

RESEARCH ARTICLE

‘Alcumists of eloquence’: The alchemist and the inkhorn in early modern England

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Abstract

This article examines the intersection of alchemical satire and linguistic critique in the late sixteenth and early seventeenth centuries, situating it within the context of the inkhorn controversy – a debate over linguistic excess and neologisms in Elizabethan England. Alchemical language, long characterized by its mystique and opacity, was a frequent target of satire, with writers like Thomas Nashe and Ben Jonson critiquing its inflated rhetoric as much as its failed transmutations. Yet such alchemical appearances in literature often signal anxieties over the use of language itself. In this article, I argue that early modern alchemical satire functioned as a mode of literary-linguistic critique. A key trope in these satires is inflation: just as alchemists relied on ‘puffing’ bellows in their experiments, their language and the ‘inkhorn terms’ of linguistic innovators were also mocked as similarly ‘puffed up’. Tracing these connections from Geoffrey Chaucer’s conman alchemist to Thomas Sprat’s complaint about the ‘swellings of style’, this article demonstrates how alchemical and linguistic satire were mutually reinforcing, forming a precursor to early seventeenth-century scientific discourse, and later calls for linguistic clarity over rhetorical excess.

Railing against the idleness of philosophers, poets and scholars, the personification of Winter in Thomas Nashe’s 1599 play *Summer’s Last Will and Testament* turns his ire to ‘Golde-breathing Alcumists’, whom he describes as ‘Vaine boasters, lyers, make-shifts ... Men that removed from their inkehorne termes, / Bring forth no action worthie of their bread.’¹ Alchemists deal not in gold but instead breathe golden lies, a well-worn satirical image. Yet Winter’s critique grants them one source of value: their ‘inkhorn terms’, without which they would produce nothing at all. This raises the question, what does alchemical language have to do with inkhorn terms?

The history of alchemy is a history of communication. Medieval and early modern alchemists were as preoccupied with encoding and obscuring their knowledge as they were with transmutation, navigating between revelation and concealment. Their language, at once celebrated for its mystique and derided for its opacity, was often the primary target of their satirization. Familiar alchemical satires of the early modern period, such as Ben Jonson’s *The Alchemist*, were often more invested in displaying and critiquing alchemical language than in the practicalities of the art itself. By satirizing alchemical language, such texts ultimately engaged with broader literary-linguistic commentaries. I follow

¹ Thomas Nashe, *A pleasant comedie, called Summers last will and testament*, London, 1600, G2r–v. Early modern printing conventions that swap ‘u’ for ‘v’ and ‘i’ for ‘j’, and vice versa, have been standardized in this article.

Katherine Eggert's suggestion that 'the appearance of alchemy in a literary text sometimes signals how well that text accepts literature as a discipline rather than as a body of universal knowledge'.² I add to this that alchemical language could function as a mode of literary-linguistic critique, particularly when read within the context of early modern metalinguistic discourse and contemporary anxieties about other forms of opaque language.

The display and critique of opaque language have long been of interest to scientists, and in the history of science such debates have tended to centre on late seventeenth-century stylistic debates. Thomas Sprat's call for members of the Royal Society to reject the 'swellings of style' in favour of 'primitive purity' is representative of the 'plain style' desired by scientists and inherited, as Werner Hüllen suggests, from the knowledge-making and linguistic concerns of Baconian and Puritan thought in the first half of the seventeenth century, each united in their praise of clear, unadorned style.³ Questions of linguistic style were central to scientific discourse since, as Peter Dear argues, 'the style of science espoused by the Fellows of the Royal Society was more important than the substance of that science'.⁴ Yet, as Ryan J. Stark suggests, 'advancers of learning used the idea of plainness in order to distinguish between their non-magical understandings of language and esoteric beliefs held by wizards, witches, theurgists, and other practitioners of mysterious arts, of whom there were many'.⁵ While Stark's analysis focuses on a desire to differentiate scientific language from the occult language of witchcraft and magic, this article seeks to place alchemy in the extended linguistic debates of the history of science and does so by offering an earlier reading of alchemical-linguistic discourse as presented in Elizabethan–Stuart literary texts. I also build on Tina Skouen's suggestion that the Royal Society's 'call for clarity and plain expression' should not be 'regarded as something that pertained only to a certain kind of learned writing', but was 'part of a national endeavor to stabilize the language'.⁶ This 'national endeavor to stabilize the language' did not begin with the Royal Society or even Bacon. Instead, we can place it in an earlier context which has not yet been tied directly to alchemy and only fleetingly to the history of science: the inkhorn controversy.⁷

This article offers a new perspective on the well-known 'plain-style' debate of the seventeenth century by locating its roots in this Elizabethan metalinguistic debate that questioned the value of neologisms, particularly those deemed Latinate and inflated. I argue that the alchemical satire of the late sixteenth and early seventeenth centuries, when read through the lens of the inkhorn controversy, reveals a neglected prehistory of the linguistic and scientific ideals later formalized by figures like Francis Bacon and Thomas Sprat. By drawing a direct line between literary representations of alchemical puffery and contemporary anxieties about verbal excess, I show how comic and theatrical treatments of alchemy's opacity anticipate the stylistic principles – clarity, simplicity and anti-rhetorical restraint –

² Katherine Eggert, *Disknowledge: Literature, Alchemy, and the End of Humanism in Renaissance England*, Philadelphia: University of Pennsylvania Press, 2015, p. 220.

³ Thomas Sprat, *The history of the Royal-Society of London*, London, 1667, P1r. Werner Hüllen, 'The Royal Society and the plain style debate', in Lothar Hoffmann, Hartwig Kalverkämper, Herbert Ernst Wiegand, Christian Galinski and Werner Hüllen (eds.), 2. Halbband: *Ein internationales Handbuch zur Fachsprachenforschung und Terminologiewissenschaft*, Berlin and New York: De Gruyter Mouton, 1999, pp. 2465–71, 2465.

⁴ Peter Dear, 'Totius in Verba', in Tina Skouen and Ryan Stark (eds.), *Rhetoric and the Early Royal Society: A Sourcebook*, Leiden and Boston: Brill, 2014, pp. 53–76, 72.

⁵ Ryan J. Stark, *Rhetoric, Science, and Magic in Seventeenth-Century England*, Washington, DC: The Catholic University of America Press, 2009, p. 2.

⁶ Tina Skouen, 'Science versus rhetoric? Sprat's *History of the Royal Society* reconsidered', in Skouen and Stark, op. cit. (4), pp. 237–64, 256.

⁷ To situate the linguistic aims of the Royal Society within a longer history of nationalist linguistic projects see R.F. Jones, *The Triumph of the English Language: A Survey of Opinions Concerning the Vernacular from the Introduction of Printing to the Restoration*, Stanford, CA: Stanford University Press, 1953, pp. 293–323.

that would become hallmarks of scientific prose. As Kate Aughterson notes, the politicization of plain versus affected speech pre-dates the Baconian imploration of ‘plain style’ that would be of central importance to later seventeenth-century debates on the accessibility and objectivity of scientific language.⁸ Alchemical satire, I suggest, also prefigures Bacon’s admonition of those who ‘hunt more after wordes, than matter’ and reveals that the push for linguistic reform in scientific writing emerged not only from institutional science, but also from the popular, comic and satirical interrogation of language itself – with alchemy as its central motif.⁹

A key image that satirical writers used in their alchemical satire as literary-linguistic commentary was inflation – a precursor to Sprat’s anxieties about the figurative ‘swellings of style’. Alchemy and inflation are connected in both material and linguistic terms. Just as alchemists literally used inflation in their practice in the form of ‘puffing’ bellows, so too is their language ‘puffed’ up. As such, the language of inflation is used to critique both alchemical falsities and inflated language more broadly, including the ‘puffed-up’ inkhorn terms of late Elizabethan metalinguistic debates. For Nashe and his contemporaries, alchemical satire was invested in both the textual and the material practices of alchemy, even when it dismissed the practice itself. This article therefore also seeks to expand our understanding of how literary writers engaged with alchemical language by demonstrating how their satirization of it and reliance on the trope of inflation was part of a broader linguistic satirization of inaccessible, deceitful and inflated language. As I follow the intersection of the alchemical and linguistic satire in this article, from the heart of the inkhorn debate to its echoes in early seventeenth-century texts, the image of inflation looms large, as those like Nashe who bring alchemical and linguistic satire together recognize the shared ‘puffery’ of the alchemist and the inkhorneer.

