

SIGN AND SILENCE: MATTERS OF LANGUAGE

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This story is about words. Not any kind of words, not these words we spontaneously think about when we think about language, words filled with conventional meanings accreted through history. It is instead about an apprehensible, coarse and absolutely useful word, uttered by some rude-looking individual whom we call ancestor...

The hominid encephalon only reached its final size about 250.000 years ago, but most of the attributes that we identify as genuinely human (technique, painting, religion, language...) appeared much more recently, *only* some 50.000 years ago. In biology, this is sometime called *Wallace's problem* (Ramachandran, 2000), after the Victorian naturalist who first formulated it, contradicting one of the founding principles of the then emerging natural selection theory. Indeed, Alfred R. Wallace laid out the paradox of a *delayed* surfacing of previously latent skills, of skills not being expressed or put into operation at the moment of their selection, when they should have been. During millennia, speech has followed this silent path, this long *unpronounced* discourse of nature that one day led to actual enunciation. The human mind reenacts this trajectory in simply no time, at every moment, as we speak, running its way from thought to word: traversing the various brain locations and stages, the conscious and the unconscious, the archetypal and the imaginary, individuality and collectivity. Noam Chomsky explains this qualitative leap in functional terms, as some sort of advantageous mutation that conferred human beings a new ability to categorize reality and interact with it, syntactically, in a generative manner (Chomsky, 2006: 176). What this doesn't explain, though, is the long incubation period, the extensive preparatory interval. A kind of awareness-raising process, a natural version of what the Greeks called *paraskeue*, a profound meditation preparing entrance into discourse (Foucault, 2005: 307). Some would argue that this preparatory interval did not depend on a single cause, but on multiple mutations, pressures and emendations, which would eventually allow oral expression. But these causes remain unrevealed.

We do not know what brings thought into motion, what ties action to potentiality, making change –*metabolé*– possible (Aristóteles, 2014: 303), and we ignore the extent to which these principles may be actually conceivable. But there is some evidence to be found in what we usually refer to as *time*, which provides an intriguing and unceasing phenomenological knowledge about the emergence of language and thought along the genetic evolution of life. For biological course leaves behind, quietly but invariably, a durable mark on our machinery, traceable in every statement and

in every behavior; each evolutionary milestone adds some information to our genetic track, and this is what time records: every attainment rephrases the primal neural architecture (Jackson, 1889) in a constant building of the mental space in which we cohabit.

Archaic language must have been, so to speak, rough and frugal. I guess it didn't arise entirely unexpectedly, as a sudden scream, directly out of the blue, but I'm sure it was then heard as if it were, before it spread around like wildfire. Any reader that delves into César Vallejo's *Trilce* (1922) understands that poets are contemporary descendants of the primitive speaker, climbing bare-handed towards the cavern's mouth (Vallejo, 1970). In a clinical context, whoever listens to the laborious neologisms of those referred to as the mentally-ill – if there could be such thing as an *ill mind*, (Vargas, 2011) – encounters territories where words pierce our soul, like the pick of pioneers.

We could say with Lamarck that, in some sense, *function creates the organ*, inducing its crystallization and grounding its materiality. It is important to note here that a function is always a *function-in-time*, vast spans of time during which it evolves between chance and necessity (Monod, 1972). In biological function, as in T.S. Elliot's *Burnt Norton* (Eliot, 1936), past, present and future are mixed up, and travel along a gradient of potentiality that faces the changing conditions of existence. Heraclitus, *the obscure*, states this in other words when – in the inspiring fragment XCIV – he declares that there is only one wisdom: to achieve the knowledge by which all things are governed (Gallero, 2009). And the laws of nature govern all, even though we might not have the models required to read their formulation.

