Afterword: Recounting the Uncountable

By Colin Burrow (University of Oxford)

If there is anyone still alive in a century's time, and if (perish the thought) there are even some historians left, at the moment it looks likely that they will think of the present era as the period in which numbers triumphed over humanity, and perhaps also over the humanities; or (to be more optimistic) they might think of it as the age in which people *feared* that numbers and their algorithmic manipulation would triumph over humanity. Politics by numbers: entirely possible. Art by numbers: also possible. Prose by algorithm: done. Poetry by algorithm: done (badly). Algorithmic mass manipulation: not just possible but ubiquitous.

This is not the whole story, though. The rise of algorithmic models for predicting, manipulating, and mimicking human agency has had some curious consequences. It has given a peculiar valence of resistance to terms used to describe human experiences which do not appear to be algorithmically or mechanically reproducible: words such as 'love,' 'genius,' 'whimsy,' 'humour,' 'soul,' 'delight,' 'freedom' have taken on an air of defiance as descriptors of things which humans can do but that the solemn and obvious statements produced by ChatGPT, Claude, and their rival forms of generative AI cannot (yet) match or replicate. The concept of embodiment—of living and moving through a landscape full of unpredictable objects and events, and of feeling the blood flow excitedly through one's veins—has been given a similar charge by the rise of AI: embodied experience is what bots do not and cannot have. The plots of innumerable sci-fi films and novels turn on the question of whether

a machine should be regarded as human rather than a machine if it can love, display genius, emote, create, write poetry, have children, or manifest a soul. The 'human' has perhaps come to seem much more 'human' (in the sense of 'not fully predictable' or 'free' or 'capable of wild emotion' or even 'fleshly' and 'able to feel pain') as humans anxiously attempt to claim a bit of the world of experience and knowledge for flesh and blood rather than bits and bytes. Even in the much-contested arena of sexuality the emergence of the 'non-binary' as a descriptor of forms of sexual identity that are outwith 'binary' norms could be seen as a resistant product of the rise of complex binary codes that seek to circumscribe human identities and practices. 'We' perhaps now want to constitute 'ourselves' as outwith the algorithm, as entities who still have something, or can do things and feel things, that the numbers can't tell us about and that the algorithms grounded in the logic of binary systems cannot reproduce. This is a kind of romantic rebellion going on within Western cultures at present against the rise of the algorithm. That rebellion must be a good thing if it offsets the utopianism and (often) inhumane commercialism of the advocates of unbridled AI.

The essays collected in this special issue are all in different ways responses to this moment, and in them Spenser's *Faerie Queene* often serves as a kind of token of the complex interrelationship between the algorithmically predictable and the radically open-ended, between the controlling structure and the (human) freedom to wander adrift. The Spenserian stanza seems infinitely self-replicating, a pattern for others to follow and from which Spenser himself can make and remake phrases and stories, and yet the stories made in and by that stanza seem deliberately constructed to defy the potential for closure written so deeply into their form. In that respect the poem is archetypical of the experience of literature, which is of both rule following and surprising divagations from rules: we read with a mass of internalised conventions in mind, and in part expect their fulfilment in what we read, but the pleasure of the greatest texts is that they seem to be following a set of principles while actually breaking them up or recombining them in ways which always surprise us. We might have a mental algorithm for the sort of thing a certain poet might write, but then when we read we find that the poet outdoes our algorithmic imagining. *The Faerie Queene* is a great text of this kind. All the essays in this issue in various ways present Spenser's poem as master fiction that gives us something that seems (like the spawn of Spenser's Errour) to be at once self-generating and infinitely replicable as well as uncanny and infinitely surprising. This combination of the rule-bound and the completely

unexpected makes Spenser a writer who has a particular power in our algorithmic age, and it makes *The Faerie Queene* a wandering flag-bearer for the romantic revolution against that age.