Alchemical language in Elizabethan England

The use of alchemical language in late sixteenth-century England can be divided into two categories: sincere and satirical. On one hand, sincere alchemical scholars grappled with the challenge of translating classical and medieval alchemical texts and navigating the inherent linguistic opacity and strategies of dissimulation that shaped the tradition. On the other, satirical portrayals of alchemy, also rooted in medieval precedent, mocked these very difficulties, framing alchemical language as needlessly inflated and deliberately obfuscatory.

Let us begin with the sincere. The history of alchemy is as much a history of reading, writing and communicating as it is a history of science or philosophy. As Tara E. Nummedal reminds us, alchemy was, for many, a ‘textual practice’.¹⁰ Like the humanist translators of classical texts, early modern alchemists were invested in the recovery, interpretation and transmission of older works. Alchemists, however, had to balance their roles as mediators of these texts, simultaneously working for their own or their patrons’ profits and as protectors of valuable alchemical secrets. Alchemists often situated themselves as the ‘heirs’ of medieval greats like Roger Bacon, George Ripley and Thomas Norton as a way to establish their own authority even when, as William R. Newman shows, their own practice owed little to these older texts.¹¹ This ensured the longevity of alchemical imagery and language, since the ‘twin strategies’, as Newman puts it, of highly figurative alchemical

⁸ Kate Aughterson, ‘Redefining the plain style: Francis Bacon, linguistic extension, and semantic change in *The Advancement of Learning*’, *Studies in Philology* (2000) 97, pp. 96–143, 98.

⁹ Francis Bacon, *The two bookes of Francis Bacon. Of the proficience and advancement of learning*, London, 1605, E3r.

¹⁰ Tara E. Nummedal, ‘Words and works in the history of alchemy’, *Isis* (2011) 102(2), pp. 330–7, 332.

¹¹ William R. Newman, ‘Decknamen or pseudochemical language? Eirenaeus Philalethes and Carl Jung’, *Revue d’histoire des sciences* (1996) 49(2–3), pp. 159–88, 165.

language were to show that one could ‘reveal’ the secrets of alchemy whilst also retaining that secret for themselves.¹² As a result, the act of identifying, interpreting and understanding alchemical language was, like the practice itself, a mystified process. Georgius Agricola, writer of the influential metallurgical treatise *De re metallica* (1556), offers a common complaint that ‘all these alchemists employ obscure language ... There are many other books on this subject, but all are difficult to follow, because the writers upon these things use strange names’.¹³ Ancient and medieval alchemical texts used code names, allegory, riddles and illustrated visual clues to both communicate and protect their alchemical processes. Medieval alchemical texts were often versified, which Eoin Bentick argues was a useful borrowing, since ‘alchemical writing is inherently paradoxical, seeking both to conceal and reveal at the same time, and so alchemists borrowed from poetry this ability to gesture towards something whilst never explicitly naming it’.¹⁴ Jennifer M. Rampling likewise notes the paradoxical nature of alchemical language as revealing and concealing, as alchemical texts ‘often outline a detailed succession of chemical processes ... [and] the final stages are often described with far greater consistency than the first step’.¹⁵ Protecting the identity of the *prima materia* through code names or riddles meant that the clarity of the latter stages was undone. As sixteenth-century practitioners, translators and antiquarians attempted to make sense of, use and translate these texts, the desire to both conceal and reveal would continue in mediations of older alchemical texts.

Translating and making accessible alchemical texts was a complex task and early modern translators and editors made clear to their readers the obscurity and unintelligibility of the language they were mediating on the reader’s behalf.¹⁶ The anonymous 1597 translator of Roger Bacon’s *The Mirror of Alchimy* offers a typical example of this. They preface the work with a promise of elucidating the ‘cloudie’ language of past alchemists:

In times past the Philosophers spake afters divers and sundrie manners throughout their writings, sith that as it were in a riddle and cloudie voyce, they have left unto us ascertain most excellent and noble science, but altogether obscure, and without all hope utterly denied, and that not without good cause.¹⁷

The early modern translator–alchemists had to negotiate carefully their relationship with earlier texts. They must balance a recognition of the ‘obscure’ language and practices of medieval alchemy with also defending the legitimacy of the practice and their own abilities to perform and translate alchemical processes. In his 1577 alchemical treatise *The Key of Alchemy*, Samuel Norton speaks to the difficult language of medieval texts, in particular that of Ripley, and the role of the early modern alchemist in mediating and presenting these ‘secrets’. Norton notes that though some ‘mightily inveigh against’ Ripley, this is because they ‘understand him not’.¹⁸ Despite the difficulty of understanding, Norton claims to have found ‘plainness’ in Ripley, stating,

¹² Newman, op. cit. (11), p. 165.

¹³ Georgius Agricola, *De re metallica* (tr. Herbert Hoover and Lou Henry Hoover), New York: Dover Publications, 1950, pp. xxvii–xxviii.

¹⁴ Eoin Bentick, *Literatures of Alchemy in Medieval and Early Modern England*, Cambridge: D.S. Brewer, 2022, p. 94.

¹⁵ Jennifer M. Rampling, *The Experimental Fire: Inventing English Alchemy, 1300–1700*, Chicago and London: University of Chicago Press, 2020, p. 12.

¹⁶ On the editorial practices of early modern translators of medieval alchemical texts see George R. Keiser, ‘Preserving the heritage: Middle English verse treatises in early modern manuscript’, in Stanton J. Linden (ed.), *Mystical Metal of Gold: Essays on Alchemy and Renaissance Culture*, New York: AMS Press, 2006, pp. 189–214.

¹⁷ Anon., ‘The Preface’, in *The mirror of alchimy*, London, 1597, A2r.

¹⁸ Samuel Norton, ‘The Preamble’, in *The Key of Alchemy* (1577), trans. W.A. Ayton, Bodleian Library, Ashmole 1421, at www.levity.com/alchemy/norton_3.html (accessed 31 March 2024).

for beginning where Ive beginneth; he teacheth not; but plainly sheweth, how to begin, how to continue, and how to finish and make perfect. And as there is no secret in the art, which he in plainness toucheth not; so doth he above all the writers of the world, open the secrets of handling the ferment. For in vain is all our labor, though we attain to the stone, if we know not how to ferment it. Which is so rare a secret that hithertoo I could never find it in any one author; neither could I yet speak with any that ever came near it ... till at the last better weighing my Master Riplie's words, I learned to stand upright where I was want [wont] to fall.¹⁹

Norton's 'preamble' to his alchemical manuscript may be typical of textual engagement with alchemical practice, but it also alerts us to the complex role of inaccessible language and the role of the mediator in alchemical texts. Norton admits to the difficulty of interpreting Ripley and his own struggles in identifying the intermediate stages between beginning and attaining the philosophers' stone, such as fermentation. Yet, whilst ironically concealing his own intermediate steps of interpretation, Norton claims to find a plain and clear explanation in Ripley. Crucially, plainness and obscurity of language are not opposed in Norton's reading. Instead, Norton at once declares to understand 'plainly' the complex alchemical language of this earlier text whilst also shrouding in mystery both his alchemical and his reading practices.

Despite the growing number of English alchemical texts promising to clear away the cloudy riddles of medieval alchemy, its obscure language persisted, both as an inherent feature of the tradition and as a key element of its cultural reception. Running parallel to the sincere alchemical textual tradition was a satirical one, equally rooted in the medieval past and similarly preoccupied with modes of communication. English alchemical satire can be traced to Geoffrey Chaucer's *Canon's Yeoman's Tale*, where alchemical language proliferates even as it collapses into unintelligibility. Chaucer's yeoman is assisting his master in an alchemical swindle and uses the language of alchemy not to explain the art but to display its inherent deceit and inaccessibility. He describes alchemy as an 'elvyshe craft', which makes it 'semen wonder wise', yet its 'termes [are] so clerghial and so queynte [so scholarly and so strange]'.²⁰ The yeoman is able to list multiple alchemical processes and materials, noting their extensiveness – 'Ther is also ful many another thyng/That is unto oure craft aperentyng' – yet states his own inability to speak them correctly: 'Though I by ordre hem nat reherce kan,/By cause that I am a lewed [unlearned] man.'²¹ Despite his repeated assertions that he 'kan nat telle' or 'I have yow toold ynowe' or 'Nat nedeth it for to reherce hem alle', the yeoman continues his display of alchemical language, bookending each extended description of alchemical processes with either a promise to stop speaking or an assertion of the failure of their attempts.²² This practice of emphasizing alchemical language by promising to stop speaking it is a typical example of *occupatio*, a favourite rhetorical device of Chaucer's. Yet it also speaks to the explosive and uncontainable nature of alchemical language, a theme that continues in early modern satire.