Words are part of this lawful domain: they reside in Academies only temporarily, and should be taken instead as natural *things* with their own physiological cycles: they are born, grow up, even reproduce themselves and eventually die. At the beginning of the twentieth century, Joseph Vendryes, with great biological instinct, held that language simply comes out of life (1967). From where else? He also concisely explained how human language is universal, if we take *universe* to refer to that of the *Homo sapiens*. That is the reason for which we humans share a similar grammar: simply because it lies within the boundaries of our species, in our phylogenetic tree. Who else would make sense out of the evolutionary coincidence of some apparently distant morphological landmarks such as our finely shaped hyoid bone and our precisely tuned middle and inner ear (Kardong, 2007: 241); who would need to exploit the resources of such an elaborate phonetics, and master the neural and social constraints of enunciation? It seems nature has made us prone to take advantage of these new procedures in information processing and communication. If rudiments were already present in various species, only us ended up putting things into words. This is not about hierarchy, it is simply a matter of identity.

Let us illustrate this issue with an example. The fact that we succeeded in walking upright should not make us think of our limbs as entirely different from those of our quadruped ancestors, but as a new *state of the art* in evolutionary technology. Regarding speech, it is interesting to note how songbirds, quite distant from us in the evolutionary tree, imitate their mother's song through the same genetic device –Foxp2– that is activated and displayed in our *modern* brain when our offspring learn to emit their first vocalizations, a resource that is involved in both motor planning and learning (Benítez-Burraco, 2008). Imitation is therefore crucial, and has its own genealogy.

The brain operates on the basis of a few elementary cognitive processes: perception, memory, thought, expression, pragmatics. These processes, which have been fairly well described by the last century's neuropsychology, stabilize the multiform field where objects and subjects interact. They are ontologically oriented towards imitation and behavioral rehearsal –verbal behavior included– through a generic neural scheme articulated and executed by the so-called *mirror neurons* system (Rizzolatti, 2006): neurons that form very fine sensory-motor connections throughout the parietal and frontal cortices, and that participate in the transformation, though imitation, of someone else's

action in our own, thus playing a part in other essential social processes such as empathy and theory of mind. As Alva Nöe writes, “to perceive is not something that occurs to us, but *in us*; it is something that we do” (Nöe, 2006). And what we *do* is reproduce what we hear from others as if it came directly out of ourselves, taking part in their world, and continuing the course of history. Augustine, in his *Confessions* –Book I, Chapter VIII– shares his experience of entering into language, narrating how it was that by hearing the same words many times he ended up learning their meaning, and by teaching his lips and tongue to produce these words, he got to express his will and explain his wishes (Augustine, 1983). For Augustine, words are somehow similar to body movements, in terms of their attachment to objects and things. He even assimilates our corporal actions to some sort of *natural words* –as he would name them,– originating from earlier forms of communication, with restricted functions. This vision appears as an impressive, thoughtfully materialist precedent of modern linguistic theories, such as Karl Bühler and Roman Jakobson propounded, theories which we could also connect with aspects of Plato’s *Cratylus* (Plato, 2012). They can also be considered as anticipating Donald Hebb’s theory of neural plasticity –summarized by Carla Shatz in her famous “cells that fire together wire together” (Markram, 2011)– which is in line with Ludwig Wittgenstein’s figurative approach to linguistics and philosophy of mind (Wittgenstein, 2013). In the case of mirror neurons recruited for speech articulation because they allow imitation of facial movements, rehearsing enters a paradigm of analogy: preparing to speak is an embodied practice, and the form of the body prefigures the form of speech, both representing or referring to reality. Body as synecdoche for words and things, we could say. A site for coordination and interplay between forms, a site for possible harmony underlying thought and representation. And these processes happen through normal development with no need for indoctrination, or any mythical *onomatourgon*, the ancient name-giver and imposer of words evoked in the *Cratylus*. Indeed, language is innate in humans, and so is the imitative structure of our learning capacity: a transversal cognitive assemblage which elucidation helps us understand oral language acquisition and consolidation, for example through the neurological study of the so-called *Wernicke’s arch* (Pearce, 2001).

