CHAPTER 7

Echoing Sounds

What Was Poetry for Gilbert White?

Courtney Weiss Smith

Echoes are resonant figures for what Mark M. Smith has called "historical acoustemology," the study of how people heard in the past.[1] For Smith, echoes underscore the historicity of sound: they are "faded facsimile[s] of an original sound, a reflection of time passed." They "invite[] a habit of listening that" encourages "us to locate origin (temporally and spatially)." But also, in returning sounds that are more or less faithful to their originals, echoes underscore the predicament of the historian of sound. Since we no longer have access to the ephemeral sounds of the past, only re-soundings, echoes raise the question: Could we ever hear a true or total echo of past sounds, "one that our listening ears" could "reliably hear and say, yes, *that's* the sound" that past people heard, *that's* the experience of sound that they had?[2] Smith encourages skepticism about "the retrievability" of sounds and "sonicity." Even if we could somehow (impossibly) hear a faithful reproduction of the precise sound waves, we would still not be hearing *like* a person of the past, because experiences of sound are mediated by assumptions and meanings of their moment.[3] Echoes sound different according to where we stand, and Smith encourages historians to abandon the dream of immediate access to the sounds of the past and instead study textual "evidence and the sensory perceptions recorded by contemporaries" for "descriptions of what these sounds meant to the various constituencies of the time."[4]

Echoes are also important figures for poetry. These figurations work a bit differently, raising a special set of issues about sound. As John Hollander put it, "the trope of echo . . . stand[s] for crucial questions about poetic language itself."[5] In Ovid's *Metamorphoses*, Echo loses her power to speak words, except what she repeats back from her surroundings, and there was a tradition in her wake that rendered Echo "the daughter of air and language [*aeris et linguae sum filia*]" – a figure for how poetic voices exist in and interact with their landscapes.[6] Moreover, at least since Alexander Pope's famous statement in his 1711 *Essay on*

Criticism that "The *Sound* must seem an *Eccho* to the *Sense*," echoes have raised questions about the nature of language – about signifiers and signifieds, form and content, hearing and understanding.[7] Much recent work in sound studies pits itself against the so-called linguistic turn, but these tropings remind us that word-sounds are themselves corporeal phenomena, that poetic language can – complicatedly – re-sound other sounds.

Inspired by both Smith's "historical acoustemology" and the poetics of echoes, this essay will explore how a particular person at a particular place and time apprehended particular sounds. Centuries before Smith's writing about echoes, Gilbert White – famed naturalist, clergyman, and sometime poet – conceived of echoes as apt figures for thinking about the experience of sound and the work of poetry. Indeed, in deliberately linking echoes and poetry in his *Natural History of Selborne* (1789), White did two things with poetry that seem surprising to us now, two things that we might not expect him to have done given our usual ways of thinking about poetry. First, in his work as a natural historian, White used Latin poetry as an instrument to measure echoes – screaming out its syllables as he tried to mathematize the landscape. Second, in his own poetry and in his writings about English prosody and versification, White echoed Pope about sound echoing sense. Yet in quoting "the finest instance" of this in English, White incorrectly copied a passage from John Dryden featuring an echoing sound: White's *mis*transcriptions actually *created* the prosodic effects that he praised. I will take seriously the logic motivating White's engagement with echoes and with Latin and English prosody as I try to understand how Gilbert White thought about poetic sound and poetry itself.

Of course, the study of sounds past raises interesting methodological issues. Smith's work insists we historicize even some of our most basic assumptions about the experience of sound – avoiding, for instance, an anachronistic privileging of vision over hearing.[8] My discussion of Gilbert White here will insist on a related methodological point: such anachronisms can be baked into the very categories through which we make sense of evidence. I am guided by exciting recent work in Historical Poetics, which asks us to think historically and skeptically about the "normative concepts that have been used to study and teach poetry."[9] Our categories shape, structure, even warp how we understand the evidence in front of us. Another methodological claim here – inspired by Meredith Martin's work in particular – is that scholars of poetry, intellectual history, and sound studies alike ought to engage more seriously with period prosodic writings, which richly show that historical categories for understanding sound, language, and poetics differed from our own.[10]

We today inherit a Romantic understanding of poetry that was forged in precisely the period this volume features: Poetry is *expressive*. But this understanding makes it hard for us to see other ways of thinking about poetry before (and alongside) the emergence and dominance of Romantic aesthetics. As I attend to White's echo play, I make the case for a rather different understanding of poetry available in the period: Poetry was language at its most material, featuring words that called attention to themselves as things, as sounds uttered and shapes printed on the page. Of course, White was not famous for his poetry or his poetic theory, and neither is especially original or distinctive for the period. This, however, makes his understanding of poetry all the more revealing of period thought. Trying to set aside our anachronistic assumptions and to recover the different ones structuring one eighteenth-century experience of sound, then: How did Gilbert White hear echoes, and what did poetry have to do with it?

Measuring Echoes

Here's one surprising thing that White did with poetry and echoes: He used poetry to measure echoes. White was an empiricist who explored the landscape, the flora and fauna, the "life and conversation of animals" in his home parish of Selborne.[11] The result was a beloved, influential book – *The Natural History of Selborne* – that contained both scientific papers read before the Royal Society and landscape poetry. The book featured important ideas about ecology and came to stand, sometimes nostalgically, for a distinctively "English" way of small-town life. White studied the natural world of Selborne, including its soundscape, its echoes. As he explained in a letter to his fellow naturalist Thomas Pennant published in *Natural History*, Selborne is "so full of hollow vales and hanging woods, it is no wonder that echoes should abound"; "this district is," he explained, "a place of responses or echoes" (*Natural History*, 285, 224).

In the letter to Pennant, White wrote at length about one particular echo in the area, "a polysyllabical, articulate echo" capable of returning multiple spoken syllables (*Natural History*, 224–25). He studied, even experimented a bit with this remarkable echo. The best place to hear the echo was "one particular spot in the *King's-field*, in the path to *Nore-hill*, on the very brink of the steep balk above the hollow cart-way" – facing "the stone-built, tiled hop-kiln in *Gally-lane*" across the valley that returns the sound (*Natural History*, 226). White was interested in how far the sound traveled and how many syllables the echo returned. So, he explained, he stood there and yelled out lines of Virgil's poetry: "*Tityre, tu patulae recubans*," he screamed, and all the ten syllables returned (*Natural History*, 225). Conjure the scene in your head. White must have spoken very loudly and very clearly to get syllables to travel over the 1,500 feet between the balk and the hop-kiln. And he must have spoken very quickly to be able to hear them once they did. There he was – the natural historian in the field, screaming out poetry.

To scholars in our times, this poetry reading has seemed curious, even a touch silly or charming, and it has confirmed our usual ways of reading White's book. He was an eighteenth-century naturalist, but, from where we sit, it is easy to make him a nature lover, his work more literature than science. *Natural History*'s echoes often come up when readers make these associations: Virginia Woolf, for instance, talked about this echo when reminding us that "literature" is always there for White, "shading the landscape with its august laurel."[12] Robert Hardy offers a compelling reading of the echo experiment as a kind of metapoetics. The syllables White chose from Virgil are from the opening of one of Virgil's *Pastorals*, an address to a shepherd who is reclining under the spreading beech tree as he plays music and "teach[es] the woods to echo" the name "sweet Amaryllis." White, out in the woods making echoes, cleverly featured a pastoral figure who causes the woods to echo. As Hardy explains, White used echoes to "transform the voice of the poet into the voice of the landscape itself," "naturaliz[ing] the voice of art."[13] White's play with Virgilian echoes puts him into a literary tradition. Exciting scholarship of the past decade, however, shows that "Literature" and "Science" as distinct disciplines in the ways we understand them were only just emerging in 1778 when White wrote his echo letter and that natural history was an importantly "interdisciplinary or predisciplinary space" right through the Romantic period.[14] This is a case, I think, where our anachronistic assumptions of what poetry is – not science, not related to measurement in any fundamental way – make it hard to glimpse disciplinary figurations different from our own, to understand why White used poetry as a measuring tool.

