

E-lex: science, technology, or a kind of in-between? Language as a framework for further research

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I am neither myself nor am I the other,
I am something in-between,
Pillar of the bridge of routine
Running from me towards the Other.
(Mário de Sá-Carneiro)

I have written this text, in my capacity as a student, for the “Digital Humanities” seminar of the PhD in Information Science of the Faculty of Arts and Humanities of the University of Coimbra, a discipline that I have chosen to include in my study plan as part of the doctoral degree in Philosophy I am currently pursuing at the same academic institution, particularly in the framework of the R&D Unit IEF - Institute for Philosophical Studies.

Unwrapping the question about e-lex

E-lex stands for electronic lexicography. Well, what is lexicography? Sure enough, it has to do with the activities of people who are lexicographers. Who has never yet heard near-unbelievable accounts of how productive some skilled lexicographers made it into the annals of history, as did the North American semiotician Charles S. Peirce, who defined roughly six thousand specialized terms and also served as a contributing editor for another ten thousand entries or so of the *Century Dictionary* (Hargraves 2019, 33)?

The world of lexicography shows signs of being rather intricate: authors write entries, editors may edit their entries, others may coordinate the interaction with or between authors and editors, while possibly also compiling the entries to be published, composing the layout of the publications or managing the web pages, designing, programming, preparing audio and video material, and always, of course, there may be those who make use of the dictionaries for studying, working or just for fun. . . It seems that this list could be endless.

It suffices to get started by thinking very cursorily of dictionaries. Dictionaries are like hats: there are plenty of them (and of lots of types). What, therefore, should be the way of thinking about dictionaries? The sky seems to be the limit. Either from a market angle or from the standpoint of communication, for instance, dictionaries can be regarded by their target audience (consumers, readers or users), and one can pose the question of whether they were compiled for a given group of people, be they native speakers of a particular language or foreigners learning it; those who master this or that field of expertise or lovers of the culture more generally; those who work in a certain industry; jazz enthusiasts; teenagers; elders; so on and so forth (you name it).

Dictionaries can be further discussed by asking how the work was put together, namely: what methods governed the development and completion of such or such lexicographical work? What tools were utilized? We can also look at dictionaries by asking ourselves how such a work was put together: what methods were employed to bring a lexicographic publishing venture to fruition? What tools were used? Which standards were followed in compiling or writing and editing the entries? How much investment of time and money was involved? But then again, what is lexicography all about? Lexicography is about the doing and the benefiting of the results of the work done by lexicographers.

A lexicographer's job to put together dictionaries, defining words, and perhaps reviewing and editing media and contents. It perhaps also to investigate meaning, language in particular, the history of the field of lexicography, its thematic objects, related disciplines, and inner growth and territorial dominions, as well as to come up with methodological advances, to worry about the design of the dictionaries, the ways of evaluating and making use of lexicographical works, the target readership or consumers (the latter may buy dictionaries without ever using them) and how they might be sold or made available. E-lex, in turn, can best be described as the lexicographical undertakings that are pursued or whose results are being exploited through the use of electronic devices.

Spotlight on eye-opening e-lex related matters

If we are to understand the subject of e-lex more fully, it is worth casting a careful eye on its evolution for a while, and then to render an educated opinion on the evolution of lexicography up to this very day, the age of e-lex. It is probably true, not only of philosophy, that whoever gets a firm grip on history will be able to roll out his or her talents across a whole range of frontiers (cf. Viola 2020, 18). Alas, no opportunity will be given here to pursue that end. For those who want to proceed to a more thorough insight into lexicography and find out what the road from lexicography to e-lex has been like: read a text, received in 2016, accepted in 2018 and published that same year by *Lexicography* (a journal of the Asian Association for Lexicography), which is an original text authored by Darío Metola Rodríguez.

Such a paper (Rodríguez 2018) may be of the utmost use in profiling, in a nutshell, the evolution from lexicography to e-lex. It should at least provide a reasonable starting point for absolute beginners by virtue of its succinctness and the use of examples that the reader may be able to access. Written by a former PhD candidate at the University of La Rioja in Spain, whose doctoral thesis he defended in 2015, the said paper is not quite exhaustive, yet it may prove helpful. This is so because, despite the fact that Rodríguez's text, just as his doctoral thesis, is focused on specific examples of dictionaries dealing with Old English, such examples are considered in the framework of the evolution over the years from lexicography to e-lex.