In *The Faerie Queene* itself, numbering and calculation rarely provide elements in the plot, but when they crop up it is often to emphasise how the plurality of phenomena exceeds all possible attempts to bound them by number. Here is Spenser's famous stanza on the endless brood of the seas, for instance:

> O what an endlesse worke haue I in hand,
> To count the seas abundant progeny,
> Whose fruitfull seede farre passeth those in land,
> And also those which wonne in th'azure sky?
> For much more eath to tell the starres on hy,
> Albe they endlesse seeme in estimation,
> Then to recount the Seas posterity:
> So fertile be the flouds in generation,
> So huge their numbers, and so numberlesse their nation.
>
> (IV.12.1)

To "count" can mean 'to enumerate,' but it can also mean 'to approximate' or 'reckon' or guess at a number; and "recount" can mean both 'count again' and 'relate as a story.' That makes it seem almost natural that a stanza that begins with a promise of counting the sea's abundant progeny should end up with the word 'numberless,' in which the endless fertility of the world and the unknowability of the number of stars become a figure for the "endlesse worke" of the poet. In *The Faerie Queene* the word "number" tends to be used in the plural, often with modifying adjectives like "huge" or in contexts where the "numbers" concerned are so big that they are in practice uncountable ("huge numbers," I.5.45.8; "huge and infinite their numbers were," II.11.5.6; "But all in vaine, their numbers are so great," V.11.45.6). And curiously the only point in *The Faerie Queene* when "numbers" is used in the sense of 'lines of verse' ("With warlike numbers and Heroicke sound," IV.2.32.7) is apropos the inimitable Chaucer, whose "Squire's Tale" has been brought to "little bits" by cursed Eld, in the stanza discussed in this issue by Chloe Holmquist. The number of the sea's posterity is numberless. The stars are numberless. The numbers of Chaucer are something that have been lost but of which enough remains to enable an imitator to imagine what they would have been. Things that are beyond counting, numbers numberless, are among the great provocations to Spenser's imagination.

The Faerie Queene invites its readers to go searching and stumbling through its own world, as Archie Cornish evokes so well in his contribution. That is because it seems at once to present a regularized vision of the world and one that is designed continually to take its readers aback, as though they are on a voyage and a storm suddenly throws them off course. That combination of regularity and unpredictability is a feature of the poem that has drawn readers and critics to it throughout the past half century and more. During the great revival of critical interest (among professional critics at least) in Spenser during the 1960s and '70s he was already seen as a poet who combined the uncodifiable or the uncountable with the highly coded. Perhaps the most surprising example of this is to be found in Alastair Fowler's numerological analysis of *The Faerie Queene* in *Spenser and the Numbers of Time* (1964). Fowler's later (and rigid) adherence to intentionalism as a guide to interpretation seems already to be on display in that book, which argues that Spenser composed according to numerological schemata, and that those schemata were put there by the poet (in finite quantities) in order to be found by the critic. Count and ye shall find. But, remarkably, after squeezing and crunching Spenser's numbers in Books I-V, Fowler accepted that in Book VI there were no numerological patterns to be found. This is either the moment when his numerological method collapses entirely, or is the moment when it is finally vindicated against the charge that a numerological significance can be found in any given text if the critic is determined to find it there. But probably in a very Spenserian way it is both of these things. In Book VI the numbers of Spenser become numberless, and the algorithm for reading which has been carefully built up during the previous books melts into a great sprawling human mess.

Something broadly analogous to the breakdown of Fowler's numerology in the face of the stubborn plurality of Book VI might also be seen in some of the Warburg-inspired iconographical readings of *The Faerie Queene* which came on the scene a few years after Fowler's book. Frank Kermode's emphasis on the role of equity within Book 5 in *Shakespeare, Spenser, Donne* (1971) for instance, was heavily influenced by the vogue for iconographical decoding of Spenserian allegory that grew up in the late 1960s and early '70s. But Kermode's iconographically inspired readings of the poem teased out from Spenser's Book of Justice a deep interest in the imperial virtue of Equity, the judicial principle that goes beyond or outside the strict and rigid measurement of right and wrong, and grants to the conscience of the monarch the imperial power to dispense right when the operations of quasi-arithmetical justice

would lead to an unjust outcome. An awareness of numbers numberless and justice justiceless, as it were, run through the later twentieth century reception history of Spenser. And these could be seen as the great foreshadowing of the poet who emerges from this issue, for whom Penny McCarthy's recursive algorithm of reading backwards and forwards at once, or Evan Bourke's network analysis of links with other writers might reveal his colonial affiliations, might offer guides to interpretation which nonetheless don't quite pin down the endlessness and open-endedness of this seething and incomplete poem.