White's decision to speak Virgil into his echo is informed by a "scientific" tradition. He repeats a measurement offered in Robert Plot's *Natural History of Oxford-Shire* (1677).[15] Plot wanted to understand the movement of sound across distances and perhaps even reduce echo phenomena to a mathematical rule. As Plot explained, the Jesuit scholar Josephus Blancanus had proposed a rule: "no one syllable will be returned clearly" in less than "120 feet," and each additional echoing syllable required an

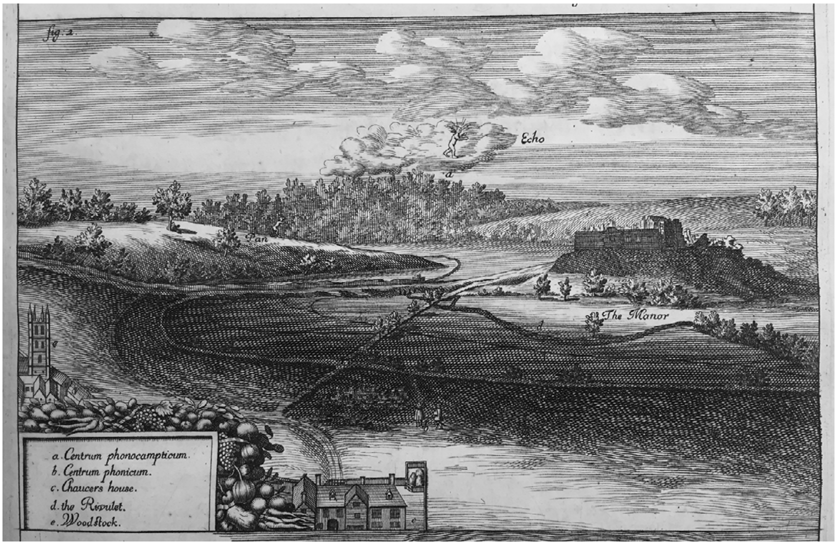


fig. 2.
Echo
a
Pan
The Manor
d
e
a. Centrum phonocampticum.
b. Centrum phonicum.
c. Chaucers house.
d. the Rivulet.
e. Woodſtock.

Figure 7.1 Image accompanying the echo measurement in Robert Plot, *The Natural History of Oxford-Shire* (1677), 17. Courtesy of the Watkinson Library, Trinity College, Hartford, Connecticut.

additional 120 feet. Plot set out to test whether a polysyllabical echo in Oxfordshire confirmed this rule. For Plot's echo, "the true place of the Speaker, or *Centrum phonicum*," the "place whither" the echoes "are returned stronger, and more distinct than any other," was in a park in Woodstock, and the echo was created by the facing hill (see Figure 7.1). Standing at the *centrum phonicum*, Plot yelled lines of Ovid into the facing hills, and he heard nineteen syllables echoed back. The *centrum phonicum* was 2,280 feet from the hill, and there he could hear nineteen syllables. If 2,280 is divided by nineteen the answer is 120 exactly; "to [his] great satisfaction," Plot explained, Blancanus's rule stood.[16] Plot's *Natural History* was cutting-edge science in Restoration England. On its merits Plot was elected to the Royal Society and awarded positions as a professor of chemistry at Oxford and curator of the university's natural history museum, the Ashmolean. After Plot, many English natural historians also tried to measure polysyllabical echoes, and decades later another Royal Society member, William Derham, would publish a similar measurement – using Latin poetry – in the Royal Society's *Philosophical Transactions*.[17]

This history suggests that we should take seriously White's interest in using the poetry, not just as a comment on poetry, but as a tool for quantifying the landscape. White understood himself to be furthering the scientific conclusions of this tradition. His findings upset the rule established by Plot and Blancanus. The *centrum phonicum* in "one particular spot in the King's-field" was about 774 feet from the hop-kiln.[18] When White too yelled out verse and counted, this echo returned ten syllables, which is only "near 75 feet, to each syllable" (not the 120 feet of the rule). "Thus," White concluded, "our measure falls short of" Plot's "as five to eight" (*Natural History*, 226). Plot, however, had proposed the 120 feet rule but also recognized that "there must be a latitude allowed," "according to the different circumstances perhaps of time, as well as place."[19] White's work confirmed the importance of such variables.

Such syllable counting thus served knowledge production. Why, then, did they do it with poetry? What are the assumptions that Plot and White held that made poetry useful? Certainly, for these classically educated men, poetry provided a ready-to-hand series of easily remembered syllables, and particular selections offered opportunities for cleverness. While White featured Virgil's pastoral echo-maker, many other English naturalists used Plot's choice, Ovid's famous lines about Echo:

Quae nec reticere loquenti,
Nec prior ipsa loqui didicit resonabilis Echo.

[She of the echoing voice, who cannot be silent when others have spoken, nor learn how to speak first herself.][20]

Plot made his echo echo lines about Echo's echoes. But the choices made by Plot and White were not motivated only by cleverness and ease of memory. There were also more fundamental considerations about the nature of poetry. Latin verse is organized by quantity, long and short syllables. Hexameter lines like Virgil's and Ovid's contain six feet, with the poet having some freedom to choose between spondaic feet (made of two long syllables, – –) or dactylic feet (a long syllable followed by two short ones, – ˘ ˘). In the eighteenth century, Latin verse's quantities, the long and short syllables, were understood as basically standard time units. As one prosody manual explained the rule: "the Proportion, generally speaking, betwixt a long and short Syllable is two to one" – that is, a long syllable takes twice as long to pronounce as a short one.[21] As Joshua Swidzinski has shown recently, eighteenth-century thinkers "inherited from Classical tradition the view that number (or quantity) is an immutable property of language" as well as "the corollary that poetry, insofar as it measures language, offers the clearest glimpse of language's numerical essence."[22] We should also remember how numerical the period's prosodic vocabulary was: *quantity*, *measure*, *proportion* – poetry itself could be called *numbers*. Latin poetry's quantities suited it to the task of measuring echoes. It made for a reliable timepiece.

The meter of the poetry was also significant. The echo measurers needed to say a lot of syllables quickly, so they could be ready to listen and count when syllables returned. Significantly, both Plot and White chose passages unusual for being composed almost entirely in dactyls (which feature short syllables). The seventeen syllables that Plot first heard back compose a hexameter line with five dactyls and a closing spondee:

– ˘ ˘ | – ˘ ˘ | – ˘ ˘ | – ˘ ˘ | – ˘ ˘ | – –
Nec prior ipsa loqui didicit resonabilis Echo

According to the period's understanding of quantity, these seventeen syllables, a full ten of them short, should take the same amount of time to pronounce as, say, just twelve syllables of spondees. White also chose a passage of what he explicitly calls "Quick dactyls" (*Natural History*, 225):

– ˘ ˘ | – ˘ ˘ | – ˘ ˘ | –
Tityre, tu patulae recubans

This is three and a half dactyls. These ten syllables, six of them short, should take the same amount of time to pronounce as just seven long syllables. Plot and White thus seem to have chosen their verses to make possible both the precise quantification and the quick pronunciation crucial to the experiment. These natural historians understood poetry as a useful instrument for this project of measurement because of the numbered, measured nature of its durations.

Moreover, *prosody* was useful for this study of echoes in ways that have not been fully appreciated. As I stated, Plot ended by suggesting that there must be latitude in the 120-foot rule. In his wake English echo science featured extensive discussion of all variables impacting echoes – setting out an almost ecological vision of the fundamental interconnectedness of the material world. For Plot, the echo was impacted by all sorts of features of the landscape: its curves, its materials, its air quality. White eagerly amplified this part of Plot's work: "weather and the time of day have a vast influence on an echo," White points out, and his echo went "totally silent" when the "field between" was "planted as a hop-garden" (*Natural History*, 226, 228).