We might describe the alchemical language satirized here as 'puffed up'. Puffery can be applied to both the material and linguistic practices of satirized alchemists, as words and substances are inflated and expanded. Another word for an alchemist, particularly the deceitful or amateur sort or the alchemist's assistant, was a 'puffer'. Chaucer's canon and his assistant yeoman who must 'blowe the fir til that myn herte feynt' would be seen as

¹⁹ Norton, op. cit. (18).

²⁰ Geoffrey Chaucer, 'The canon's yeoman's prologue and tale', in *The Canterbury Tales*, Harvard's Geoffrey Chaucer Website, at <https://chaucer.fas.harvard.edu/pages/canons-yeomans-prologue-and-tale> (accessed 31 March 2024), 751–2.

²¹ Chaucer, op. cit. (20), 784–7.

²² Chaucer, op. cit. (20), 930, 860, 796.

'puffers', as would the instrument used to stoke the fire.²³ This association continued into the early modern period. Alchemists are defined by their 'continually blowing to make their furnaces yeeld forth great treasure' and might provide 'no little profite to themselves and disadvantage to the buier, beside puffed rings'.²⁴ One medical account of 'windiness in the stomacke' suggests that it is caused by a man's 'vaporous windy opinion of some rare quality in himselfe', after which his stomach will 'blow (like an Alchymist) to a great masse'.²⁵ Alchemists do not only physically 'blow' and 'puff'; their words are puffed up too. The yeoman is unable to contain the very language that he admits to not understanding even as he cries, 'Fy! Spek nat therof, for it wol nat bee', reminding us that the expansive language of alchemy is not enough to bring its promises into being.²⁶ The alchemical language of satire is as paradoxical as that of sincere uses of it. It is inexpressible yet cannot be contained. Puffery offers a useful metaphor for this, since it is explosive and windy, and signifies what might be big without and hollow within.

This Chaucerian mode of alchemical satire was developed in the Elizabethan period when another alchemist's assistant appears with a similarly confused yet expansive list of alchemical terms. John Lyly was a courtier best known for popularizing euphuism, a highly ornate style of prose characterized by its balanced sentences and excessive similes, but he dramatized satirical alchemical language in his play *Gallathea*. First performed at court in 1588 and printed in 1592, *Gallathea* is often discussed for its concluding transformation of a girl into a boy, but its subplot follows Rafe, a young man testing out various occupations, including alchemy. His first encounter with the craft, however, is not through its practices or equipment but through its language, mediated by the alchemist's assistant, Peter. Like Chaucer's yeoman, Peter is both brimming with alchemical jargon and incapable of comprehending it:

[Peter:] What a life doe I leade with my Maister nothing but blowing of bellows, beating of spirits, & scraping of Croslets? it is a very secrete Science, for none almost can understand the language of it. Sublimation, Almigation, Calcination, Rubification, Encorporation, Circination, Sementation, Albification, and Frementation. With as many termes unpossible to be uttered, as the Arte to be compassed.

[Rafe:] Let me crosse my selfe, I never heard so many great devils in a little Monckies mouth.

[Peter:] Then our instruments, Croslets, Sublivatories, Cucurbits, Limbecks, Decensores, Violes, manuall and murall, for enbibing and conbibing, Bellowes, molificative and endurative.

[Rafe:] What language is this? doe they speake so?²⁷

The language of alchemy is so alien to Rafe that he mistakes it at first for the occult or infernal speech of 'devils'. We know, however, that Peter's insistence that alchemy's mystifying terms are inextricable from its secrecy is in line with the long alchemical tradition of using deliberately inaccessible language. Yet Peter's list of alchemical terms is riddled with errors as he frequently misnames key processes, such as 'almigation' for 'amalgamation' and 'fremmentation' for 'fermentation'.²⁸ This satirical alchemical language, then, is even more obscure than its sincere counterpart, since its error-laden rendering of alchemical terms transforms them into gibberish, even if they still point to real alchemical language and processes. Like Chaucer's tale, Lyly's satirization is also attuned to the inflated nature of both alchemy and its language. Like the yeoman who must 'blowe the fir til that myn

²³ Chaucer, op. cit. (20), 753.

²⁴ François de La Noue, *The politicke and militarie discourses of the Lord de La Nouue* (tr. E.A.), London, 1588, V3r; Robert Greene, *A quip for an upstart courtier*, London, 1592, G1v.

²⁵ Thomas Adams, *Diseases of the soule a discourse divine, morall, and physycall*, London, 1616, I2v.

²⁶ Chaucer, op. cit. (20), 845.

²⁷ John Lyly, *Gallathea*, London, 1592, 2.3, C3r.

²⁸ Lyly, op. cit. (27), 2.3, C3r.

herte feynt', Peter too must do 'nothing but blowing of bellows'. And when he finishes his first lengthy list of alchemical terms, we might imagine him breathless as he says, 'With as many termes impossible to be uttered, as the Arte to be compassed.'²⁹ Peter is speaking not only to the inaccessibility of this language, but also to its expansive and inflated nature, in which the number of terms and their length make them, once again, both inexpressible and uncontainable.

In both the sincere and satirical uses of alchemical language, its communicative capabilities are under scrutiny. Unintelligibility is a shared concern. Sincere alchemists seek at once to explicate and conceal meaning, whilst satirical renderings both mimic and mock the language they claim to debunk, as alchemists' assistants seem unable to contain the jargon they dismiss. Yet alchemy was not the only sphere undergoing an intense metalinguistic investigation in Elizabethan England. Running parallel to these alchemical mediations were broader discussions about the use and abuse of the English language, which reached their peak in the inkhorn controversy. This debate was entangled in nationalist, religious and intellectual concerns, as writers negotiated the boundaries of intelligibility. In the most pointed satirical treatment of the controversy, the pamphleteer Nashe employs alchemical imagery to critique linguistic excess, as he examines the competing forces of inflation and distillation in literary-linguistic production.

Alchemy and inkhornisms

Peter's rapid-fire listing of alchemical terms, all ending in the Latinate suffix '-ation', may have registered as a familiar mockery of inaccessible language to early modern audiences, though not in an immediately alchemical context. In the same year that Lyly's *Gallathea* was printed, Nashe launched his attack on his rival Gabriel Harvey's language, cataloguing a string of 'over-rackt absonisme[s]', ill-sounding words, including 'energetically persuasions: Rascallitie: materiallitie: artificiallitie, Fantasticallitie: divine Entelechy: loud Mentery: [and] deceitfull perfidy'.³⁰ This satirical list of linguistic excess functions much like Peter's babble of 'termes impossible to be uttered', drawing attention to the contemporary intersection of Latinate neologizing and the translation of alchemical terminology into English. Both passages engage, albeit humorously, with intellectual traditions of translation and linguistic antiquarianism and show how such language, whether scholarly or pseudo-scientific, can veer into the deliberately or accidentally unintelligible. Nashe asks his readers to discern 'whether [these words] be currant in inkehornisme or no', situating Harvey's language not within alchemical satire but within the inkhorn controversy, a metalinguistic debate concerned with the intelligibility and value of English words.³¹

By the sixteenth century, English had long been regarded as a 'base' and 'insufficient' language, especially in comparison to Latin. As Peter Burke relates, there was widespread commentary across early modern Europe on the 'riches or poverty' of any vernacular language.³² To compensate for the perceived shortcomings of the English language, writers and translators were forced to borrow and neologize, and, by 1592, Nashe's rival Harvey thanked his contemporaries for 'their studious endeavours, commendably employed in enriching, & polishing their native Tongue, never so furnished, or embellished, as of-late'.³³ Alchemists, humanist translators and energetic neologizers of the sixteenth century all turned to

²⁹ Lyly, op. cit. (27), 2.3, C3r.

