

**‘The sound of the printed letter’:  
Orthography, Orthoepy, Print and the Naturalization of English Dictionaries**

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First appearing in 1701, John Jones’ *Practical Phonology* argues that the printed letter more accurately represents “correct” English pronunciation than a child’s innate capacity to learn phonemes. According to Ralph Emerson, writing at the turn of the twenty-first century, “few people would disagree” today (Emerson 265). Indeed, this belief has influenced some of the most prominent studies on English phonology. For instance in *The Sound Pattern of English*, Noam Chomsky and Morris Halle use the writings of four seventeenth- through nineteenth-century orthoepists to “trace the evolution of the pivotal rules of the modern English Vowel system” (Chomsky and Halle 249), proving that “English orthography ... comes remarkably close to being an optimal orthographic system for English” (Chomsky and Halle 49). Although critical of Chomsky and Halle’s “highly selective approach to evidence,” Joan Beal cites Thomas Spence’s *Grand Repository of the English Language* as “direct evidence” for eighteenth-century English pronunciation. In these studies, published writings on language, much of them prescriptive in nature, exist outside their social, political or technological context, providing data as reliable as the sound clips used to research modern English phonology.

Certainly the alphabet and speech share an intimate relationship. However, these studies fail to ask: how does the medium – not just writing, but *printed* orthography –

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<sup>1</sup> This paper is an excerpt from a longer work exploring the dictionaries of John Wilkins, Samuel Johnson, Thomas Sheridan and John Walker. The entire work is available on my website at <http://whitneyannetrettien.com/dictionaries>. Email: whitney.trettien@duke.edu.

shape the message of orthoepy? And furthermore, what leads John Jones, Ralph Emerson and the many linguists in the three centuries between to accept print as a natural, unmediated representation of sound?

Early language reference works and, in particular, dictionaries are not passive mirrors reflecting linguistic trends but are themselves media objects, circulating among speakers and writers of a language. Shaped, to some extent, by the material constraints of print, they propagate a mediated view of language, constructing social attitudes even while presenting them as the inevitable progress of civilized communication. The present paper explores this process of naturalization through a close reading of the texts and contexts surrounding John Wilkins' universal language project, itself a kind of proto-dictionary attempting to fix orthography and orthoepy *to* the order of the world *through* the medium of print. In doing so, it lays the foundation for the dictionaries of Nathan Bailey, Samuel Johnson, John Walker, and others who, for centuries after, used lexicography to synthesize speech and writing in orthographic standards, thereby rooting their practice in the affordances of the printed page.

Before turning to Wilkins, it is necessary to contextualize his project against the backdrop of Petrus Ramus and Francis Bacon, two philosophers whose work epitomizes the transition from manuscript to print culture. For over four hundred years, scholasticism dominated medieval universities, grounding education in the oral, dialogic tradition of the Socratics. The scholastic method centers around two forms of dialectical reasoning: *lectio*, the reading of a text with commentary, and *disputatio*, a formalized debate on

philosophical problems. Although handwritten texts play a central role in both *lectio* and *disputatio*, the boundaries of a written document are permeable in the scholastic tradition, pervious to additions and alterations. Annotations occupy the margins of manuscripts; passages from other works infiltrate copies; and, in a society short on the materials and skills requisite for handwritten production, lines from a palimpsest compete for space with later creations. To borrow Jacques Derrida's term, the medieval manuscript is an "open text" – not a "finished corpus of writing, some content enclosed in a book or its margins, but a differential network, a fabric of traces referring endlessly to something other than itself, to other differential traces" (Derrida 84). Contra the modern disjunction between written and spoken language (often characterized as a "natural" outcome of the invention of writing), this medieval "open text" functions alongside speech, mirroring its reliance upon the interruptive, interrogative flow of dialogue. In other words, medieval scholastic manuscripts were both communal texts and, in turn, textual communities – open spaces for scholars to inscribe their interpretations or dispute others'.