Crucially, the experimenters themselves were not excepted; their voices and eardrums were key variables, and prosodic language appeared frequently in these discussions. As an early encyclopedia put it, prosody was the branch of knowledge "relat[ing] to Syllables," "treating of their true Pronunciation in respect of Accent and Time." It started from concern with particular qualities of letter sounds (*open*, *closed*, *liquid*, *mute*, etc.). These compose syllables, distinguished by "Time" (*long*, *short*) and "Accent" (*grave*, *acute*, *circumflex*).[23] Syllables combine into feet – including *dactyls* and *spondees* – and then into lines, which could seem "*smooth*, or *soft*, or *low*, or *rough*, or *rapid*, or *sonorous*," or "agreeable to the Ear," and so on.[24] Natural historians deployed this vocabulary, as they included the sensory qualities of words in their lists of variables impacting echoes. Plot proposed "that possibly there may be some sounds more agreeable to every *Echo*," noting that his Woodstock echo differed from the one Francis Bacon had described, which would not return "the letter S," "an interior and hissing sound."[25] Natural historians after Plot only intensified this engagement with prosody. In Northamptonshire, John Morton found that he "cou'd not persuade" his echo "at any Distance whatsoever to say *didicit*," so he rewrote Ovid's line: he preserved its dactylic rhythms but "substituted" a more "open" vowel "Sound."[26] In his 1708 *Philosophical Transactions* discussion of Plot's measurement, William Derham drew in detail on prosody as he urged consideration of "the different audibility of sound, the grave or acute sound of the syllables themselves, or their length or shortness." Derham compared the Ovid Echo line with what he called "the rough and long syllables" of a line that echoed poorly.[27] Prosody could provide a sensitive vocabulary for the material realities of word-sounds. Prosody helped these writers describe the variables that ought to be accounted for in the measurement.

White eagerly participated in this tradition. In addition to considering the landscape's variables – the "weather," the materials of hop-kiln, the crops in the field – White insisted the syllables themselves mattered. He demonstrated that the Selborne echo returned more syllables of dactyls than spondees. It returned ten syllables of "Quick dactyls": "*Tityre,* | *tu patu* | *lae recu* | *bans.*" White compared this with another Virgilian passage, which features three spondees and a final long syllable:

> –   – | –   – | –   – | –
> *Monstrum horrendum, informe, ingens*
> [A monster frightful, formless, immense][28]

Prosodically, this passage is highly unusual. In Latin verse, when a word ending with a vowel or an *m* occurs before a word beginning with a vowel, the syllable at the word end is elided. These words, then, are pronounced as seven syllables, "*Monst-ror-ren-din-for-min-gens.*" Since both this and the Tityre passage contain three and a half feet, in theory they should take the same amount of time to pronounce (the two short syllables of a dactyl taking the same time as one long syllable of the spondee). One might expect to hear back all seven of the spondaic syllables. Yet, White reported, he "could perceive a return of but four or five" of the long syllables; the qualities of the syllables themselves impacted their movement through space (*Natural History*, 225).

White described the spondee syllables as not just "slow" but "heavy" and "embarassed [*sic*]" (*Natural History*, 225). The corporeal realities here seem complex. These syllables, as spondees, are "slow" in themselves, and they seem to move more slowly through space, and fewer returned. Similarly, "heavy" refers to the syllables as things with quantities, but it is also a synonym for the grave accent with which they are to be pronounced. It might also refer to the syllable's sluggish movements.[29] Samuel Johnson defined "embarrass" as "to perplex; to distress; to entangle."[30] The "embarrassed" words are "perplexed" in themselves, characterized by obstacles to pronunciation: With the elisions, the sheer number of consonants packed into every syllable make them hard to read out (*Monst-rorr*). White repeated the word "embarassed": "hanging wood" is bad for echoes, for "the voice is at it were entangled, and embarassed in the covert" (*Natural History*, 225). He acknowledged that syllables (embarrassed in themselves) find physical form only by being voiced and that voiced syllables can become embarrassed – entangled – by obstacles like trees. Syllables are material phenomena in a material world, with physical properties that interact complexly with the voice that actualizes them and the landscape they move across. Here, it was not only that a line's prosodic features assisted the measurement. Prosodic theory was deployed for a science of sound, helping natural historians understand and talk about how the sensory qualities of words impacted their movements through the landscape.

So how did White – standing in a field in the 1770s – hear the echo? Because of his understanding of Latin poetry but also because of the "weather and time of day," because the kiln stood just so, and because the intervening field had not yet been planted with hops, he heard ten syllables: "*Tityre, tu patulae recubans.*" White believed these were "Quick dactyls," short syllables that took half as long to pronounce as the long ones. It is worth pointing out that, however he processed what he heard, White probably did not hear syllables that stood in such a precise time relation to one another. Eighteenth-century writers on prosody understood that English pronunciation mangled Latin quantity: An "English Ear … distinguishes not the Time" in Latin feet, but "the accent alone."[31] Derek Attridge's work on early modern understandings of Latin has shown that, in spite of the fact that their pronunciations meant that English speakers could not reliably hear Latin quantity, there was a tradition of English pedagogy that taught quantity as "more important" and somehow "more real than a mere physical property."[32] Did White appreciate how his English pronunciation upset the time measurements? Did he think of quantity as physical or ideal? Whatever the (possibly irrecoverable) complexities of his thinking here, White's understanding of "measured" poetic word-things was *not* the same as ours.

Indeed, the very hearing of these syllables was structured by a different understanding of poetry from ours. Proceeding from a different understanding of the disciplines, White allowed poetry to stand in significant relation to truth and knowledge production. He believed, for one, that poems could contain empirical truths, could thematize them. As *Natural History*'s letter on echoes continued, White tested – by "experiment" – Virgil's claim in the *Georgics* that echoes can hurt bees. White did not find evidence of injury, "yet," he said, "I grant it is possible" that bees "may feel the repercussion of sounds." Fittingly, White concluded the echo letter with what he described as a "lovely quotation, so finely describing echoes" from Lucretius's *De rerum natura*. If White's "experiment" made him doubt the truth of Virgil's claim, he endorsed Lucretius's critique of superstitions about echoes. Poems were not merely pleasurable, and they did not necessarily express subjective states: They contained verifiable truths.

In addition to its themes, poetry in its very form retained a relation to knowledge production. White used poetry to measure echoes precisely, for poetry offered up language whose material properties he understood to be organized with numerical precision. And White turned to prosody to make sense of how syllables move, for prosody was the branch of knowledge focused on the material nature of syllables. We have trouble appreciating what White was doing with the echo because we do not share his understanding of what poetry is, of poetry's relation to what we call science.

"Rendering the sound an 'echo to the sense'"

This is all true of Latin, though: surely White had different ideas about English poetry – right? Most scholars today assume that English verse does not work through numbers and quantity, and usually associate it less with truth and knowledge than with subjectivity and imagination. Did White share these assumptions?

There is a rich history of asking what poetry was in just the moment when White wrote, for this period saw the emergence of a new Romantic understanding of poetry. As M. H. Abrams's *The Mirror and the Lamp* famously argued, earlier poets had aimed, mirror-like, to capture or reflect a truth located out in the world, but by the end of the eighteenth century a new understanding had emerged. Through the recovery of Longinus and the sublime, an emerging association of poetry with the primitive and instinctive, and the increasing popularity of lyric forms, people had learned to think of poetry as expressive and subjective.[33] Virginia Jackson offers a complementary history, wherein a variegated genre system (differentiating between, say, pastoral, georgic, and epic) was blurred over the course of the eighteenth and nineteenth centuries, and lyric – a rule-breaking catch-all of a category with investments in "subjectivity, passion," and "organic unity" – became an "aesthetic ideal," inspiring new reading practices.[34] As Jackson reminds us, we have inherited the ideas consolidated in this late eighteenth-century moment: We too tend to think of poetry as expressive, subjective, imaginative, *lyric*.

The stories we tell about changing understandings of art have a kind of momentum, so that it seems easy to assume that everyone in the late eighteenth century ascribed to the expressive theory that was only just emerging. And the fact that we have inherited these expressive ideas makes it even harder for us to see other ways of thinking about poetry in the period. Though minimal attention has been paid to White's own poetry or attitude toward poets, the scholars who have explored these issues mostly assume a Romantic understanding. Stuart Peterfreund notes, "Poetry for White is the record of a given poet's affective response to nature as experienced by means of passive observation," a "vehicle for remarking and responding affectively" to nature.[35] Richard Mabey notes a tendency to assume that White just poured out words "from his heart" – his work "not so much the product of intelligence and hard work as of a fortunate gift, as singing is to the bird." Mabey rejects these associations in recovering White's work as a naturalist, but – tellingly – not for his poetry. For White, he says, poetry acted as a "discreet escape valve" for emotions, and feelings of "loneliness and desolation" are expressed in descriptions of lonely landscapes.[36] Poetry as "affective response" or "escape valve" for feeling: These are Romantic understandings. But Mabey himself inadvertently highlights a mismatch between these assumptions and White's poetry, noting that a poem that White wrote during a brutal winter "reveals no more about his feelings than that he was distressed enough by the weather to write *something* in verse."[37] Even noticing that the poem does not express feelings in the ways he expects, Mabey doubles down on a statement that the purpose of writing the poem must have been to express such feelings.