But mankind comes up against the undetermined... In the proactive scene of perception and *anamnesis* –there’s always an introspective stage in perception, bringing meanings out of silenced memories of the world– the brain doesn’t follow certainty parameters, but instead bases its predictive activity in the phenomenological features of whatever reaches its senses, in a computing style that is both probabilistic and utilitarian. Probabilistic because it is necessarily partial and interpretive, limited by the needs of anticipation and by its own processing capacities; and utilitarian because it serves a practical interest, that is, interactive *on-line* personal development. Words participate to these perceptual processes. Lucretius, in book V of *De rerum natura*, verse 1028 to 1090 (Lucretius, 2003), explains language as the result of a natural nominative impulse, taken once again as a universal and synchronic attribute of our species –let us note that this is being said in the first century B.C.– and similar to the gesture of a child pointing with his imperative finger, in a naive type of knowledge on the verge of becoming explicit. Moreover, Lucretius talks about utility as the main determining factor in the forging of names. According to him, names arise by a programmatic urge that accompanies encephalic development, and then continue to delimitate their respective semantic field through their usage. And in fact, the neural representation and organization of semantic fields obeys the same principle: within neural circuitry, words reside near or far from each other according to their respective application. The degree of laxity or amplitude within these fields remains, nonetheless, quite variable throughout neuroanatomy, with our left hemisphere –our more logic and systematizing one– having stricter and firmer lexico-semantic connections, whereas in our right hemisphere –the imaginative, the libertarian– things tend to occur the other way round, allowing for the creation of new and original names, of double meanings, or of metaphors (Jung-Beeman, 2005). Because

everything has not already been said, and discursive possibilities are formally infinite –Chomsky would subscribe to this– words keep traveling along brain hemispheres, back and forth. Throughout life, they circulate in a round trip from the uncertainty of the unknown to the apparent certainty of what is thought to be known, but lends itself to reformulation. This accords with Elkhonon Goldberg's theory of hemispheric specialization in *novelty* and *routine* processing (Goldberg, 2008), following the neuropsychological school of social neuroscience inaugurated by Vygotski and Luria in the past century (Luria, 1984).

Movement is, all in all, the spark of matter. And so it has been understood, since the beginning of our science, from Democritus to Leibniz. Actually, atomism emerged to explain this fact, to give a reason for change, transmutation and interaction between natural objects. For it is from its perspective that the boundary between object and subject disappears, in an ontological intermeshing through which nature progresses. In other words, imitation is not enough, since it conveys neither full interaction nor movement. A child learning to speak finds himself in an imitative state, since he has not taken complete control of language –as Benveniste would put it– and still has to fix his position in relation to the world and to others. This is precisely what Plato considers when expelling poets from the Republic, in book X (Plato, 1969). The expelling of poets can be understood as a criticism of the oral-mimetic tradition (Zazo Jiménez, 2011) which leaves the spurious artist outside of the polis, and in so doing constitutes the authentic citizen's liberation: the Republican man discovers himself as a demiurge –a creative posture shared by contemporary poet José Hierro (Hierro, 2002)– and retrieves the atomistic principle of social organization: the Republic is poetic because it rises from an apprehended freedom. Poetry moves on, travels, but does not disappear: it carries its ancient forms, and constantly returns to those left behind. To put it simply, every man retrieves his ancestor, and becomes a poet. Friedrich Hölderlin would say, in his late poem *In lieblicher Bläue*, that "...poetically, man dwells on this earth," a statement that would inspire Martin Heidegger's essay *Hölderlin and the Essence of Poetry*, where he identified poetry as the primitive language through which being is established (Heidegger, 1988). Man's essence is to him the manifestation of our belonging to earth, to the collectivity of things that are at the same time in conflict and gathered together –a conflict that Hölderlin names *intimacy*, a somewhat open-minded intimacy, an unlimited sense of belonging, not related to local meanings but to a foreknowledge of what lies ahead (Weinfield, 2010). For Heidegger, this manifestation is what constitutes history, because it "occurs as history," and is the reason for having received the use of language, which would be inherent to such being. Here lies the true dimension of words: appearing as imitation of others, then released as assertion of self. A self that is tied to the restrictions and arbitrariness of the linguistic sign, but that finds in it a vehicle for its own empowerment. This deeply lyrical self is exteriorized in the world through a dialectic relation from which emerge poetic emotion, discourse and speech, and everyone's narrative. Jean Cohen explains that poetic language, distinct from common use geared toward imitation and rehearsal, reorganizes the linguistic code by creating deviations from the general rule (which could be related with laxity within neural circuitry, uncertainty management, and so on). In this way, "freed from any opposition, words recover their own identity and, at the same time, their complete semantic plenitude" (Osorio de Ita, 2011), exemplifying liberation through word, through what Antonio Machado referred to as "the essential word in time," in the self's inexorable impulse towards existence, which is the foundation of Heidegger's notion of authentic life.