Just how feasible would it be to behold the wonders of e-lex with no comparison between it and the more typical marvels of a-lex? Sounds like an impossibility, to be sure, but neither is the purpose of this study to take a trip along the avenues of the wonders of e-lex. Should this be done, though, the above suggestion could be reiterated, perhaps followed along the lines of a text published in 2020 in the *International Journal of Lexicography* under Oxford University Press, authored by Reinhard Heuberger. In it, Heuberger examines the doors that electronic means are opening up as regards the production and usage of dictionaries, and looks at some instances of a- and e-lexicographic creations devoted entirely to the tongue in which the highly esteemed reader is presently in the act of reading.

The wonders of e-lex are to be met in both the words and the underlying premisses found in Heuberger's paper. Paying attention to the wonders of e-lex, construed with reference to the previously referred text (Heuberger 2020), should be enough to enable stakeholders (anyone interested) not only to grasp the basics of e-lex, but also to appreciate why e-lex differs from analog lexicography (or a-lex). The very first page, by way of illustrating this latter aspect, can already tell the reader that access to dictionaries in the realm of e-lex is not just a matter of using the dictionary but rather, more narrowly, of being able to gain or provide

access to the dictionaries, partly because of a business model that fosters cost-free services (see below).

The writer from the University of Innsbruck, Austria, observes that the leading publishers of monolingual English learner’s dictionaries are already offering free online versions (although in some cases only basic ones, as noted in *Ibid*, note 1) of their authoritative editions. This may imply that one of the wonders of e-lex is to be riding high in the forefront of the movement for open access, or else it would hardly be true that, even in the arena of commercial publishing houses, the “business model” that has become the standard has been that of “offering these internet dictionaries free of charge” (*Ibid*, 10). How curious does e-lex’s propensity for open access sound?

Given that even in the world of business, and even in a realm not renowned for its friendliness with regard to open access, such as that of the English language, it ultimately pays off in the end to ensure open access (as can be inferred from *Ibid* and Rodriguez 2018), something particularly exceptional needs to be noticed and explored in detail regarding the world of e-lex. This very exceptional something ought to be detected and thoroughly researched, not least to realize i) that all such something or value is not susceptible of being expanded into other areas, even if adapted to a greater or lesser extent; ii) that in the final analysis, all of that value is only relevant to the web-market of lexicography, as well as to the general domain of language sciences and technologies and all related areas such as those of language engineering or the computational sciences.

E-lex in the light of language

Admittedly, it remains unclear whether e-lex is, per se, in the realm of science or that of technology. A lexicographic “app” for Android, for instance: it is e-lex, but is it not a technological product? Or is it a scientific project? It is beyond doubt that e-lex is found in the domain of language, so this is the environment that is going to be explored here. Hopefully, once in this peculiar setting of language, we may throw the anchor of e-lex (or indeed of a-lex or of lexicography as a whole) so as to unearth a map pointing the way to the treasure chest containing the key to the question regarding the situation of e-lex in respect to science and technology, something that may be tackled in the course of subsequent investigations.

Language... Where else to start if not at its very origin? Rather than going all the way back to the Big Bang, it seems common sense that 21st century human beings are the consequence of a long evolution that dates back to their (*Homo sapiens*) now extinct ancestors. Here is an excellent starting point to understand language diachronically. Here was indeed an excellent starting point, albeit for an unusual circumstance. An unpretentious stumble upon *I Think I Am a Verb* (Sebeok 1986) led to finding, in the second chapter, an interesting rebuttal to the above all too intuitive consideration about the origin of language. This induced us to switch from leisure to work and to pay careful attention to a bit of all that Thomas Albert Sebeok wrote about language and its origin.

John Deely said, in “Semiotic entanglement”, that Thomas Sebeok was the very first thinker to have thoroughly established that linguistic communication only takes place in the realm of human experience, most notably in the territory of meaning-making and meaning-understanding human activities (Deely 2014: 24n20). Because our proposal consists of nothing but groping the grounds of language in a quest to find fertile soil for framing e-lex in a scientific/technological perspective, there is no point in not investing time reading Sebeok, for it will hopefully enable an understanding of the uniquely human element of e-lex, an activity that readily emerges as intimately bound up with verbal language.