Must it have been? In "The Naturalist's Summer-Evening Walk," a poem featured in *Natural History*, White does write four rather conventional lines (which themselves seem to echo James Thomson's *The Seasons*) about an "affective response" to nature. The poem's other forty lines, however, focus on describing nature in particular detail; it is anachronistic to center expressivity here. Moreover, in the mid-1770s, White wrote two intriguing letters to his nephew Samuel Barker, laying out his understanding of English prosody and poetics.[38] These letters say almost nothing about expressive subjectivity, and very little about poems we would consider lyric. Instead, White praised "just description and fine moral reflections" and cited epics and georgics, Thomson, Pope, Dryden, and John Milton.[39] Above all, White wrote at length about poetry as a technical craft that involves work with the materiality of language, with recalcitrant syllables that need to be arranged carefully. He discussed pauses and diction; he commented on alliteration and rhyme.

Significantly, he used echoes to think about the nature of English poetry. In his second prosody letter, White drew on Pope's famous dictum as he praised "the power that masterly writers possess of adapting their numbers to their subject, or rendering the sound 'an echo to the sense.'"[40] When White wrote in 1775, however, the dictum was controversial, as Samuel Johnson had famously critiqued Pope's passage and argued that such sound–sense relations are often only the product of an eager reader's "imagination."[41] In his letter to Barker, White showed that he knew this critique – "you must remember that fanciful commentators have over-refined on this power, and have found numberless beauties of this kind which the authors neither perceived nor intended" – before insisting, *contra* Johnson, that English nonetheless "is very capable of being conducted to this perfection."[42] White's choice, in the letter, of the "finest instance" of English numbers also puts him in a tradition of echo poetics. Eighteenth-century commentators often thought about how sound enacts sense in passages explicitly featuring echoes. Even the sound-sense skeptic Dr. Johnson allowed that "Milton has very happily imitated the repetitions of an echo," and prosodists dwelled on other echoing sounds in Milton.[43] In this context, it is intriguing that White chose to praise "old John Dryden's translation of a simile" from Virgil – a passage that, in

Dryden's hands, emphasizes sound. The bird has "sounding Wings," and, as she moves to flight, "The Cavern rings with clatt'ring."[44] Sound should seem an "echo to the sense," and descriptions of echoing sounds were important places for poets to self-consciously work with word sounds.

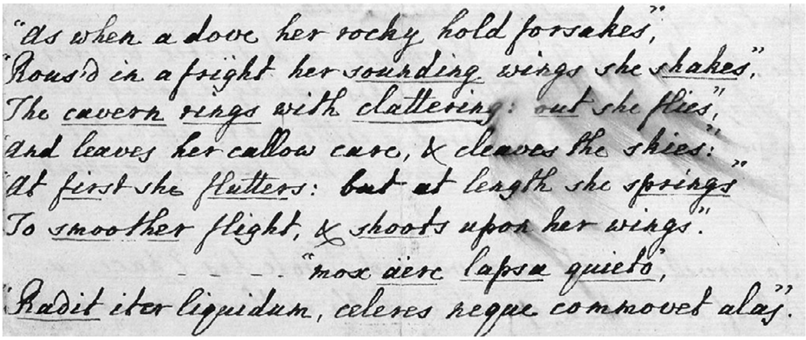
White quoted and discussed these lines from Dryden twice – in the prosody letter to Barker and again in *Natural History*, where he praised Virgil for depicting the bird "in such engaging numbers" and Dryden for "render[ing]" this "so happily in our language" (*Natural History*, 113–14). In both places, however, White incorrectly transcribed certain details of the lines. And rather astonishingly, some of the most marked prosodic effects in the lines transcribed, some of the features that make them most effectively re-sound the bird's actions, are not in Dryden's original. They are actually produced by the *mis*transcriptions. In what follows, I trace the origins and contexts (deliberate or accidental, individual or collective) of these mistranscriptions in order to understand how White thought about poetry and echoes, how he heard poetry in the 1770s and 1780s.

Compare (1) Dryden's original, from the 1697 first edition of his Virgil translation, with (2) its appearance in the 1789 first edition of White's *Natural History*:

(1)
As when the Dove her Rocky Hold forsakes,
Rowz'd in a Fright, her sounding Wings she shakes
The Cavern rings with clatt'ring; out she flies,
And leaves her Callow Care, and cleaves the Skies;
At first she flutters; but at length she springs,
To smoother flight, and shoots upon her Wings:[45]

(2)
As when a dove her rocky hold forsakes,
Rous'd, in a fright her sounding wings she shakes;
The cavern rings with clattering:– out she flies,
And leaves her callow care, and cleaves the skies:
At first she flutters:– but at length she springs
To smoother flight, and shoots upon her wings.
(*Natural History*, 114)

Some of the changes are in accordance with period trends in orthography: White, like later editions of Dryden's translation, removed capitalizations and modernized spelling. Other changes – unattested in any Dryden editions – are probably best explained by assuming that White was writing



"As when a dove her rocky hold forsakes,"
"Rous'd in a fright her sounding wings she shakes."
"The cavern rings with clattering: out she flies,"
"and leaves her callow care, & cleaves the skies:"
"At first she flutters: but at length she springs"
"To smoother flight, & shoots upon her wings".
- - - - . "mox aëre lapsa quieto,"
"Radit iter liquidum, celeres neque commovet alas".

Figure 7.2 Detail from letter from Gilbert White to Samuel Barker and Anne Barker, 30 March 1775. John Rylands Library, Manchester, Eng MS 1306/9. Courtesy of The John Rylands Library. Copyright The University of Manchester.

the lines from memory. In his letter to Barker, where the lines appear transcribed in some similar ways (Figure 7.2), he explained, "though I have not seen" the Dryden passage "for these 20 years, I shall never forget" it "on account of its singular elegance."[46] As I will show, these changes also illuminate changing assumptions and preferences about poetry – as well as something fundamental about its sound play.

I focus on three significant changes to how the passage sounds. Most strikingly, White added a syllable to Dryden's line. Dryden had "The Cavern rings with clatt'ring" – that last word contracted so as to be pronounced in two syllables. Yet every time White wrote these lines he put "clattering," *clat-ter-ing* as three syllables. In his prosody letter, White was emphatic that "John Dryden is to me much the greatest master of numbers of any of our English bards." But this change suggests White thought about English numbers differently from Dryden. And it gives me pause: How *did* Dryden or White understand the nature of the English line? Did they understand its meter as I was taught to understand it, at the turn into the twenty-first century? I think not – and the complexities introduced by this small syllable act as a warning about ways in which anachronisms can be baked into our most basic concepts.

An introductory literature textbook today would tell students that lines like Dryden's are accentual-syllabic, organized into feet of stressed and unstressed syllables. The pentameter line consists of five feet, and in iambic pentameter the dominant rhythm is that established by the iamb – a foot featuring an unstressed and then a stressed syllable (usually marked ˘ /). Poets, however, substitute different feet to create different rhythms: an iambic line might begin with a trochee (/ ˘), or somewhere in the middle introduce a trisyllabic foot like an anapest (˘ ˘ /). A related line about echoes was discussed by many prosodists in the eighteenth and nineteenth centuries: “And the shrill sounds ran ecchoing round the woods.”[47] According to the way students are taught prosody today, this line scans something like this:

˘ ˘ | / / | ˘ / | ˘ ˘ / | ˘ /
And the shrill sounds ran ecchoing round the woods.

This is five feet in a basically iambic pattern, with several meaningful substitutions. Most notably, the fourth foot contains a trisyllabic substitution, an anapest, that adds an eleventh syllable to the line. This prosodic system involving feet and substitutions is useful for showing students what is happening in historical poems. But, as Meredith Martin has compellingly shown, “our fixed attention to this established, foot-based scansion has obscured a vast body of writing about other possibilities for English prosody.”[48] It is certain, moreover, that many English writers and readers between Dryden and White did not think of the English line in this way. The material nature of English poetry was an open, contested question, and we should be on guard for anachronisms in our assumptions about how poems work.