The invention of moveable type fundamentally transformed the production and transmission of texts in the West. Whereas a scholastic manuscript served a dialectic community, print fortified the boundaries of the page, enclosing language inside a uniform, infinitely reproducible space. As a result, the static correspondence of isolated "texts," each occupying a branch on the tree of knowledge, began to replace the dynamic discourse of scholastic learning. One of the most influential philosophers in his own century (the sixteenth), Petrus Ramus stands at the rubicon of this transition: behind him trails the sixteenth-century scholastic tradition in which he was taught; ahead, a new

methodology centered around closed texts. From a historical perspective, his anti-Aristotelian reforms epitomize the impact of typography, casting a prototype of scholarship in the age of the printed book.

How, then, does Ramus change scholarship? First, challenging the Ciceronian model, Ramus argues for a divorce of logic from rhetoric; then he subdivides each discipline into two dichotomized categories that may be further subdivided until the chart exhausts all possibilities. In a Ramist table, then, knowledge does not circulate in an open “differential network” of “traces referring endlessly to something other than itself” but forms a rigid chart of epistemic units, or “corpuscles,” referring redundantly to their referent, and only their referent. Walter Ong famously describes Ramism as a type of “‘corpuscular epistemology,’ a one-to-one gross correspondence between concept, word and referent which never really g[ets] to the spoken word at all but t[akes] the printed text, not oral utterance, as the point of departure and the model for thought” (Ong *LO* 168; c.f. *RM* 203).

The textbook is Ramus’ lasting legacy to education – a harbinger of the massive sociocultural changes enacted in part through the new communications technology. Unlike handwriting or manuscript production, the printing press could rapidly reproduce identical copies of a ramified chart or scientific diagram – textual objects dubbed “immutable mobiles” by Latour – and the burgeoning publishing industry could, by the sixteenth century, distribute copies to universities across Europe relatively quickly. With its telescoped taxonomies, Ramus’ own logic textbook, *Dialectique*, published in 1555, exemplifies the new medium not only in its production but in its underlying “corpuscular

epistemology” which crystallizes knowledge into moveable parts. By 1600, a century of sweeping educational reforms in Europe had replaced the mnemonic devices of oral dialectic and the scholastic community with an academic machine, fed by these homogenized corpuscles of information.

Print technology and, indeed, any media are not deterministic, spurring only one cultural movement or school; rather, as Martin Heidegger famously argues, they construct a media environment, framing all language and images that circulate within it (Heidegger 4). Because Ramus focuses his work on the *studia humanitatis* – arts such as grammar, rhetoric and reformed schools of logic – modern scholars label him a humanist, one of the many teachers who turned to the classics with renewed interest during the Renaissance. Yet, even as the invention of moveable type enabled the anti-scholastic humanism of Ramus, it also played a significant role in the development of scientific empiricism, an *anti-humanist* movement led by Francis Bacon in the late sixteenth and early seventeenth centuries. Although in his own time Bacon positions himself in opposition to Ramus (whom he calls “that hide-out of ignorance, that pestilent book-worm, that begetter of handy manuals” (Bacon *MBT* 64)) the distance of several centuries sheds light on one of their common denominators: they both reflect different, though related, scholarly responses to the printed medium.

The humanists’ glorification of rhetoric worried Bacon, who argues that the art of eloquence corrupts words with emotions. He termed this linguistic imprecision the “Idols of the Market,” writing:

For men converse by means of language, but words are formed at the will of the generality, and there arises from a bad and unapt formation of words a wonderful

obstruction to the mind. Nor can the definitions and explanations with which learned men are wont to guard and protect themselves in some instances afford a complete remedy – words still manifestly force the understanding, throw everything into confusion, and lead mankind into vain and innumerable controversies and fallacies. (Bacon *NO* I.xliii, 320)

By contrast, a universal grammar ties language directly to its referent, fixing it to an objective reality. In the *Advancement of Learning*, Bacon divides grammar, the *vehiculum cogitationum*, conductor of thoughts, into two categories: literary and philosophical. While literary grammar suffices for speech, philosophical grammar is “subservient to philosophy” and thus must be “neither corrupted by any vulgar, depraved phrases, and customs of speech, nor vitiated by affection” (Bacon *AL* VI.1, 164). To render language a more useful tool for natural philosophy, Bacon proposes gathering together the most precise vocabulary and syntactic structures from the world’s tongues to construct “one grand model of language for justly expressing the sense of the mind, formed, like the Venus of Apelles, from the excellencies of several” (Bacon *AL* VI.1, 165). In this manner, Bacon argues, philosophy restores the unity of the original Adamic language through a linguistic pastiche, reversing the confusion of Babel – with a slight difference. Whereas Adam and Eve *spoke* God’s proto-language, Bacon’s philosophical language is explicitly *written*. As print assumes a greater role in scholarship, written language splits away from speech, growing into an autonomous mode of communication that, for Bacon, is a more accurate “conductor of thought” than speaking.