³⁰ Thomas Nashe, *Strange newes*, London, 1592, I4v.

³¹ Nashe, op. cit (30), I4v.

³² Peter Burke, *Languages and Communities in Early Modern Europe*, Cambridge: Cambridge University Press, 2004, p. 17.

³³ Gabriel Harvey, *Four Letters*, London, 1592, F4v–G1r.

Latinate vocabulary to enrich the English language. For alchemists, this linguistic expansion enabled the translation and publication of English alchemical texts. For humanists, it provided a means to translate classical and medieval works into English. And for prolific neologizers, from Nashe to William Shakespeare, it allowed for the creation of new words, adapting and merging existing terms to enrich the lexicon and make the language more dynamic.

However, this process of linguistic borrowing was not without its critics. As English grew, so did anxieties about its intelligibility. The proliferation of Latinate terms, referred to as ‘inkhorn terms’ or ‘hard words’, became the target of fierce critique during the inkhorn controversy. The linguistic innovation that began as a desire to expand and enrich English soon devolved into ‘inkhornism’ – excessive borrowing and neologizing that rendered English unintelligible, obscure and often ridiculous to anyone without a firm grip of Latin. The diplomat and rhetorician Thomas Wilson advised his readers as early as 1553 to avoid excessive linguistic borrowing, prioritizing plain English above all else: ‘Emong al other lessons, this should first be learned, that we never affect any straunge ynkehorne termes, but so speake as is commonly received ... Some seke so farre for outlandishe Englishe, that thei forget altogether their mothers language.’³⁴ Other complaints of this nature include the poet and rhetorician George Puttenham’s attack on those who ‘seeme to coigne fine wordes out of the Latin’ and the orthographer John Hart’s concern that Latin borrowings ‘hindereth the unlearned from understanding of the matter’.³⁵ Paula Blank suggests that, to early modern commentators, ‘the idea that English was a “foreign” language – even to native speakers – was felt to be a uniquely contemporary phenomenon’, especially since the language truly had expanded by thousands of words.³⁶ As shown by these complaints, in which borrowers ‘hindereth the unlearned’ and ‘forget altogether their mothers language’, the inkhorne faces multiple charges. He not only alienates his countrymen through his exclusive and excessive use of foreign borrowings; he betrays his nation too.³⁷

The length, or polysyllabic nature, of borrowed words was a regular feature both of celebrations of the expansion of English and of critiques of inkhorn terms. The Tudor scholar and educational writer Roger Ascham, for example, argues that because English uses mostly ‘wordes of one syllable’, translations out of Greek or Latin ‘doth rather trotte and hoble, than runne smoothly in our English tong’.³⁸ Nashe similarly complains, ‘our English tongue of all languages most swarmeth with the single money of monosyllables which are the onely scandall of it’, suggesting that to remedy this words must be conjoined or borrowed out of Greek, French, Spanish and Italian.³⁹ This suggestion that English was fundamentally monosyllabic meant that polysyllabic words became associated with foreignness and inkhornism. The poet George Gascoigne wryly commented in 1575 that, since polysyllabic words ‘cloye a verse and make it unpleasant’, writers should

³⁴ Thomas Wilson, *The arte of rhetorique*, London, 1553, P2v.

³⁵ George Puttenham, *The arte of English poesie*, London, 1589, Ee3v; John Hart, *A methode or comfortable beginning for all unlearned*, London, 1570, A3r.

³⁶ Paula Blank, *Broken English: Dialects and the Politics of Language in Renaissance Writings*, London and New York: Routledge, 1996, p. 18. See also Jones, op. cit. (7); Terttu Nevalainen, ‘Early modern English lexis and semantics’, in Roger Lass (ed.), *The Cambridge History of the English Language*, Cambridge: Cambridge University Press, 2000, pp. 332–458.

³⁷ On anxieties surrounding Latin borrowing in this period as linked to anti-papist sentiment see Jamie H. Ferguson, ‘The Roman inkhorn: religious resistance to Latinism in early modern England’, in Kevin Killeen, Helen Smith and Rachel Willie (eds.), *The Oxford Handbook of the Bible in Early Modern England, c.1530–1700*, Oxford: Oxford University Press, 2015, pp. 83–97.

³⁸ Roger Ascham, *The Scholemaster*, London, 1570, R4r–v.

³⁹ Thomas Nashe, *Christs teares over Jerusalem*, London, 1593, *2v.

thrust as few wordes of many sillables into your verse as may be: and hereunto I might alledge many reasons: first the most aunient English wordes are of one sillable, so that the more monasyllables that you use, the truer Englishman you shall séeme, and the lesse you shall smell of the Inkehorne.⁴⁰

As such, overinflated words were at the heart of the inkhorn controversy.

With these sincere linguistic concerns came satirical jabs. The connection between ‘big’ polysyllabic words and inkhornisms is dramatized in Shakespeare’s *Love’s Labour’s Lost*. In a play full of neologisms, two characters in particular are denigrated for their ‘fier new wordes’, the Spanish braggart Armado and the pedant Holofernes.⁴¹ The inflated quality of their words is noted when Costard, a country bumpkin, speaks with Moth, Armado’s servant, as he jokes, ‘I marvaile thy [master] hath not eaten thee for a worde, for thou art not so long by the head as honorificabilitudinitatibus.’⁴² ‘Honorificabilitudinitatibus’, the longest word in Shakespeare’s works and an overblown Latinism meaning the ability to attain honours, mocks the unintelligible, inflated inkhorn words that Wilson and Gascoigne decry. It would soon be used by Nashe to describe the deceitful and mystifying language used by trickster physicians, who ‘deafen our eares with the Honorificabilitudinitatibus of their heavenly Panachaea their soveraigne Guaiacum’.⁴³ This article began with Nashe’s connection between alchemical language and inkhornisms, as Winter states that alchemists are nothing without their ‘inkehorne termes’. Yet elsewhere in Nashe’s prose, the analogy is inverted. Rather than satirizing alchemists, Nashe uses the language of alchemy and its well-known associations with puffery and deceit to critique the similarly ‘puffed up’ language of his literary rivals.

Nashe entered the English literary scene in the late 1580s. After graduating from Cambridge and starting his career as a state-backed, anonymous pamphleteer in the Marprelate controversy, Nashe’s first credited appearance in print was his preface to Robert Greene’s *Menaphon* (1589). Lorna Hutson describes this as an opportunity for Nashe to ‘conduct a spirited review of the state of English letters’, praising Greene and other earlier writers invested in the humanist aims of expanding the English language whilst simultaneously critiquing the current ‘stagnation in which authors appear to be mere retailers of classical and continental merchandise’.⁴⁴ Recently graduated, newly arrived in London, and in the first print publication in his name, Nashe addresses the preface to *Menaphon* to ‘the Gentlemen Students of Both Universities’ and immediately inserts himself into debates surrounding inkhornism: ‘I am not ignorant how eloquent our gowned age is grown of late; so that everie moechanicall mate abhorres the english he was borne too, and plucks with a solemne periphrasis, his *ut vales* from the inkhorne’.⁴⁵ The pedantic scholar greeting others (*ut vales*) daily with ‘solemn periphrasis’ and full of inkhornish Latinisms that is ridiculed by Nashe would later appear in literary figures such as *Love’s Labour’s Lost*’s Holofernes. Nashe references the inkhorn here, but ‘periphrasis’ is an even more loaded term in this context. ‘Periphrasis’ was already an established Latin rhetorical term, translated by Elyot in his *Bibliotheca Eliotae* as ‘circumlocution, one worde expressed by many’.⁴⁶ In the sixteenth century, however, the word was also directly borrowed into English, such as in Thomas More’s *Apologye*, in which he admits to have ‘fallen on a fayre fygure unaware,

⁴⁰ George Gascoigne, *The poesies of George Gascoigne Esquire [Hundreth sundrie flowres]*, London, 1575, T4r.

⁴¹ William Shakespeare, *Loves labors lost*, London, 1598, 1.1, A4r.

⁴² Shakespeare, op. cit. (41), 5.1, F3r.