Take the issue of trisyllabic substitutions, for instance. Most late seventeenth- and early eighteenth-century approaches to prosody did rule out – in theory at least – trisyllabic substitution, as when an iamb is replaced with an anapest (“ran ech | **o-ing round** |”). To understand why, we have to appreciate the extent to which ideas about English prosody were in flux in the period. English iambic pentameter as we know it can be traced back to the metrical practice of Geoffrey Chaucer. Eric Weiskott points out, however, that there is “a constitutive gap between the practice and theory of verse,” and in Chaucer’s wake his lines were understood and imitated in different ways: Did they involve merely a “count of ten syllables” or “the alternation of metrically unstressed and metrically stressed syllables”?[49] Paul Fussell’s magisterial *Theory of Prosody in Eighteenth-Century England* – still the best guide to the period between Dryden and White – shows that many took the former tack, denying that feet existed in English verse.[50] The period's most influential prosody manual, Edward Bysshe's *The Art of English Poetry* (1702), declared: "The Structure of our Verses . . . consists in a certain Number of Syllables; and not in feet compos'd of long and short Syllables, as the Verses of the Greeks and Romans."[51] The language of feet, iambs, trochees, and such is borrowed from classical verse, where they involve quantity. But, as period writers recognized, English does not function like Latin, with long syllables supposedly double the duration of short ones. Thus writers like Bysshe understood English prosody as more like purely syllabist French prosody – based on numbers of syllables alone, with no regard to long or short, stressed or unstressed syllables. What we call pentameter was the "heroic" line, and it consisted of ten syllables, period. Others proceeded from a similarly fixed sense of the ten syllable line, though allowed that lines also involve alternating stresses, or accents, or tones, or even quantities – the precise nature of the emphasis was a recurring question for prosodists.[52] Johnson's 1755 *Dictionary* famously summed up this approach to syllabic and stress regularity. Writing heroic verse required "the arrangement of a certain number of syllables according to certain laws": for instance, "the accents are to be placed on even syllables," and in general lines are "more harmonious, as this rule is more strictly observed."[53] For both of these approaches, though, trisyllabic substitution made for "bad numbers" – eleven syllables where there should only be ten. An extra syllable is extremely noticeable and problematic if the line is defined in terms of fixed ten syllables.

Dryden's poetic practice is telling, in this context. Unlike some others in the period, Dryden did allow for feet, though his understanding of these was not identical to ours.[54] He was quite clear, though, that trisyllabic substitutions are to be avoided: The main "rule" in heroic verse is that the feet should "be disylables; whether *Spondee*, *Trochee*, or *Iambique*, it matters not" – just not trisyllables.[55] One powerful strategy for avoiding this in practice was the poetic contraction, which was indebted to classical rules of elision. As Bysshe explained, some syllables must be "cut off" to avoid an "ill-Gaping," called "*Hiatus*," when "a Word ended in a Vowel, and the next began by one."[56] Thus, on the same page of the *Aeneid* translation, Dryden had "th'unwieldy" instead of "the unwieldy." Bysshe noted, too, that "nothing can be of more ease, or greater use to our Poets, than the retaining or cutting off a Syllable from a Verse, according as the measure of it requires." Many of Bysshe's examples involve syncope, where a sound is dropped in the middle of a word: as in "Am'rous" (two syllables) or "endeav'ring" (three).[57] On the same page of the *Aeneid*, Dryden has eleven syncopes, including "Rowz'd" and "clatt'ring."[58]

Fussell brings together an ingenious array of evidence suggesting that "the contractions indicated by apostrophes in the poetic texts were actually read in oral delivery, and were intended by the poets themselves to be so read."[59] For instance, the groundbreaking prosodist Samuel Say, writing in 1745, discussed this as a widespread practice. Say critiqued "the Greatest Part of Modern Readers" who, "accustom'd to a Smooth and Unvaried Uniformity of Numbers," "reject every Syllable which they imagine to be Supernumerary" (i.e., more than ten) and "lay a strong Accent on every Even Syllable." When faced even with that "shrill sounds" line, Say explained, such readers would scan and pronounce it as though it was perfectly regular:

˘ / ˘ / ˘ / ˘ / ˘ /
"And THE shrill Sounds ran ecch'ing" round the woods.[60]

This is a deeply odd take on the line, privileging regularity almost above sense, but one produced by influential ideas about regularity and contraction.[61] Fussell also helpfully recovers how this "Uniformity of Numbers" (which was never as "Unvaried" as critics alleged) was understood in the period: Late seventeenth- and early eighteenth-century poets aimed not to mimic "natural" speech – as poets today often do – but to improve upon it, "raising" "phonetic materials" so that they corresponded with an ideal pattern, "improv[ing] ... the irregularities of words in their state of nature."[62] This practice seems strange to us post-Romantic readers, but it makes good sense within a poetic system that privileged materiality, artifice, and craft – a system where harmony was associated with pattern, and poetic language was meant to call attention to itself.

Still, I want to urge a bit of caution about the limits of what we can know about pronunciation and a poet's prosodic intentions. In an edition of Dryden's poetry, Paul Hammond pauses over contractions in the manuscripts: Given Dryden's way with apostrophes, perhaps he "wanted syllables to be run together" – "slurred" – "rather than dropped completely," Hammond suggests?[63] But, I wonder, how could we today know how Dryden wanted contractions to be read?[64] Moreover, Say's comments remind us that the reader herself could "reject" syllables in pronunciation. And even Hammond acknowledges that "printed texts ... do not follow Dryden's contractions at all systematically." Are the contractions in printed texts fictions or instructions? And, in any case, do they belong to Dryden, or the compositor, or the printer, or someone else again?[65] There are limits to what we can know about how “ecchoing” sounded – in the 1690s, 1740s, or 1780s.

There is good evidence to suggest, though, that how they sounded did change over this period. Fussell shows that emerging Romantic prosody – more stably accentual and foot-based, open to trisyllabic substitutions – had important implications for contractions. Say, for instance, critiqued “ecch’ing” in order to offer his own scansion. He condemned the “Uniformity” of pronunciation for its “amazing Inattention” that “drop[s] the very Sounds, to which the whole Beauty of the Numbers is owing, and the happy Imitation of Nature itself.” It perverts these lines so that “they will neither be *shrill* nor *eccho* any longer.” Say himself suggested a reading of the line that preserved these sound effects:

˘ / — / / ˘ ˘ — ˘ —
And the shrill sounds ran ecchoing round the woods.[66]

He happily allowed a trisyllabic substitution, that extra syllable (“ran ech-o-ing round”) that has the sound mimic the thing described. In the decades following, prosodists became increasingly comfortable with the idea of trisyllabic substitutions, especially when they were made in attempts to adapt sound to sense. And people started un-contracting the syllables from earlier poets. As Fussell explains, “from the middle to the end of the eighteenth century, there was a great deal of confusion, in the minds of poets, readers, and prosodists alike, about the way the contractions should be dealt with.”[67] Readers often forgot or ignored the principles from which the early poetry proceeded, and guides for reading poetry insisted that every syllable should be pronounced. In 1775 (the year of White’s prosody letter), Thomas Sheridan recognized that, in the “shrill sounds” line, “advocates for the rule will say, that the vowel *o* in the word echoing ought to be struck by an apostrophe,” but Sheridan doubted that “any one” ever would have actually pronounced it thus: “Can any thing be more absurd than to omit a vowel in the writing, which cannot be omitted in the utterance?”[68] Moreover, Fussell demonstrates, in the second half of the eighteenth century readers “instinctively seeking a rhythmical variety which” earlier “poets had never intended, were simply filling in the carefully placed apostrophes” (a practice that continues in modern readings of these poems).[69] By the end of the eighteenth century, one prosodist could see very clearly what was happening. Peter Fogg wrote that some English versifiers had contracted words in their desire to “lay aside the trisyllabic feet” – “as when they write *recov’ry* for *recovery*.” Fogg pointed out, however, that now "it frequently happens . . . that this artificial mangling is disregarded by readers of taste, who thus strike out real beauties in reading, which yet the poet never meant."[70] Poems sound different in different moments, when read by different readers.