Therefore, although Ramus and Bacon champion opposing schools of thought – humanism and scientific empiricism – their plans to taxonomize knowledge in a God’s-eye-view chart both emerge from the matrix of new communications technology taking

root in sixteenth- and seventeenth-century Europe. As Ong points out, typography and, specifically, the printer's font becomes the "dialectical locus" of thought in Ramist logic – "a 'common' place from which can be pulled an unlimited number of printed pages, each blanketed with 'arguments'" that were "reduced to a visually apprehensible and spatially maneuverable form" (Ong *RM* 310). Thus, whereas in oral discourse myths and icons serve as cultural repositories, storing the scientific, religious and artistic knowledge of a society, with the advent of printing, the material mode of communication – the fonts, the matrices, the molds, the book – becomes a culture's magazine of information. Bacon also relates print to his project: "On waxen tablets you cannot write anything new until you rub out the old. With the mind it is not so; there you cannot rub out the old till you have written in the new" (Bacon *MBT* 72). In the seventeenth century, scholarship no longer produces incomplete chronicles of knowledge, as ephemeral as wax writing, but an indelible record, erasing nothing but only correcting knowledge through publication.

Enter John Wilkins, one of the founders of the Royal Society. First published in 1668, Wilkins' *Essay Toward a Real Character and a Philosophical Language* begins by classifying the entire known universe in a Ramist table of dichotomies. In these charts, taking up hundreds of pages in his *Essay*, forty major genera subdivide into 251 characteristic differences, from which Wilkins derives 2,030 paired species. Having thus categorized the universe, Wilkins outlines his system for Baconian philosophical grammar void of polysemy, metaphors, idioms and synonymy. Wilkins then maps his Ramist tables onto his Baconian natural grammar. A word's placement in the table is

linked orthographically to the placement of diacritics around a central symbol, and orthoepically to distinct syllables. Thus anything written or spoken in Wilkins's system, even unknown words, can be decoded by its visual appearance or pronunciation, then appropriately placed in the Ramist order of the universe.

Although Wilkins' grammatical and semantic machinery is complex, it produces only 2,030 primitives – not nearly enough to sustain philosophical or scientific communication. To expand the scope of his language, Wilkins devotes the final section of his *Essay* to a dictionary of 15,000 English terms. If his tables include the headword, the entry points to its genus, characteristic difference and species, thereby translating the English term into the philosophical language. However, if the tables do not directly represent the headword, the dictionary may point to a synonym or offer a periphrastic term. In some instances, Wilkins employs a system of transcendental particles, or special markings that indicate the characteristics of a primitive. For example, since a foal can be represented as 'young' + 'horse', placing a symbol for 'young' within or around the symbol for 'horse' conveys the same meaning. Transcendental particles may also indicate metaphorical usage, modifying a word such as 'Root' to mean 'Original'.

Ironically, although intended to render English more precise, these methods only amplify the imprecision in Wilkins' system, underscoring the impossibility of absolute synonymy, the absurdity of periphrasis and the confusion of particles. Natural language represents synergy, its whole greater than the sum of its constituent parts. Wilkins' artificial language, by contrast, is mechanical, crude, constrained by the rigid form of a printed table; thus it cannot achieve the ingenuity which the human linguistic faculty



manufactures on its own. Likewise, even as print standardizes written language so that spelling is “always fixed and determined” (Wilkins 15), pronunciation continues to drift farther from the standard that print constructs. Many (if not most) newly-coined terms were never spoken and therefore never heard; they existed only in print, which can preserve words for centuries after they have become colloquially obsolete. Similarly, words borrowed from other languages may retain that language’s spelling, attaching new sounds to English letters. Thus final *e*’s grow silent, the letter *y* takes the place of an *i* in Greek-derived English words, and speech syncopates syllables that are frozen in print.