⁴³ Thomas Nashe, *Lenten stuffe*, London, 1599, D4v.

⁴⁴ Lorna Hutson, *Thomas Nashe in Context*, Oxford: Clarendon Press, 1989, pp. 64–5.

⁴⁵ Thomas Nashe, ‘To the gentlemen students of both Universities’, in Robert Greene, *Menaphon*, London, 1589,

**1r. Hereafter referred to as Nashe, Preface to *Menaphon*.

⁴⁶ Thomas Elyot, *Bibliotheca Eliotae*, London, 1542, B6r.

that ys I trowe called periphrasys'.⁴⁷ Over the century we see the status of this rhetorical term diminish from a 'fayre figure' to what Puttenham describes as 'holding somewhat of the dissembler, by reason of a secret intent not appearing by the words'.⁴⁸ The 'Englishing' of this rhetorical term and its subsequent devaluing exemplify the growing mistrust of superfluous and mystifying rhetoric. He that 'falls on' periphrasis unnecessarily expands his language in a way that makes it artificial and robs it of substance. This expanded, insubstantial language is further critiqued by Nashe as he moves on to an explicitly alchemical metaphor: the 'idiote art-masters, that intrude themselves to our eares as the alcumists of eloquence; who (mounted on the stage of arrogance) think to outbrave better pens with the swelling bumbast of a bragging blanke verse'.⁴⁹ Nashe's reference to the 'stage of arrogance' tells us that this particular complaint is launched against playwrights, whom he later suggests 'repose eternitie in the mouth of a player'.⁵⁰ Nashe's connection between 'bombastic' and 'blank verse' may be familiar to Shakespeareans, since Robert Greene's famed 1592 critique of Shakespeare, the 'upstart Crow', would similarly attack the playwright's ability 'to bombast out a blanke verse as the best of you'.⁵¹ Robert Stagg shows that the dual meanings of 'bombast' as both to 'stuff' with unnecessary matter and to 'swell' or 'inflate' alerts us to bombastic blank verse's paradoxical status as 'both too little and too much', as Shakespeare 'pads out [his blank's] essential emptiness (their blankness) with portentous rhetoric and vacuous sound'.⁵² The shared imagery of excessive 'stuffing' and empty sound continues in Nashe's preface, as he furthers his attacks:

Indeed it may be the ingrafted overflow of some kilcow conceipt, that overcloieth their imagination with a more than drunken resolution, beeing not extemporall in the invention of anie other meanes to vent their manhood, commits the digestion of their cholerick incumbrances, to the spacious volubilitie of a drumming decasillabon.⁵³

The writers that Nashe attacks have 'stuffed' imaginations, 'overflowing' with 'conceits' that 'over cloy' them, making them unable to invent anything new through 'extemporal' means. As a result, they must transform these unoriginal 'cholericke incumbrances' into airy blank verse, which has the space of a hollow yet volubile drum perfect for 'drumming decasillabon' – the decasyllable or iambic pentameter typically used in blank verse. Nashe's own desire to avoid inflated language continued in his other works, such as his call to a muse in *Christs teares over Jerusalem* to 'file away the superfluous affectation of my prophane puffed up phrase, that I may be thy pure simple Orator'.⁵⁴ This is presented within a broader attack on the morality of inflation as Nashe attacks sinners, stating, 'It is not your pinches, your purles, your floury jaggings, superfluous enterlacings, and puffings up, that can any way offend God, but the puffing up of your soules, which therein you expresse'.⁵⁵ 'Puffings up' represent, then, not just inflated language, but all superfluous and ambitious objects and souls.

⁴⁷ Thomas More, *The apologye of syr Thomas More knyght*, London, 1533, R4v–S1r. See also 'periphrasis, n.', *OED Online*, 2018, www.oed.com/view/Entry/141026 (accessed 31 March 2024).

⁴⁸ Puttenham, op. cit. (35), Y3r.

⁴⁹ Nashe, op. cit. (45), **1r.

⁵⁰ Nashe, op. cit. (45).

⁵¹ Robert Greene, *Greenes, groats-worth of witte*, London, 1592, F1v.

⁵² Robert Stagg, 'Shakespeare's bombastic blanks', *Review of English Studies* (2021) 72(307), pp. 882–99, 883.

⁵³ Nashe, op. cit. (45), A2v.

⁵⁴ Nashe, op. cit. (39), A1v.

⁵⁵ Nashe, op. cit. (39), S3v.

In Nashe's second credited work, *The Anatomie of Absurditie*, the imagery of empty containers and drums continues. As he promises to 'runne through Authors of the absurder sort, assembled in the Stacioners shop, sucking and selecting out of these upstart antiquaries', Nashe complains of a literary scene diluted with 'unlearned Idiots', and goes on to describe them as 'brainlesse Bussards' like 'emptie' eggs that 'floateth above', unlike full eggs that sink in water.⁵⁶ He quickly expands this metaphor of hollowness:

the Authors of eloquence, and fountains of our finer phrases, when as they sette before us, nought but a confused masse of wordes without matter, a Chaos of sentences without any profitable sence, resembling drummes, which béeing emptie with in, sound big without.⁵⁷

Here, both the hollow egg and the empty drum reiterate the deceitful emptiness of the 'puffed-up' phrases and 'swelling bumbast' of the 'alcumists of eloquence' attacked in his earlier preface to *Menaphon*, with 'alcumists' swapped out for 'Authors' in *Anatomie*. This passage also continues Nashe's interest in the paradox of such language, which is both massy and hollow, empty within yet sounding 'big without'. These attacks are reminiscent both of the changing status of 'periphrasis' discussed earlier, 'one worde expressed by many', and of the alchemical satire seen in *Lyly*, which is similarly a 'confused masse of wordes without matter', using many words, often long and unintelligible, to signify little other than that they represent satirized alchemy, which also, as Nashe's Winter puts it, 'bring[s] forth no action'.

The inflated imagery of both the 'puffer' alchemist and the 'puffed-up' author are evoked by Nashe in his preface to *Menaphon* too. That something might be deceitfully expanded once 'puffed up' with air, only to prove hollow within, connects the 'swelling' of alchemy (both its techniques and its falsities) and the empty-headed poet that Nashe attacks. Inflation, swelling and puffing are traits of the 'alcumists of eloquence', but these words will be used in much more ambivalent ways over Nashe's career. Jason Scott-Warren's object-oriented reading of Nashe, for example, centres on his 'swollen' and 'hollow' imagery and the 'windy emptiness' and stuffiness of his language.⁵⁸ We might see this as a progression in Nashe's literary style once free of the limits of a preface, but there are many moments in this first work that relish linking alchemical imagery with literary production.

Nashe goes on to employ alchemical language to put forward his own linguistic commentary. Though he denounced the 'swelling bumbast' of playwrights, he praises some scholars for 'repurg[ing] the errors of Arts expelde from their puritie, and set before our eyes a more perfect Methode of Studie'.⁵⁹ He hails the poet Edmund Spenser as that 'miracle wit' that would produce English gold should 'an forreiner [try] to bring our english wits to the tutchstone of Arte' – 'touchstone' at this point was both metaphorical and a literal stone used to rub gold and silver against to test their purity.⁶⁰ There are some writers, then, who escape Nashe's criticism, but the language used to describe them is no less alchemical than the 'puft up' language of playwrights. This suggests that while Nashe engages with alchemical satire to attack the inflated language of his contemporaries, literary and alchemical perfection is possible.

⁵⁶ Thomas Nashe, *The anatomie of absurditie*, London, 1589, A1r.

⁵⁷ Nashe, op. cit. (56), A1v.

⁵⁸ Jason Scott-Warren, 'Nashe's stuff', in Andrew Hadfield (ed.), *The Oxford Handbook of English Prose 1500–1640*, Oxford: Oxford University Press, 2013, pp. 204–18, 214–17.

⁵⁹ Nashe, op. cit. (45), **3r.

⁶⁰ Nashe, op. cit. (45), A2r–v; 'Touchstone, n.', *OED Online*, 2018, 2a, www.oed.com/view/Entry/203901 (accessed 31 March 2024).