This is important context for Gilbert White's extra syllable. Dryden's "clatt'ring" is part of a ten-syllable line, which can be read as regular, with alternating emphases: "The **Cav**ern **rings** with **clatt**'ring; **out** she **flies**." White, however, un-contracted it: "The cavern rings with clattering:– out she flies." Though it is impossible to re-hear his pronunciation, I think it likely that White would have pronounced the extra syllable, for he pointedly used similar effects in his own poetry. In "The Naturalist's Summer-Evening Walk," White invited his reader "To hear the clamorous curlew call his mate" – "clam-or-ous" adding an extra syllable just as the curlew would be making noise (*Natural History*, 69). Even more revealingly, he wrote:

> While o'er the cliff th' awaken'd churn-owl hung
> Through the still gloom protracts his chattering song;
> (*Natural History*, 69)

"Chat-ter-ing" here is a lovely three syllables mimicking the owl's sounds, actually "protract[ing]" the owl's sound by an extra syllable. This couplet also helps us see that White could have written "chatt'ring" if he had wanted it pronounced thus. The first line contains three contractions marked by apostrophes that require a bit of pronunciation gymnastics to keep the line to ten syllables: "While o'er the cliff th' awaken'd churn-owl hung." (Also twice in the poem before he wrote "chattering" without a contraction, White had contracted an *-ing* form – "dark'ning" and "deep'ning" – and White elsewhere did this, like Dryden, before an *r*: "shelt'ring," "whimp'ring.")[71] The three syllables of "chattering" create a significant, fitting sound effect, and White's mistranscription of Dryden's "clattering" similarly amplified the resonance of the dove sound.

But, writing during a moment of prosodic transition, did White subscribe steadily to the foot prosody usually taught today? I am not sure. Though White's own eleven-syllable lines usually make sense as containing trisyllabic substitutions in foot prosody, his transcription of Dryden's line is awkward to scan thus:

˘ / | ˘ / | ˘ / | ˘ ˘ / | ˘ /
The cavern rings with clat**tering: - out** she flies

Here, "er-ing:– out" would have to be an anapest interrupted by the line's main pause; is this, thus scanned, the "finest instance" of English numbers?

White himself only ever emphasized the complexity of these issues: "It would be in vain to think of saying much here on the art of versification: instead of the narrow limits of a letter, such a subject would require a large volume."[72]

The other two significant sound changes in White's transcription have to do with the way the pauses are placed and thus with the passage's imitation of motion. Even skeptics like Dr. Johnson allowed that the cadence of a line could be manipulated "so as very strongly to represent . . . the modes of external motion."[73] In English, poets often manage motion effects by manipulating line endings. Where Dryden's line is end-stopped – "at length she springs, / To smoother flight," – White removed the punctuation. The resulting enjambment allowed the graceful motion to run over "smooth"-ly, as it were, into a line describing the flight: "at length she springs / To smoother flight, and shoots upon her wings." White seems to have appreciated this enjambment particularly, for he imitated it repeatedly in his own poetry. Though most of the forty-four lines of "The Naturalist's Summer-Evening Walk" are end-stopped, a full five of the seven enjambed lines dramatize bird or insect motion. For instance, White had the reader "mark the swift in rapid giddy ring / Dash round the steeple, unsubdu'd of wing" (*Natural History*, 69). Birds fly, exuberant, right through boundaries of the line ending.

Finally, White's version moved the comma in the second line: Where Dryden's translation had "Rowz'd in a Fright," *Natural History* read, "Rous'd, in a Fright." White's prosodic comments on the nature of the English line help us understand this change. He explained that each English line has one pause, and he advised his nephew to use the central pause of a line to create effects of variety: "The great grace of poetry consists in a perpetual variation of your cadences: if possible no two lines following ought to have their pause at the same feet."[74] Much of Dryden's passage features such variation:

> As when the Dove || her Rocky Hold forsakes,
> Rowz'd in a Fright, || her sounding Wings she shakes
> The Cavern rings with clatt'ring; || out she flies,
> And leaves her Callow Care, || and cleaves the Skies;
> At first she flutters; || but at length she springs,
> To smoother flight, || and shoots upon her Wings:

As marked, the third line has its break after seven syllables, the fourth line after six, the fifth line after five, and sixth line after four. Arguably, though, Dryden's first two lines do have the pause at the same place, after four syllables. There is a real parallelism here, underscored by the repetition of "her" and the similarity of sentence structures in the second half of each line. White's transcription, however, added more "variation" to the passage with a very unusual, almost Miltonic pause after only one syllable: "Rous'd, || in a fright her sounding wings she shakes." This moved pause makes the first and second lines sound different. It also emphasizes the abrupt surprise experienced by the bird when "Rous'd," slamming emphasis onto that surprise and distinguishing it from the bird's reaction, which takes longer to unfold over the course of the line than the cause that provoked it. Again White used related effects in his poetry. In fact, "The Naturalist's Summer-Evening Walk" combined enjambment with an early pause to enact the way a swallow lingers, "Belated," of an evening: "see the swallow sweep the dark'ning plain / Belated, to support her infant train" (*Natural History*, 69).

How exactly did the changes to Dryden's verse happen? White's faulty memory and personal tastes played a role, but we should also consider the many agencies that contribute to how a poem sounds. White could have found later Dryden translations with modernized capitalizations and even an enjambment before "To smoother flights"; this couplet seemed to many later readers to work better enjambed. Further, though the comma after "Rous'd" appears in the printed *Natural History*, both White's manuscript and his handwritten letter to his nephew (Figure 7.2) give no comma in that line, so the reader would determine their own pause.[75] White's prosody provides a compelling explanation for the logic behind an early pause, but this one may not be his: Did the compositor or printer add it? What happened in the print process?

These changes also show the influence of changing poetic tastes and understandings. If the early eighteenth century made art by working the materials of speech into harmonious patterns – only ten syllables per line, usually with a pause somewhere about the middle, lines rhymed in pairs, each line and each couplet end-stopped with punctuation – later writers increasingly valorized transgression of these constraints, using different choices in different lines.[76] What makes a poet was a "master of numbers" (to use White's phrase)? Earlier, mastery involved bringing lines as close as possible to an almost mathematical pattern. By White's moment, however, Dryden was a "master of numbers" because his poetry is full of "perpetual variation," "finely adapted to the sense."[77] *Natural History*'s mistranscriptions reflect these changes. One representative prosodist, William Belsham, publishing in the same year as *Natural History*, argued that the

English couplet "is capable of . . . a very great diversity in its pauses," and that good poets "indulge[]" themselves "in the liberty of running one couplet into another," which "add[s] wonderfully to the spirit, freedom, and energy." He continued to make what was becoming a common move by the end of the century, preferring Dryden (who sometimes "indulges" in "liberty") over Pope (who is more "polished and correct" but "adher[es] too closely to the rule").[78] White made a similar move in his prosody letters, preferring Dryden's "noble liberty" in rhyming to Pope's "over exactness."[79] White's very preference for Dryden reflects the new importance of "variation" and "liberty" in prosodic thinking of the period.

Finally, there is the vexed issue of pronunciation. Say stated that some readers just "reject" syllables, and Sheridan decried the state of things when people "omit a vowel in the writing, which cannot be omitted in the utterance." There are other questions about pronunciation too. For instance, in his letter White underlined nine words in this passage, including the two in the "Rous'd" line – presumably to denote italics, which in turn act as a prompt to emphatic pronunciation: how complicated the "sounding" is here! This underscores something fundamental about poetic sound: Many agencies shape a poem's appearance on the page, and its printed sound shapes must necessarily be reenacted in the mind or mouth of a reader. There is a way in which every reading of a poem is itself an imperfect echo, not of the sense of the poem but of necessarily inaccessible word-sounds first sensed by their author. Indeed, echo is an apt figure for the ways in which author, poem, reader, and more all help shape a poem's sound, the boundaries between these overlapping agencies blurring. Such ontological blurring was encouraged by period linguistic usage. *Echo could echo echoes*, and we have also glimpsed it in White's Latin echoes, caused both by his Virgil-screaming but also the hop-kiln and the surrounding landscape.[80]

What was poetry for Gilbert White? If "The Naturalist's Summer-Evening Walk" offers only brief, depersonalized feelings, its descriptions of nature use the material resources of language to mimic the sensory properties and behaviors of natural phenomena: swifts "in rapid giddy ring / Dash[ing] round the steeple," "Belated" swallows, and owls' "chattering song." And when White sat down to write about poetry for his nephew, he wrote little about imagination and feelings but a lot about the craft of working with material syllables. Syllables must be counted, pauses placed, edges of lines and sentences arranged in relation to one another, sounds knit together across lines. In King's Field, White assumed that Latin poetry was language with an especially precise material organization and that prosody offered useful ways of discussing language's materiality; here he emphasized the ways in which English verse, too, offered up language at its most material. He thought about the word-stuff of English poetry in relation to world-stuff, using the resources of the one to re-sound the other.