To seek the origin of language in the communication systems of ancestral species is to rely on a claptrap that already has prompted “naive efforts” within the scientific community. These efforts have even entailed plans to obtain public funding to investigate alleged “language-like propensities in a few enslaved primates by claiming that they [the authors of the “naive efforts”] are thereby about to uncover the roots of language” (Sebeok 1986, 12-3). Sebeok also finds it nonsensical that the human “verbal code” is thought to

be an “evolutionary continuum with the multifold and diversiform nonverbal codes of the extinct hominoids, presumed to be still embodied in the extant great apes.” It seems that those who, throughout the course of recent centuries, have put forth research proposals on the origin of language in the sense alluded to above have, because of the highly speculative nature of such proposals, not been greeted with much sympathy by the majority of peers.

Verbal language is, therefore, human in origin, and so the birthplace of lexicography in a broad sense is humanity, for even if a dictionary of dinosaur grunts were to be produced, it would be produced by humans and for humans, or it would not be a dictionary at all, nor would humans be able to benefit from such a dino-lexicographic heritage. To better appreciate the question of the humanity/language relationship as posed by Sebeok, it can be noted that dogs have four legs, but when a dog is born with three legs or loses one (or is not able to use one) we do not claim that dogs do not have (or cannot use) four legs any longer, but that the three-legged dog is the unique or a rare exception. Nonverbal language is not something that only humans possess, but only humans express themselves in verbal language (or in terms of “grammar”, as referred to in *Ibid.*, 13), which does not mean that all humans use the latter generously (or at all, in the event of pathology).

When it comes to the understanding or technological developments for the understanding of English (to give just one example) it is a matter of what is proper only to human animals, which is verbal language. Anyone looking to find breeding ground for framing e-lex at the science/technology crossroads may well not be disappointed if he/she embarks on the journey with the confidence that he/she is navigating the seas of a “species-specific trait of *Homo sapiens*,” which is grammar or linguistic communication, and is thus in the field of the digital arts and humanities, which are themselves part of the world of e- or digital sciences. However, e-lex is not solely concerned with disinterested scientific research, which is why the question is raised about the situation of e-lex in relation to the field of technology. This last issue also deserves to be faced with a firm conviction, namely that there is no disgrace for e-lex in bearing the label of an existence partially aimed at satisfying the most immediate human needs, something that is more akin to technology.

How come there is no disgrace in it? Because, after all, e-lexicographic technological innovation is actually called for in order for humans to deal with the challenges posed by verbal language, which itself may be understood as a machine or device that seems strange or unnecessarily complicated, and often poorly designed or even dangerous, as Thomas Sebeok suggests (*Ibid.*, 16). Verbal language was itself developed by humans who could already communicate in non-verbal ways but who managed to devise adequate means to respond to communicational needs. The future is thus challenged: speaking of e-lex is to speak of science, of technology, or of something in-between?

References

- Deely, J. (2014). Semiotic entanglement: The concepts of environment, Umwelt, and Lebenswelt in semiotic perspective. *Semiotica*, 2014(199). <https://doi.org/10.1515/sem-2013-0085>
- Hargraves, O. (2019). The Century Dictionary Definitions of Charles Sanders Peirce. *Dictionaries: Journal of the Dictionary Society of North America*, 40(2), 31–53. <https://doi.org/10.1353/dic.2019.0012>
- Heuberger, R. (2020). Monolingual Online Dictionaries for Learners of English and the Opportunities of the Electronic Medium: A Critical Survey. *International Journal of Lexicography*, 33(4), 404–416. <https://doi.org/10.1093/ijl/ecaa018>
- Rodriguez, D. M. (2018). From traditional to electronic lexicography: the dictionaries of Old English. *Lexicography*, 4(2), 119–133. <https://doi.org/10.1007/s40607-018-0043-0>
- Sebeok, T. A. (1986). *I Think I Am a Verb: More Contributions to the Doctrine of Signs*. Boston, MA: Springer US. <https://doi.org/10.1007/978-1-4899-3490-1>

Viola, T. (2020). Peirce on the Uses of History. Berlin; Boston: Walter de Gruyter GmbH. <https://doi.org/10.1515/9783110651560>