or ecological volunteers –

4 Finlay, "Weaving the rainbow", p. 385.

5 Thanks to Aonghus Gordon for pointing this out.

6 See e.g. Richard Mabey, *The Cabaret of Plants: Forty Thousand Years of Plant Life and the Human Imagination* (2016); Tim Robinson, *Stones of Aran: Pilgrimage* (1986); Robert Macfarlane, *The Wild Places* (2007); Sarah Maitland, *Gossip from the Forest: the Tangled Roots of our Forests and Fairytales* (2012).



Figure 3: JMW Turner, “Light and Colour (Goethe’s Theory) – the Morning after the Deluge – Moses Writing the Book of Genesis” (c. 1843)

and of course to their own experience, of standing still in a glade by moonlight, or lying in wet leaves to hide their own scents, of cutting and working wood with an expert, of cold and hunger. This kind of project – and the widespread popular reaction to this writing – is perhaps contemporary testimony that the integrative impulse behind the Goethean project is by no means a minority one but, in this new combination of different kinds of natural science, social analysis and personal experience, is one which many people recognise as a fuller form of understanding.

Macfarlane made this explicit in a recent defence of this kind of writing, which he prefers to describe as “literature that explores relations between selfhood,

landscape and ethics”:⁷

In 1972, Gregory Bateson published *Steps to an Ecology of Mind*, a collection of his essays from the previous three decades. Bateson was a dazzlingly versatile thinker, whose work shaped the fields of anthropology, linguistics and cybernetics, as well as the movement we now call environmentalism. Near the end of the book, Bateson deplored the delusion of human separation from nature. “We are not,” he warned, “outside the ecology for which we plan.” His remedy for this separatism was the development of an “ecology of mind”. The steps towards such a

⁷ Robert Macfarlane, “Why we need nature writing”. *New Statesman*, 2 September 2015.

mind were to be taken by means of literature, art, music, play, wonder and attention to nature – what he called “ecological aesthetics”.

We could identify other approaches which seem to run on parallel lines – Raymond Williams’ “cultural materialism”, with his close attention to the relationship between place, production and culture and his conscious experimentation with form, from literary criticism (*The Country and the City*) via political reflection (*Towards 2000*) to historical fiction (*People of the Black Mountains*) or for that matter Gary Snyder’s unclassifiable attempts to bring together poetry, ecology, linguistics, politics and spirituality.⁸

But I think we can also find it outside of the written word: for example, in the actions of the tens of thousands of volunteers whose work now underpins so many national parks, wildlife reserves and other ecological sites; and in the lives of many organic farmers and others involved in local food networks. Here, as in readers’ responses to the new nature writing, we find a willingness to connect in practice often far outstripping conscious articulations of the abstract idea.⁹

CONCLUSION

What does this sort of reflection offer us? I want to suggest that it enables us to rehabilitate Goethe’s *Farbenlehre* in a different perspective, within which his opposition to Newton was neither a personal eccentricity nor a stroke of personal genius, but rather a powerful statement within a cultural argument then raging across Europe. Blake’s position – and perhaps also Keats’ – shows that this argument can also be found within English cultural history; and that part of what was at stake was precisely the nature and position of science in the world.

If I am right, something of the same Goethean

impulse – to ‘connect’ natural science, personal experience and the world of culture and meaning – can also be found in much contemporary nature and ecological writing. Understood in this way, there may be a much larger potential audience than is sometimes felt for the practice of integration, when it is expressed in understandable ways – and far more people may resonate with the desire to think different things in their relationships to one another, and not simply in isolation. Making these connections, and finding ways of communicating them effectively, is also fundamental to human beings taking the kind of action which is necessary to preserve the conditions for our kind of life on this planet.

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8 See also Richard Mabey’s defence of contemporary nature writing at <https://www.theguardian.com/books/2013/jul/18/richard-mabey-defence-nature-writing>.

9 In other ways too, it seems that Keats was overly pessimistic: we value the “haunted air, and gnomed mine” immensely, in the writing of a JRR Tolkien or an Alan Garner, even when we do not read *Moria* or *Fundindelve* as propositional truth.