For Nashe, the inflated words of both inkhornism and alchemy can be combated through another alchemical procedure – distillation. The act of distillation, separating dross from valuable matter, was a useful metaphor for the act of writing since, as Philip Ball suggests, there was ‘something highly attractive in the image of distillation as the way to obtain a potent essence from everyday fare; indeed, poetry is itself a kind of distillation of language’.⁶¹ Margaret Healy similarly identifies late sixteenth-century England, with its writers interested in the poet-as-maker trope, as a ‘remarkable phase in the history of poetic theory in which the technique of writing was understood to involve “distillation”’.⁶² In sonnet 54, for example, Shakespeare imagines poetry’s ability to preserve and make sweeter the beloved’s beauty through the distilling power of verse, as the poem’s final couplet shows, comparing the more lasting scent of distilled roses and temporary living rose: ‘And so of you, beautious and lovely youth, / When that shall vade, by verse distils your truth.’⁶³ In later works, Nashe develops his alchemical metaphors for literary creation to consider how the inflated alchemical language of ‘puft up’ poets might also be distilled. In *Pierce Penilesse*, Nashe favourably contrasts those who ‘study twentie yeeres to distill golde out of inke’ against younger writers who ‘doe nothing but devise how to spend’.⁶⁴ In *The Unfortunate Traveller*, however, the perils of distillation as a means to create literary ‘gold’ are presented. The narrator, Jack Wilton, accompanies a fictionalized Earl of Surrey who is travelling to Italy to woo a lady, Geraldine. While the playwrights Nashe complained of in his preface to *Menaphon* attempted to ‘embowell the clowdes in a speach of comparison’, ‘embowel’ is changed for ‘distil’ in *Unfortunate Traveller*. Composing sonnets for his beloved, Surrey ‘eclipsed the Sun and Moone with comparisons’ and Nashe describes the earl’s poetic process as when ‘The alcumy of his eloquence, out of the incomprehensible drossie matter of clouds and aire, distilled no more quintessence than woulde make his Geraldine compleat faire’.⁶⁵ Surrey is no more successful than the playwrights at producing valuable literature. Like the ‘alcumists of eloquence’ in the preface to *Menaphon*, Surrey’s poetic matter is ‘aire’, and when Surrey attempts to ‘distil’ this ‘drossie matter’, the resulting ‘quintessence’ pays little compliment to Geraldine. The swollen, airy language critiqued earlier in Nashe’s career is exchanged for constricting, weighty language. When Surrey mistakes another woman for Geraldine, he delivers the following poem,

In thy breasts christall bals enbalme my breath
 Dole it all out in sighs when I am laid ...
 Thy [eyes] like searing yrons burne out mine,
 In thy faire tresses stifle me outright,
 Like Circes change me to a loathsome swine,
 So I may live for ever in thy sight.⁶⁶

Rather than airy and inflated, Surrey’s language is ‘stifling’ and punctuated with weighty, metallic, and earthy imagery, as the recipient has eyes like searing irons and stifling tresses of hair, a suffocating inversion of both Petrarchan love poetry and the inflated imagery deployed earlier. Even the metamorphosis offered by alchemy so often displayed in early modern sonnets is debased as Surrey asks the mistaken beloved to ‘Like Circes change me to

⁶¹ Philip Ball, ‘Alchemical culture and poetry in early modern England’, *Interdisciplinary Science Reviews* (2006) 31(1), pp. 77–92, 87.

⁶² Margaret Healy, *Shakespeare, Alchemy and the Creative Imagination: The Sonnets and A Lover’s Complaint*, Cambridge: Cambridge University Press, 2013, p. 52.

⁶³ William Shakespeare, ‘54’, in *Shakespeare’s sonnets*, London, 1609, D4r.

⁶⁴ Thomas Nashe, *Pierce Penilesse*, London, 1592, A2v.

⁶⁵ Nashe, op. cit. (45), **1r; Thomas Nashe, *The unfortunate traveller*, London, 1594, H3v.

⁶⁶ Nashe, op. cit. (65), G4r.

a loathsome swine'. Surrey performs poetic distillations, but by using the 'drossie matter of clouds and aire' as his *prima materia*, his alchemical poetry fails, only creating more dross. Yet Nashe, like the alchemists of his time, remains elusive as to what *prima materia* might be effective for producing literary gold.

Nashe's repeated use of alchemy to attack the broader failings of language exhibited by Surrey and Nashe's own contemporaries is typical of what Dermot Cavanagh terms the 'double-sidedness' of his satire.⁶⁷ Cavanagh notes that Jack Wilton 'deploys the arts of language in a way that both satirizes their artificiality and that allows him to exploit their utility in instrumental ways'.⁶⁸ This mode of Nashean satire, however, is true of alchemical satire more broadly. From Chaucer's early use of alchemical-linguistic satire in which the yeoman claims that there is no need to 'reherce' the alchemical language of his master whilst doing just that to Lyly's uncontainable list of phoney alchemical terms, the deployment of alchemical language is a deliberate mode of satire in which alchemy's inflated language can be made both to signify and to satirize itself. Both alchemical writers and early modern satirists were involved in a game of concealing and revealing meaning, asking their readers and audiences to interpret and differentiate dross from valuable matter. Alchemical language is inflated, empty and inaccessible, but by placing alchemy within the broader literary-linguistic politicization of mystifying language, Nashe and his contemporaries suggest that an alternative literary-linguistic perfection is possible. Linguistic perfection would go on to become a central concern of seventeenth-century scientists, but, even in the early decades of the century, the inflationary rhetoric of both alchemists and inkhorners lingers in both sincere and satirical reflections on the use and abuse of language.

Windy echoes in the seventeenth century

By the early seventeenth century, the inkhorn controversy had waned, but its core concerns about communication and intelligibility persisted in both sincere and satirical treatments of alchemy, ultimately influencing the emerging discourse of 'new' science. This final section explores how the Elizabethan literary engagement with alchemical imagery as a means of linguistic commentary, particularly the language of inflation, wind and puffery, echoed in the decades that followed and shaped broader metalinguistic debates in both literary and scientific circles.

In the first decade of the seventeenth century, the linguistic debates that had flourished in 1590s London evolved and found new expression in the universities. Francis Bacon's 1605 *Advancement of Learning* redirected concerns about unintelligible and deceptive language away from inkhorners and trickster alchemists, focusing instead on the realm of scientific inquiry. In the *Advancement*, he begins the linguistic commentary that he would later develop in *Novum Organum* and reflects on the energetic neologizing and linguistic scholarship of the century prior. Noting the increased interest, following the Reformation, in 'ancient Authors, both in Divinitie, and in Humanitie, which had long time slept in Libraries', Bacon cites the 'necessitie of a more exquisite travaile in the languages originall, wherein those Authors did write' as the cause of linguistic 'excesse'.⁶⁹ At this point, in a turn of phrase strikingly similar to Nashe's attack on 'confused masse[s] of wordes without matter', Bacon states that 'men began to hunt more after wordes, than matter'.⁷⁰ Bacon does not name inkhornisms, a term that was falling out of fashion by this point, but his complaint has the same root. Humanist translation and antiquarian language caused an

⁶⁷ Dermot Cavanagh, 'Modes of satire', in Andrew Hadfield (ed), *The Oxford Handbook of English Prose 1500-1640*, Oxford and New York: Oxford University Press, 2013, pp. 380-95, 381.

⁶⁸ Cavanagh, op. cit. (67), p. 393.

⁶⁹ Bacon, op. cit. (9), E2v-3r.

⁷⁰ Bacon, op. cit. (9), E2v-3r.

'excesse' of words. Bacon was also aware of the potential of wind, air, clouds and inflation as metaphors for the linguistic and imaginative work of windy orators who 'agitate' people like wind 'troubles' the sea and the 'vapourous imaginations' of those who engage in 'Naturall Magicke, Alchimie, Astrologie', who 'in steede of a laborious and sober enquire of truth[,] shall beget hopes and Beliefes of strange and impossible shapes'.⁷¹ Bacon's linguistic commentary is rarely connected to the preceding inkhorn controversy, yet the concerns with intelligibility, puffed-up scientific practice and the usefulness of inflated, airy imagery as a mode of critique continue.