Enunciation is thus central: it is therein that man and thought seal their deal with time. What is kept unsaid vanishes into thin air, never to come back, never to last! It is through enunciation itself, and not only through what is enunciated, that human experience is inscribed in language and apprehended (Benveniste, 2011). All the rest remains foreign to the process of anamnesis, to the inquiry of oneself and others, amounting to the negligible silences gathered along human evolution,

forever unknown. This does not mean, obviously, that everything should be recorded to gain a durable existence, nor that *existence itself equals being pronounced...* The writer José Jiménez Lozano, in a comment on Boris Pasternak (Jiménez, 2013), holds that poets must remove from their work what they think they could write again, and leave only what comes from a source they cannot identify.

This is something that can be translated to our everyday life to enhance its meaning. We need to be aware that there is a place beneath what is said, a creative substratum lying under the domains of consciousness, existing prior to symbol, in a silent and contingent preamble of enunciation. And this uncertainty is the basis for the cognitive indeterminacy at the origin of every statement, and for the provisional nature of names and figures. This fact brings us beyond the overworked pre-Socratic discussion about the boundaries of matter (García Díaz, 1957). Undoubtedly, it is much more fruitful to discuss signs and names, as Alcmaeon of Croton –the first physician to link psychological functions to the brain– already said, for the *invisible*, as he claimed, is clear and immediate only to gods (Outes, 2008). Plato adopts a similar position in the *Cratylus* (Plato, 2012), when he explains that our duty as humans is to ascertain the etymological accuracy of the names we give these gods, while ultimate knowledge belongs only to them. Taking therefore enunciation as a creative act of elucidation, our true cognitive specificity would be to situate understanding within discourse, just a step ahead of its silent origins. This putting of speech at the vanguard of quietness, as a ward against ontological uncertainty, defines a broad field of operations within language, operations that take into account the old Eleatic maxim (Parmenides, Zeno of Elea) whereby transformations occur only from things that already exist. Words relate to one another, as Ferdinand de Saussure has shown with his differential theory of meaning (Laclau, 2003), and as they evolve, they keep traces of former meanings, as if they were obeying the scientific principle of conservation. There seems to be some relationship between materialistic monism, phenomenology, and modern epistemological syncretism, insofar as in each of these fields, individuals attribute meaning to an articulated form, atomizing their speech to go beyond the uncertainty and possibility that underlies enunciation. This point accords with the physical laws that govern us in other domains. We could use Heisenberg's uncertainty principle to understand speech: if light prevents us from simultaneously measuring the position and momentum of a particle, owing to a change in its constitution, articulated words, by altering mind-body and mind-world relations, erase the footprints of their own source. This process involves not only statements, but enunciators and narrators as well. Enunciation, by manifesting what was to be said, projects the *self* into a *locution*, dispossessing it from its authorship and agency; the self then becomes the witness of a story that from now on belongs only to words themselves.

Finally, two words about communication. Communication both towards oneself and towards the other. The human brain is capable of, and does articulate the essential questions about us and what surrounds us: *what, what for, how, how much, when...* In his *Tractatus*, Wittgenstein states that if an answer cannot be formulated, nor can the corresponding question, which would otherwise constitute what is called an enigma (Wittgenstein, 2013). And in fact the human brain dedicates a good amount of resources to eliminate such enigmas, resolving the cognitive dissonances that they produce (Harmon-Jones, 2012). In the same way, Wittgenstein considers philosophy to play a therapeutic role in solving philosophical problems (Vásquez, 2006). We can appreciate here the analogy between linguistic and communication theory, on the one hand, and the neuropsychological groundings of speech, on the other. Speech begins with a primal sensory-motor stage of development (Piaget, 2007), originating in an undifferentiated state between self and surroundings, but quickly functioning as a kind of grammatical and pragmatic draft that sets up limits between the self and its surroundings –a kind of narcissism without Narcissus– allowing for a clearer view of what is similar and what is not, and reducing the dissonance of what looks one way but is in fact another. Vendryes held that language, “prior to being a way of reasoning, should have been a way of action”