This is more than just a manifestation of twentieth and twenty-first century preoccupations. It tells us something significant about Spenser and his age. It suggests that Spenser was pre-modern in ways that make him of particular imaginative use to readers in modernity and post-modernity. The late sixteenth century offered many tools for counting and measuring the world, and these were also potentially methods to enable its control. Mathematics could be used in the manufacture and deployment of artillery, in the arts of war and of navigation, and so could enable the expansion of a realm into an empire that extended over the numberless spawn of the seas into distant nations (and, curiously, 'nations' is a word which Spenser tends to use in the plural, as though they are multiple and uncountable despite being entities that a colonist might want to count up in order to control). A major reason for developing the mathematical skills of algebra and geometry in the later sixteenth century was to perfect the arts of navigation, and it need not be said that navigation was a practical skill that enabled the mapping, exploration, and potentially the exploitation of the globe. Despite the rapid developments during Spenser's lifetime in map-making, in the projection of spheres onto planes, and in the use of numbers to predict and direct the course of ships, anyone who sought to navigate the 'known' world in the 1590s would also know that quite a few nations of the world were still "numberless," or outside the zone of the mapped and the known; and that even the best navigated ships could get wrecked or tossed off course by unpredictable natural forces, by winds and storms and whirlpools; and that even "salvage nations" might be sophisticated enough to kill you. Numbers might take you to a position of knowledge and control, but the process of calculation always suggests that there is more to be known, and the experience of the world always indicates that even the most careful calculation of one's course cannot prevent shipwreck or tempest or a surprise attack from a lurking unknown enemy. That mixture of attitudes runs through the mathematical preface to

the first English translation of Euclid's *Geometry* by the mathematician and magician John Dee, in which he outlines the practical value of geometry:

> The Arte of Navigation, demonstrateth how, by the shortest good way, by the aptest Direction, & in the shortest time, a sufficient Ship, betwene any two places (in passage Navigable,) assigned: may be conducted: and in all stormes, & naturall disturbances chauncyng, how, to use the best possible meanes, whereby to recover the place first assigned. What nede, the *Master Pilote*, hath of other Artes, here before recited, it is easie to know: as, of *Hydrographie*, *Astronomie*, *Astrologie*, and *Horometrie*. Presupposing continually, the common Base, and foundacion of all: namely *Arithmetike* and *Geometrie*.[1]

This might sound at first very unlike Spenser in its implicit optimism that arithmetic and geometry could be used to calculate the "shortest good way" between any two places. Does Spenser ever want to find a way from A to B that does not go via at least E and F and probably Q via Y too? But Dee's mathematical optimism also has room for turbulence and surprises that disrupt the journey of his calculating seaman with his backstaff and astrolabe: even the expert navigator is subject to "naturall disturbances chauncyng," and has not just to proceed smoothly from A to B but to "*recover* the place first assigned," even when he has lost the way. That is, geometry and the mathematical arts are not quite methods for controlling the world, but means of correcting for its stubbornly unpredictable chance events and unforeseeable turbulences. That combination of numerical regularity and empirical turbulence runs through the very last section of Dee's preface, in which he imagines an arch-science, which encompasses all the mathematical and quasi-mathematical arts, which he terms "archemastrie":

> Now end I, with Archemastrie. Which name, is not so new, as this Arte is rare. For an other Arte, under this, a degree (for skill and power) hath bene indued with this English name before. And yet, this, may serve for our purpose, sufficiently, at this present. This Arte, teacheth to bryng to actuall experience sensible, all worthy conclusions by all the Artes Mathematicall purposed, & by true Naturall Philosophie concluded: & both addeth to them a farder scope, in the termes of the same Artes, & also by hys propre Method, and in peculier termes, procedeth, with helpe of the foresayd Artes, to the performance of complet Experiences, which of no particular Art, are hable (Formally) to be challenged. If you remember, how we considered *Architecture*, in respect of all common handworkes: some light may you have, therby, to understand the Soverainty and propertie of this Science.