Yet, despite its role in divorcing spoken and written language, print may also help reduce the incongruity between writing and pronunciation, acting as a preservative for written language while reducing pronunciation to a set of rules governed by orthography. As Wilkins believes, the printed word is but “the picture or image of speech,” and “ought to be adapted unto all the material circumstances of it” (Wilkins 355). Thus scholars must prioritize writing, inscribing speech with the standards of print. Echoing Bacon’s theories on language, Wilkins writes that the “principal design of this treatise” is a “real universal character, that should not signify words, but things and notions, and consequently might be legible by any nation in their own tongues” (Wilkins 13).

Wilkins achieves this end by tying both orthography and orthoepy to the universe outlined in his tables, guaranteeing that a word’s pronunciation never changes; for the very characteristics of the signified imbue the signifier, both in sound and letter. Wilkins writes in the dedicatory epistle to his dictionary, his system is “much to be preferred ... as things are better than words, as real knowledge is beyond elegancy of speech, as the

general good of mankind is beyond that of any particular country or nation.” In Wilkins’ system, then, language is not a medium through which thinkers convey ideas but is itself immediately representative of objects in the world. Thus the construction of a universal language and grammar naturalizes print in all communication as a gestalt technology comprising pronunciation, orthography, speakers, auditors and the known universe. Transcending its role as speech’s derivative in Wilkins’ system, the printed word establishes itself as standard, fixing language within its material limitations; paradoxically, though, doing so frees knowledge from the boundaries of the medium, implanting wisdom directly in the user’s mind. Put another way, the taxonomic disposition of print allows Wilkins to construct a system that erases the technological reality of taxonomies, rendering them transparent, “natural” representations of the world. By becoming competent in the universal language, readers do not simply forget the presence of the medium but understand the very essence of the objects represented, including their distinguishing characteristics, their relationship to other objects, and their unique place in the universe. As Wilkins writes at the beginning of his treatise, “supposing such a thing as is here proposed, could be well established, it would be the surest remedy that could be against the curse of the confusion [of Babel], by rendering all other languages and characters useless” (Wilkins 13).

Yet, even as it attempts to naturalize the print medium, a universal grammar can only come to fruition through the technology of print. From an economic perspective, standardizing and then disseminating such a language is impossible without the communications advancements brought about through the printing press; indeed, only

after the invention of the printing press did the idea of a universal language move from Biblical myth to attempted reality, allowing Wilkins to compile, collate and classify great piles of information. In fact, Wilkins' attempt to render print transparent inadvertently constructs a typographic empire of lists, charts, systems and taxonomies – a system so complex that, as Eco points out, “without constant double-checking against the tables, it is difficult to avoid misprints and misunderstandings” (Eco 249). Indeed, Wilkins mistakes ‘barley’ for ‘tulip’ (Eco 249), since in a philosophical language based on an affinity between genera it is actually quite easy to muddle members of similar species, which are phonetically and graphically similar.

For this and other reasons, Wilkins' philosophical language – or any philosophical language – has not and most likely will not ever come into widespread use. However, although Wilkins did not succeed in “fixing” English, the goals and direction of his project profoundly influenced later lexicographers. For example, his *Essay* is one of the first writings on language to utilize the properties of print, identified by Ramus and Bacon, to construct a uniform standard, delimiting a linguistic reality through a dictionary. In Wilkins's system, then, the printed book achieves its authoritative status as, in Jay David Bolter's words, “a technological reflection of the great chain of being, in which all of nature had its place in a subtle, but unalterable hierarchy” (Bolter 105). Like Narcissus falling in love with his own image, by taxonomizing nature Wilkins replaces the universe, his subject, with its technological reflection, substituting the hyperreal order of print's visual quantifications for the chaotic reality of the natural world. No longer a metaphor, Nature becomes, in Wilkins' system, a Book – a fixed arrangement of objects

transmitted across space and time.