It might be tempting to understand White as holding onto a traditional, backward-looking "mirror" approach to poetry, even as new expressive "lamp" understandings emerged. There is some truth to this, but it is not quite so simple. Stephanie Weiner has demonstrated that related energies are central to one tradition of the Romantic and post-Romantic lyric. John Clare (who admired White) and the twentieth-century poets whom Clare in turn influenced offer "a maximal assertion of mimetic fidelity" that actually "foreground[s] the linguistic and formal medium of poetry." Weiner argues that, though Clare's evocative descriptions work through a distinctively lyric dialectic between mind and world, scholars have often struggled to place him because they operate from an often impoverished understanding of the Romantic lyric itself, emphasizing only one half of its dialectic, "imagination, transcendence, and a subjective union with the world."[81] (Mabey's emphasis on feelings is a more reductive take.) Instead, it is useful to remember that what Weiner calls "Clare's lyric" shares with White's not-lyric a fascination with how poets use their materials – words – to capture something of our sensory experience of the world. Weiner quotes Attridge, who suggests that these effects activate what is "a characteristic response associated with the reading of poetry" – right across perhaps too-tidy divides of "lamp" and "mirror," English and Latin, lyric and not-lyric: "a feeling of intensified referentiality combined with (and inseparable from) a heightened awareness of the aural qualities of language."[82]

Reverberating?

Mark M. Smith argues that echoes are apt figures with which to think about the historicity and irretrievability of sound, as well as the importance of our own positionality in experiencing it. For his part, participating in a rich tradition of poetic thinking about echoes, Gilbert White thought about how echoes demonstrate the close connections between words and the world. Syllables are material, and they bounce around material landscapes. They can also be arranged so that they share meaningful properties with material things: onomatopoeia-sounds but also qualities (heavy, rough) and rhythms. A poem features a particular kind of word-things, whose inaccessible original sounds constantly echo, imprecisely, in the mouths and minds of readers. Like echoes, poetic sounds are made possible by multiple blurred agencies. The history of poetics, then, has at least this to offer to sound studies: Word-sounds are themselves corporeal phenomena, and poetic language can – complicatedly – capture something of other sounds.

My reading of White's echoes, moreover, highlights the ways in which assumptions baked into our category of "poetry" – that it is not science, that it is an unlikely instrument for measurements, that it has something to do with expressive subjectivity, that in English it involves feet and substitutions – can obscure what and how people heard. We should be wary of using understandings of lyric forged by Romantic poets, and anachronistically instituted as central to all poetry, to make sense of how and why someone like White engaged it. We should be wary of assuming even something as basic as how many syllables people of the past heard in particular lines. We can, however, try to recover their categories: What did "poetry" mean for them? How did it work, and how did this understanding impact their experience of sound?

In closing, I want to suggest that the categories through which we apprehend sounds have lively, fraught implications even beyond what we hear. "Poetry" is complexly linked up with ideas about nation, nature, and humanity itself. Consider the loaded language of White's prosodic writings. Triplets "add[]" a "freedom to your expressions," and Dryden practiced "that noble liberty":[83] These words could not but have carried political resonances when White wrote them in 1775, in the run-up to the American Revolution. And think of White, delighted at hearing his English landscape returning those classical Latin syllables, nature itself seeming to confirm the ideological biases of his neoclassicism.

Understandings of poetry also crucially raise questions about what it means to be human – and not only in ways that turn on a lyric expressive subjectivity. White's material poetics resonate with Enlightenment philosophy of language, which often started from an insistence that words are a kind of thing. But if some of this philosophy made language the exclusive domain of humans, White instead thought constantly about the "conversation," "notes and language" of birds (*Natural History*, 240). Weiner's reading of Clare is again helpful. Romantic poetry often rendered the difference between sight and sound as one between rationality and emotion, but we should remember what "any ornithologist knows": Serious study of birds "involves listening: a birder can identify a bird by its call or song, a true expert merely by the sound of its wings in flight."[84] Bird sound was central to both White's poetry and his natural history. In both, he used the resources of human linguistic materiality to capture something of what birds sound like: Land-rails say "crex crex," he writes in *Natural History*, while the grasshopper lark is more "sibilous" (*Natural History*, 116). Ravens have both a "loud croak" and "a deep and solemn note" that – like Tityrus's song – "makes the wood to echo" (*Natural History*, 241). Language is not the exclusive preserve of humans here, and poetry's association with birdsong has less to do with instinctive emotive expression than with strategic use of vocal tracts to articulate and communicate.

Just as the sound of echoes is impacted by listeners themselves, White's understanding of poetry was impacted by his understanding of himself, his language, and his place in a material world. Echoes are figures, too, for the ways in which our bodies, our landscapes, our words, and our ideas necessarily shape our experience of sound.

Notes

1 Mark M. Smith, "Echo," in *Keywords in Sound*, ed. David Novak and Matt Sakakeeny (Durham, NC: Duke University Press, 2015), 55–64, at 55.

2 Ibid., 56.

3 Mark M. Smith, "Echoes in Print: Method and Causation in Aural History," *Journal of the Historical Society* 2.3–4 (2002): 319.

4 Smith, "Echo," 62.

5 John Hollander, *The Figure of Echo: A Mode of Allusion in Milton and After* (Berkeley and Los Angeles: University of California Press, 1981), 21.

6 Ibid., 9. Hollander cites Ausonius.

7 Alexander Pope, *Essay on Criticism*, in *The Poems of Alexander Pope*, vol. 1, ed. E. Audra and Aubrey Williams (London: Methuen, 1961), 195–326, line 365. See my "The Matter of Language: or, What Does 'The *Sound* Must Seem an *Eccho* to the *Sense*' Mean?," *ELH* 87.1 (2020): 39–64.

8 Smith, "Echoes in Print," 320–21. See also Bruce R. Smith, "How Sound Is Sound History? A Response to Mark Smith," *Journal of the Historical Society* 2.3–4 (2002): 308, 312.

9 See "Historical Poetics," www.historicalpoetics.com/about/.

10 See Meredith Martin, *The Rise and Fall of Meter: Poetry and English National Culture, 1860–1930* (Princeton, NJ: Princeton University Press, 2012); Meredith Martin et al., Princeton Prosody Archive, https://prosody.princeton.edu/; and Yopie Prins, "Victorian Meters," in *The Cambridge Companion to Victorian Poetry*, ed. Joseph Bristow (Cambridge: Cambridge University Press, 2000), 89–113.

11 Gilbert White, *The Natural History of Selborne* (London, 1789), 144. All other references to this work will be parenthetical, by page number.

12 Virginia Woolf, "White's Selborne," *The New Statesman and Nation*, September 30, 1939, 460.

13 Robert Hardy, "Gilbert White and the Natural History of Vergilian Echoes," *Classical World* 95.2 (2002): 163–69.

14 Noah Heringman, "Introduction: The Commerce of Literature and Natural History," in *Romantic Science: The Literary Forms of Natural History* (Albany: State University of New York Press, 2003), 7. On the disciplines, see Clifford Siskin, *The Work of Writing: Literature and Social Change in Britain, 1700–1830* (Baltimore: Johns Hopkins University Press, 1999) and Joseph Drury, "Literature and Science in Enlightenment Britain: New Directions," *Literature Compass* 14.6 (2017).

15 Some of this material about Plot's echo experiment first appeared as a work-in-progress blog, "The Science of Prosody, circa 1677," in "Prosody: Alternative Histories," ed. Eric Weiskott and Natalie Gerber, *Arcade: Literature, the Humanities, & the World*, December 2018, Stanford University, https://arcade.stanford.edu/content/science-prosody-circa-1677. Thanks to Eric and Natalie for helpful feedback.

16 Robert Plot, *The Natural History of Oxford-Shire* (Oxford, 1677), 7–10.

17 William Derham, "Experimenta & Observationes de Soni Motu," *Philosophical Transactions* 313 (1708): 2–35; trans. as "Experiments and Observations on Sound," in *Memoirs of the Royal Society*, vol. 5 (London, 1740), 75–93.