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[1] Euclid, trans. H. Billingsley with a preface by John Dee, *The Elements of Geometrie of the Most Auncient Philosopher Euclide of Megara* (London: John Daye, 1570), sig. D4v.

(sig. A4v)

"Archmastrie" again might seem like the controlling fantasy of Dee the mathematician-magus, who sought by understanding the world to bring it under the power and "soverainty" of man. The term "archmaistrie" had previously been used in English of alchemy, which was supposed to enjoy 'sovereignty' over not just all arts but over all things. For Dee "archmaistrie" is the skill of skills, that reunites mathematical abstractions with the particularities of experience. It is in that respect akin to equity, in that it recombines the bare principles of mathematics with the particularities of cases that might not quite fit the abstractions of number; and in that respect too it is akin to Spenser's poem in seeking to number the numberless, and aspiring to mastery over the unmasterable multiplicities of the globe and the natural world.

So the historical moment of *The Faerie Queene*—of colonial expansion underpinned by mathematical and geometrical principles, yet continually threatened by storms; by the reluctance of foreign 'nations' to yield to the supremacy of those who claimed to discover them; and by the inherent absurdity of human attempts to 'master' something as vast and untameable as the natural world—has curious analogies to our own, in which massive tech companies seek to manipulate and anticipate the desires of populations who might respond with reluctance, resistance, or rebellion to their attempts to reduce the human to an algorithm. Empires, be they technological or economic or military or mathematical, tend always to generate rebellions, even if those rebellions are a long time coming, or are implicit in the contradictions generated by those empires rather than explicitly expressed in the actions of their subjects.

I suggested at the start of this afterword that there was something 'romantic' about the desire to rebel against the algorithm, and that the present dominance of mathematical models of human agency and human writing have led to a potentially rebellious emphasis on features of humanity that cannot be replicated through complex mathematical and computational systems. So perhaps the last word in this Afterword best belongs to the arch-romantic rebel and follower of Spenser, Lord Byron. Byron has as good a claim as anyone to have been literally the father of the algorithm, since his daughter, Ada Lovelace, is generally believed to have been the first person to have written a computer programme. Ada inherited her mathematical skill from her mother rather than from her highly unruly father, whose carelessness over the vulgar business of counting his debts (let alone the finer points of mathematics) is

the stuff of legend. In *Childe Harold's Pilgrimage* Byron wrote in Spenserian stanzas about his travels in Europe and about the state of European politics in the early nineteenth century. He was an imitator of Spenser who was particularly responsive to the combination of ruliness and unruliness in *The Faerie Queene*, although his own poetic transformation of Spenser has some features that seem so mechanical as to seem almost the product of a Byron algorithm. Byron multiplied and personalised the wanderings described in *The Faerie Queene*. He made the Spenserian stanza a vehicle (a little too often) for impassioned apostrophes and rhetorical questions. And Byron was also fond of turning Spenser's meditations on the destructive power of time into melancholy reflections on the loss of European liberty in the period of reaction following the French Revolution. Looking back to the past from the ruins of Greece and Rome was not just a pretext for meditating on the lost classical world in *Childe Harold,* or for lamenting the destructive power of cursed eld over the texts of Chaucer, but an opportunity to reflect on a lost age of freedom. As a result Byron's algorithm for transforming Spenser into a poet of his own age made *The Faerie Queene* into a vehicle for expressing a desire for freedom through a politicised version of Spenser's nostalgia for a lost age. But Byron also responded to the Spenser who was a poet of the uncountably multiple, of stars and woods and trees that exceeded expectations and human efforts to encompass them in number, and for whom no algorithmic reduction of experience would serve. He turned that fascination with multiplicity into a desire not just to break free from the constraints of numbers, but to transcend the limits of mortality:

> Ye stars! which are the poetry of heaven!
> If in your bright leaves we would read the fate
> Of men and empires,—'tis to be forgiven,
> That in our aspirations to be great,
> Our destinies o'erleap their mortal state,
> And claim a kindred with you; for ye are
> A beauty and a mystery, and create
> In us such love and reverence from afar,
> That fortune, fame, power, life, have named themselves a star.
>
> (3.88)[2]

[2] Lord Byron, *The Complete Poetical Works: Volume II*, ed. Jerome J. McGann (Oxford: Clarendon Press, 1980).