Two years after the publication of *The Advancement of Learning*, a play titled *Lingua: or The combat of the tongue, and the five senses for superiority*, by Cambridge playwright Thomas Tomkis, was published. This academic play takes place in the microcosm of the mind and dramatizes a battle between Lingua, the female personification of language, and the five senses. Tomkis's drama has already been connected to new science elsewhere, particularly his later play *Albumazar*, which both satirizes the likes of alchemy and astrology and showcases enough engagement with the latest scientific discourses to characterize Tomkis as a 'playwright who was deeply engaged with early modern natural philosophy'.⁷² In *Lingua*, the titular Lingua moves at ease between languages, ancient and vernacular. In response to her linguistic flexibility, Common Sense imagines and condemns her speech as a failed alchemical experiment, stating, 'I am perswaded these same language makers have the very quality of colde in their wit, that freezeth all Heterogeneall languages together, congealing English Tynne, Graecian Gold, Romaine Latine all in a lump.' He then suggests that Lingua use the 'cleane current of a pure stile' instead, foreshadowing the language of Abraham Cowley's 1667 celebration of the Royal Society's linguistic reformation, since they have 'vindicated Eloquence and Wit' and now philosophy has a 'candid Stile [that] like a clean Stream does slide'.⁷³ Common Sense, much like Nashe's Winter and Bacon, shows a wariness towards 'language makers', be they alchemists who can 'tell miracles' or orators who flit between tongues so frequently that their speech becomes an indistinguishable 'lump' of fused metals.

The debates between the senses and Lingua on the right and proper use of language are paralleled with the conversations between their array of pages, who each represent other senses and attributes of the mind. In one scene, Lingua's page Mendatio (lying) spots Heuresis (invention), the page of Phantastes (imagination), ruminating on his alchemical practice, and the tropes of alchemical satire continue:

[Mendatio:] Ha, ha, ha, ha, he is turned Chimick sirra, it seemes so by his talke.

[Heuresis:] But how shall I devise to blow the fire of Beechecoales, with a continuall and equall blast? ha? I will have my bellowes driven with a wheele, which wheele shall bee a selfe mover.⁷⁴

Mendatio can identify Heuresis's alchemical interests (he is 'turned Chimick') purely by his 'talke', and Heuresis's talk, much like that of Chaucer's yeoman and Lyly's Peter, is all inflation. He must 'blow' and 'blast' his fire and work his 'bellowes' with the wheel. Once again, alchemical talk is tied to inflation. It is relevant too that it is the personification of invention, the capacity of the mind required for creating the 'hopes and Beliefes of strange

⁷¹ Bacon, op. cit. (9), Xx4v, Hh4v.

⁷² Vivian Appler, 'Among actions, objects, and ideas: the telescope in Thomas Tomkis's *Albumazar*', *Comparative Drama* (2006) 50, pp. 81–105, 84.

⁷³ Thomas Tomkis, *Lingua: or The combat of the tongue, and the five senses for superiority*, London, 1607, 3.5, F2r; Abraham Cowley, 'To the Royal Society', in Sprat, op. cit. (3), B3v.

⁷⁴ Tomkis, op. cit. (73), 4.1, G4v.

and impossible shapes' and windy orations, that Bacon critiqued. *Lingua* draws upon the alchemical and linguistic satire of the Elizabethan period, but its dramatization of the relationship between language and the senses also points towards the scientific-linguistic discourses of the century ahead, in which 'lingua' would continue to be denigrated for its capacity to deceive.

Alchemical language receives a more extended and well-known dramatization in Jonson's *The Alchemist*, in which conmen Subtle and Face play, among other roles, a phoney alchemist and an alchemist's assistant to dupe the wealthy but foolish Sir Epicure Mammon and his dubious friend Pertinax Surly. Neither Mammon nor the audience ever see the laboratory where the promised transmutations are to take place, although the explosion at the play's conclusion and the discovery by Lovewit, the owner of the house the play takes place in, of 'smoak'd' walls and 'A few crack'd pots, and Glasses, and a Fornace' suggest that genuine attempts were made.⁷⁵ Instead, both Mammon and the audience are only exposed to the language of alchemy as proof of its workings. Subtle is an adept at mimicking alchemical language, language that on the one hand, as Eggert argues, 'partakes in, rather than merely scoffs at, the scientific discourse of Jonson's day', since it displays a clear knowledge of these terms, yet on the other hand undermines its alchemical meaning and replaces it with a satirical one when deployed in an explicitly duplicitous fashion.⁷⁶ Surly's response to Subtle's alchemical speech, much like Peter's garbled listing of alchemical terms, shows how easily such language can be mimicked even by one who understands none of it:

[Surly:] What else are all your Terms,
 Whereon no one o'your Writers grees with other?
 Of your Elixir, your Lac virginis,
 Your Stone, your Med'cine, and your Chrysosperme,
 Your Sal, your Sulphur, and your Mercurie ...
 ... And worlds of other strange Ingredients,
 Would burst a man to name.

Rather than dismiss Surly's parody as mere ignorance, Subtle insists that this obscurity is intentional:

[Subtle:] And all these, nam'd,
 Intending but one thing: which art our Writers
 Us'd to obscure their Art.
 [Mammon:] Sir, so I told him.
 Because the simple Idiot should not learne it,
 And make it vulgar.

Subtle then aligns alchemical secrecy with a venerable tradition of mystification in sacred and literary discourse:

⁷⁵ Ben Jonson, *The Alchemist*, London, 1612, 5.5, M3r.

⁷⁶ Katherine Eggert, 'The Alchemist and science', in Garrett A. Sullivan Jr, Patrick Cheney and Andrew Hadfield (eds.), *Early Modern English Drama: A Critical Companion*, Oxford: Oxford University Press, 2006, pp. 200–12, 206.

[Subtle:] Was not all the knowledge
 Of the Aegyptians writ in mystick Symboles?
 Speake not the Scriptures oft in Parables?
 Are not the choysest Fables of the Poets,
 That were the Fountaines, and first Springs of Wisdome,
 Wrapt in perplexed Allegories?⁷⁷

This scene dramatizes many of the literary-linguistic contexts that drew upon serious discussion of alchemical language. Rather than denounce Surly's mimicry as the ramblings of one who does not understand the practice, Subtle tells him that this language is deliberately obscured. Subtle then situates alchemical language within a broader tradition of deliberately obscure and inaccessible language: Egyptian hieroglyphics, biblical scripture and classical poetry – the 'first Springs of Wisdome'. The scene thus offers more than a comic send-up of alchemical puffery. It stages a metalinguistic debate about the politics of specialized language, about who gets to speak obscurely and why, and aligns the theatrical satire of alchemical language with broader early modern concerns about clarity, authority and access. The debate between the trickster alchemist and the sceptic here is not about alchemy's capacity to transmute metals, but rather about the politics of inaccessible, figurative language itself.

Jonson's use of alchemy as a means to satirize inaccessible language more broadly continues in his court masque, *Mercury Vindicated from the Alchemists at Court*. Mercury, representing both the substance often used as *prima materia*, the first matter, in alchemy and the Roman god of money, communication and trickery, attempts to escape Vulcan, the blacksmith god, and his court of alchemists who try to catch him before he 'evaporate[s]'.⁷⁸ Mercury's dual role as an alchemical substance and the god of communication suggests that these courtly alchemists are attempting to trap him not only to use his substance for their work, but to gain mastery over the communicative and potentially manipulative power of language too. This is strengthened when Mercury describes the 'materials' of alchemy, in which alchemical and verbal matter are mingled:

His materials, if I be not deceiv'd, were juyce of almanacks, extraction of *Ephemerides*, scales of the *Globe*, fylings of figures, dust o'the twelve houses, conserve of questions, salt of confederacy, a pound of adventure, a graine of skill, and a drop of trueth. I saw vegetals too, aswell as minerals, put into one glasse there, as adders tongue, title-bane, nitre of clyents, tartar of false conveyance, *Aurum palpabile*, with a huge deale of talke, to which they added tincture of conscience, with the faces of honesty ...⁷⁹

Most of the 'materials' listed are not alchemical materials, but words. Mercury finds amongst the glass and minerals 'fylings of figures', a 'conserve of questions', 'a drop of trueth', a 'tartar of false conveyance' and a 'huge deale of talke'. The linguistic 'materials' of alchemy outnumber the chemical, reminding us that for Jonson, as for Nashe's Winter, the success of alchemy only went as far as the power of its 'termes'. Yet Jonson's attack on alchemical language is also an attack on those who would use artificial, overblown language – figures, false conveyance and a 'huge deale of talke'. Mercury's status as both

⁷⁷ Jonson, op. cit. (75), 2.3, E2r.