18 White does not give the exact distance in feet, but he offers enough numbers for a reader to work it out.

19 Plot, *Oxford-Shire*, 11–12.

20 Ibid., 7, quoting from Ovid, *Metamorphoses*, 3.357–58, trans. A. S. Kline.

21 John Brightland, *A Grammar of the English Tongue, with Notes*, 2nd ed. (London, 1712), 131.

22 Joshua Swidzinski, "Poetic Numbers: Measurement and the Formation of Literary Criticism in Enlightenment England" (Ph.D. dissertation, Columbia University, 2015), 24. I want to thank Joshua more generally for helping me think through many aspects of eighteenth-century prosodic thought.

23 Ephraim Chambers, *Cyclopaedia*, 2 vols. (London, 1728), s.v. "prosody."

24 Ibid., s.v. "numbers."

25 Plot, *Oxford-Shire*, 11.

26 John Morton, *The Natural History of Northampton-Shire* (London, 1712), 358.

27 Derham, "Experimenta"; I quote from the eighteenth-century translation in *Memoirs of the Royal Society*, 92–93.

28 Virgil, *Aeneid*, 3.658.

29 *Oxford English Dictionary*, s.v. "heavy."

30 Samuel Johnson, *A Dictionary of the English Language* (London, 1755), vol. 1, s.v. "embarrass."

31 Samuel Say, *Poems on Several Occasions: and Two Critical Essays* (London, 1745), 107.

32 Derek Attridge, *Well-Weighed Syllables: Elizabethan Verse in Classical Metres* (Cambridge: Cambridge University Press, 1974), 76.

33 See M. H. Abrams, *The Mirror and the Lamp: Romantic Theory and the Critical Tradition* (Oxford: Oxford University Press, 1971).

34 Virginia Jackson and Yopie Prins, *The Lyric Theory Reader* (Baltimore: Johns Hopkins University Press, 2014), 160, 7. See also Virginia Jackson, "Lyric," in *Princeton Encyclopedia of Poetry and Poetics*, ed. Roland Greene et al., 4th ed. (Princeton, NJ: Princeton University Press, 2012), 826–34.

35 Stuart Peterfreund, "Clare, White, and the Modalities of Mediation," *The Wordsworth Circle* 27.3 (1996): 147.

36 Richard Mabey, *Gilbert White: A Biography of the Author of* The Natural History of Selborne (Charlottesville: University of Virginia Press, 1986), 8, 93, 96.

37 Ibid., 192.

38 Gilbert White, letters to Samuel Barker, November 3, 1774 and March 30, 1775, reprinted in *The Natural History and Antiquities of Selborne*, ed. Thomas Bell, 2 vols. (London, 1877), vol. 2, 105–7, 110–12.

39 White, letter to Barker, March 30, 1775, 112.

40 I quote directly from the letter manuscript here, for White is interestingly, unusually emphatic: Gilbert White to Samuel Barker and Anne Barker, March 30, 1775, The John Rylands Library, Manchester, Eng MS 1306/9.

41 Samuel Johnson, *Rambler* 92, in *The Works of Samuel Johnson*, vol. 4, ed. W. J. Bate and A. B. Strauss (New Haven, CT: Yale University Press, 1969), 122.

42 White, letter to Barker, March 30, 1775, 110. Dr. Johnson argued that Pope borrows his beauties from Vida's Latin, but transplanted it into English, "a soil less adapted to its nature, and less favorable to its increase" (*Rambler* 92, 129).

43 Johnson, *Rambler* 94, in *The Works of Samuel Johnson*, vol. 4, 140. He quotes *Paradise Lost*, 2.787–89. See also Hollander, *The Figure of Echo*.

44 Virgil, *Aeneid*, 5.213–17; John Dryden, trans. *The Works of Virgil* (London, 1697), 335, lines 277–78. Interestingly, Dryden adds the sound thematics to a passage that, for Virgil, focuses on mimicking motion.

45 Dryden, trans., *The Works of Virgil*, 335, lines 276–81.

46 White, letter to Barker, March 30, 1775, 111.

47 In the nineteenth century, this line was credited to Milton, but its actual source is unclear.

48 Martin, *The Rise and Fall of Meter*, 5.

49 Eric Weiskott, "Before Prosody: Early English Poetics in Practice and Theory," *MLQ* 77.4 (2016): 476; Eric Weiskott, *Meter and Modernity in English Verse, 1350–1650* (Philadelphia: University of Pennsylvania Press, 2020), 184. See also O. B. Hardison, *Prosody and Purpose in the English Renaissance* (Baltimore: Johns Hopkins University Press, 1989).

50 Paul Fussell, *Theory of Prosody in Eighteenth-Century England* (New London, CT: Connecticut College, 1954).

51 Edward Bysshe, *The Art of English Poetry* (London, 1702), 1.

52 Richard Bradford, *Augustan Measures: Restoration and Eighteenth-Century Writings on Prosody and Metre* (Farnham: Ashgate, 2002), chapter 2.

53 Johnson, *Dictionary*, s.v. "Prosody."

54 See Bradford, *Augustan Measures*, 17; and R. D. Jameson, "Notes on Dryden's Lost Prosodia," *Modern Philology* 20.3 (1923): 241–53.

55 John Dryden, *Of Dramatick Poesie, an Essay* (London, 1668), 63.

56 Bysshe, *The Art of English Poetry*, 11.

57 Ibid., 16; the examples are given over a discussion of several pages, 11–17.

58 Dryden, trans., *The Works of Virgil*, 335.

59 Fussell, *Theory of Prosody*, 87 and chapter 3 generally.

60 Say, *Poems*, 130–31. Say only partially scanned this line, and my scansion here is meant to recapture the reading of the line Say critiqued.

61 Note that the awkward "ecch'ing" appeared, printed thus, in other eighteenth-century poems.

62 Fussell, *Theory of Prosody*, 76.

63 Paul Hammond, *The Poems of John Dryden*, vol. 1: *1649–1681* (Milton Park, Abingdon: Routledge, 1995), xix.

64 On Dryden's own (odd) reading habits, see Harold Love, "Roger L'Estrange's Criticism of Dryden's Elocution" *Notes & Queries* 48.4 (2001): 398–400.

65 I am grateful to Steven Zwicker for helping me think through this point.

66 Say, *Poems*, 131. This is not yet precisely our modern understanding of prosody, however; Say marks both accent (/) and quantity (–).

67 Fussell, *Theory of Prosody*, 87.

68 Thomas Sheridan, *Lectures on the Art of Reading* (London, 1775), vol. 2, 3.

69 Fussell, *Theory of Prosody*, 82.

70 Peter Fogg, *Elementa Anglicana; or, The Principles of English Grammar* (Stockport, 1796), vol. 2, 189–90, discussed in Fussell, *Theory of Prosody*, 86.

71 White, "A Harvest Scene," in *Natural History*, ed. Bell, 503–4.

72 White, letter to Barker, March 30, 1775, 106.

73 Johnson, *Rambler* 94, 140.

74 White, letter to Barker, March 30, 1775, 106.

75 For the manuscript see Gilbert White, "Natural History of Selborne," digitized by Gilbert White and the Oates Collection, www.gilbertwhiteshouse.org.uk/manuscript/.

76 See Fussell, *Theory of Prosody*, chapters 4–5; Bradford, *Augustan Measures*, chapters 4–5; and Earl Wasserman, "The Return of the Enjambed Couplet," *ELH* 7.3 (1940): 239–52.

77 White, letter to Barker, March 30, 1775, 110.

78 William Belsham, "Remarks on English Versification," in *Essays, Philosophical, Historical, and Literary* (London, 1789), 226–27, 233, 229.

79 White, letter to Barker, March 30, 1775, 106.

80 For a more extended argument about echo as an apt metaphor for poetic sound, see my “The Matter of Language.”

81 Stephanie Weiner, *Clare’s Lyric: John Clare and Three Modern Poets* (Oxford: Oxford University Press, 2014), 2, 7.

82 Derek Attridge, “Language as Imitation: Jakobson, Joyce, and the Art of Onomatopoeia,” *MLN* 99.5 (1984): 119, quoted and discussed in Weiner, *Clare’s Lyric*, 40.

83 White, letter to Barker, March 30, 1775, 106.

84 Weiner, *Clare’s Lyric*, 30. White himself privileges sound knowledge as he laments “Frequent returns of deafness,” which, he fears, “half disqualify me for a naturalist” (ibid., 189).