⁷⁸ Ben Jonson, *Mercury Vindicated from the Alchemists at Court*, in *The workes of Benjamin Jonson*, London, 1616, Pppp5r.

⁷⁹ Jonson, op. cit. (78), Pppp5v.

an alchemical substance and a god associated with writing, communication and trickery reminds us that Jonson's satire is as concerned with the politics of alchemical language, or any form of artificial, deceitful language, as it is with alchemy itself. Despite his condemnation of it, Mercury readily deploys alchemical language as a means to signify a broader spectrum of affected, inflated and inaccessible language.

This interest in inflated language returns us to material inflation in alchemical satire. Like Lyly's Peter, Jonson's Surly, after finishing his mimicry of alchemical terms, emphasizes the impossibility of reciting alchemical terms in their entirety since the practice uses 'worlds of other strange Ingredients, / [that] Would burst a man to name'.⁸⁰ Alchemy may aim for multiplication, but in *The Alchemist* airy inflation that leads to explosion is another result of both alchemy's practice and language. *The Alchemist* is full of wind, inflation and swelling. In its first lines, Subtle tells Face, 'I fart at thee', hinting at the windy and explosive language and acts he will perform.⁸¹ When Face takes on the role of the alchemist's assistant, he also takes on the name 'Lungs', which Mammon refers to him as, sometimes alternating with 'Puffe'.⁸² The link between inflation and alchemy connects the language and practice of alchemy itself, the puffing and blowing of bellows performed by alchemists and their assistants, like Chaucer's yeoman and Lyly's Peter. *Gallathea*'s Peter spends his time doing 'nothing but [the] blowing of bellows' and Face likewise tells Mammon, 'I have blown, sir, / Hard for your worship'.⁸³ Mammon himself has a desire for inflated and airy spaces. When speaking of his plans for the wealth that alchemy will bestow on him, he says, 'I will have all my beds blown up, not stuff', perfume 'vapour'd'bout the room, / To lose ourselves in', and ladies who 'shall fan me with ten estrich tails / A-piece, made in a plume to gather wind'.⁸⁴ The inflationary imagery of *The Alchemist* is, as Elizabeth Rivlin suggests, a 'metaphor for the desire to inflate oneself, subjectively, economically, and socially'.⁸⁵ I add to this that it also represents the desire to inflate one's language. Although the literal use of 'puff', an imitative word meaning to blow out air or to inflate something, was well in use by this point, the sixteenth century sees the earliest recorded uses of 'puff' in a metaphorical sense – 'puffing' as to give undue, 'inflated' praise or to cause someone to 'swell' with vanity.⁸⁶ The inflated imagery of satirized alchemical language denotes both the literal work of alchemy, which required 'puffers' to blow the furnace, and the metaphorical potential of puffing, inflating and swelling as representative of both the inflated language of alchemy and the work of trickster alchemists who 'puff up' their patrons with inflated promises. Jonson, like his literary predecessors, uses alchemy to satirize not only the inflated promises of alchemy and its puffed-up practices, but also inflated and deceitful language itself, which is likewise 'puffed up'.

The satirical portrayal of alchemy in *The Alchemist* – its wind, puffery and explosive inflation – extends beyond the practice itself to a broader linguistic critique. The very mechanics of alchemy, with its bellows and vaporious transmutations, provide a fitting metaphor for rhetorical excess, where words, like air, can be overblown to the point of explosion. Jonson's satire, then, is not merely a rejection of fraudulent alchemical promises, but a continuation of anxieties central to the inkhorn controversy and Bacon's *Advancement*: the fear that

⁸⁰ Jonson, op. cit. (75), 2.3, E2r.

⁸¹ Jonson, op. cit. (75), 1.1, B1r.

⁸² Jonson, op. cit. (75), 2.1, C4v, 2.2, D2r.

⁸³ Lyly, op. cit. (27), 2.3, C3r; Jonson, op. cit. (75), 2.2, D2r.

⁸⁴ Jonson, op. cit. (75), 2.2, D2v–3r.

⁸⁵ Elizabeth Rivlin, 'The rogues' paradox: redefining work in *The Alchemist*', in Michelle M. Dowd and Natasha Korda (eds.), *Working Subjects in Early Modern English Drama*, Farnham: Ashgate, 2011, pp. 115–30, 117.

⁸⁶ See 'puff v.', *OED Online*, 2018, 6a–7b, at www.oed.com/view/Entry/154181 (accessed 31 March 2024).

language, if left unchecked, could become as unstable and deceptive as alchemical experimentation. By embedding alchemical inflation within his literary and linguistic satire, Jonson, like Tomkis, Nashe and Lyly before him, reveals how the period's preoccupation with language – its clarity, accessibility and capacity for deceit – was inextricable from its broader intellectual and scientific concerns. As the seventeenth century moved towards Baconian empiricism and calls for linguistic precision, alchemical puffery remained a potent symbol of rhetorical artifice.

To conclude, when Sprat warned members of the Royal Society against the 'swellings of style' in 1667, the connection between inflation and linguistic excess in scientific history already had a long textual and cultural history. Even alchemy remains on Sprat's mind when imagining a verbal style tied to air, swelling and smoke, as he describes their linguistic practices in terms that directly connect the 'smoak' of their language with the material 'smoak' of their practice:

This desire of glory, and to be counted Authors; prevails on all, even on many of the dark and reserv'd Chymists themselves: who are ever printing their greatest mysteries; though indeed they seem to do it, with so much reluctancy, and with a willingness to hide still; which makes their style to resemble the smoak, in which they deal ...⁸⁷

When read in the larger context of Sprat's call for a plain style, his dismissal of alchemists aligns their language with their practices: both are simply 'smoak'. Sprat's association of alchemical secrecy with 'smoak' not only discredits the language of the 'chymists', but also treats their mode of writing and experimentation as a form of epistemological pollution. The comparison to smoke – lingering, obscuring, difficult to grasp – positions alchemical rhetoric as a direct threat to the Royal Society's emerging values: clarity, transparency and the visible demonstration of truth. Yet Sprat's own stylistic choices remain haunted by the very inflation he condemns. His prose, while ostensibly plain, still draws on metaphor, irony and pointed caricature. The smoky residue of alchemy clings to the linguistic ideals of early modern science, even as they attempt to purge it. The society's insistence on a plainness may aspire to strip language of its airs, but the fear of linguistic puffery that it responds to had already been thoroughly rehearsed in the satirical playbooks of the late sixteenth and early seventeenth centuries.

This article has shown that literary alchemical satire – especially in the wake of the inkhorn controversy – offered a crucial testing ground for early modern anxieties about language long before the Royal Society institutionalized them. In texts by Nashe, Jonson and Tomkis, alchemical excess became a way of diagnosing the slipperiness of words, the dangers of obscurantism, and the need for communicative reform. Far from being mere comic asides, these alchemical echoes are part of a longer intellectual genealogy that connects linguistic innovation to scientific enquiry. Reading alchemical satire as a linguistic commentary reveals that the concerns later articulated by Bacon and Sprat did not emerge *ex nihilo*, but from a vibrant and suspicious literary culture already preoccupied with the instability of words. In this context, alchemy's windy words matter not just for what they reveal about fraudulent science, but also for how they prefigure the linguistic disciplines that modern science would claim for itself.

Recognizing alchemy as a linguistic problem as much as a material one invites a reassessment of its place in the history of science. The textual experiments of Nashe, Jonson and Tomkis do not merely parody failed transmutations; they stage a deeper contest over how knowledge is made legible – or rendered illegible – through language. These literary texts,

⁸⁷ Sprat, op. cit. (3), K1v.

alert to the volatility of words, help illuminate how the instability of alchemical language became a productive site for negotiating the values that would later define scientific prose. In tracing this genealogy, we can better understand how the rise of plain style was shaped not in spite of alchemy's smoke and puffery, but through the very linguistic tensions that alchemical writing and its satirizations brought to the surface.

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