(Vendryes, 1967), and that is how we express ourselves: by physically behaving, but also by verbal action. Early in life, articulation emerges, impulsively, tenuously connected with understanding, and based mainly on a strategy of *fait accompli*. Articulation finds at this stage its neural correlate in the brain's sensory-motor interface and its connection with the perisylvian phonologic network (Hickok, 2007). This neural structure, subsidiary of the *how* and the *what for*, is engaged in the *executive functions* of the brain, as opposed to *cognitive functions* –let us keep in mind, however, that any brain activity could be considered as part of *cognition*. These “*how*” and “*what for*” functions have to do with other aspects of experience such as the *what*, the *when*, the *how much*. While the former points out to a prospective and predictive brain activity, the latter relates to quantitative aspects of knowledge, which tie the self to a certain gradation of being, as exposed by heteronym Alberto Caeiro in conversation with Fernando Pessoa (Pessoa, 2001). These quantitative functions are distributed in a wide network supplied by lexical-semantic relations throughout the whole brain (Lezak, 2012), defying connectionism itself. Émile Benveniste notes that, unlike other communicating systems in nature, “the privilege of language is to carry the significance of signs and the significance of enunciation at one time” (Benveniste, 2011). The brain's specialization is devoted to this parallel-distributed gnoseology, binding semiotics and semantics, in the proactive, pragmatic sense given by Benveniste, and in accordance with the model of linguistic processing adopted by modern neuroscience. Explanation, so to speak, follows action. Contents, ideology, and thought, whenever they arise from what Merleau-Ponty called the *authentic denomination* (Merleau-Ponty, 1993), are linguistic conquests occurring with use, and *in use*, when we take control of our voice. This voice is necessarily and forcefully narrative. Its identity, its narrative identity, is recorded in time (Ricœur, 2006). Our characters and scenography are inseparable from the background story, making memory possible. We, as narrators, not only make history, we also tell the story.

Bibliographical references:

- ARISTÓTELES (2014): *Metafísica*. Prólogo y traducción de Tomás Calvo Martínez. Madrid, Editorial Gredos, primera edición.
- BENÍTEZ-BURRACO, Antonio (2008): «FOXP2 y la biología molecular del lenguaje: nuevas evidencias. I. Aspectos fenotípicos y modelos animales». Revista de Neurología, 46, 289-98.
- BENVENISTE, Émile (2011): *Problemas de lingüística general*. Traducción de Juan Almela. México, D.F., Siglo veintiuno editores, vigesimoquinta reimpresión.

- CHOMSKY, Noam (2006): *Language and Mind*. Cambridge, MIT University Press, third edition.
- DE HIPONA, Agustín (1983): *Confesiones*. Traducidas según la edición latina de la congregación de San Mauro, por el R. P. Fr. Eugenio Ceballos. Madrid, Espasa Calpe, 10^a edición.
- ELIOT, Thomas S. [1936] (1999): *Cuatro cuartetos*. Edición bilingüe de Esteban Pujals Gesalí. Madrid, Cátedra Letras Universales, cuarta edición.
- FOUCAULT, Michel (2005): *La hermenéutica del sujeto*. Madrid, Ediciones Akal.
- GARCÍA DÍAZ, Adolfo (1957): «Las bases de la cosmología de Anaxágoras». *Diánoia*, 3(3), 149-165.
- GOLDBERG, Elkhonon (2008): *El cerebro ejecutivo*. Lóbulos frontales y mente civilizada. Barcelona, Editorial Crítica.
- HARMON-JONES, Eddie (2012): «Cognitive Dissonance Theory». Encyclopedia of Human Behavior, Second Edition, 1, 543-549.
- HEIDEGGER, Martin (1988): *Arte y poesía*. Traducción y prólogo de Samuel Ramos. Buenos Aires, Breviarios del Fondo de Cultura Económica, Primera reimpresión argentina.
- HERÁCLITO (2009): *Fragmentos e interpretaciones*. José Luis Gallero and Carlos Eugenio López. Madrid, Árdora Ediciones.
- HICKOK, Gregory and David Poeppel (2007): «The cortical organization of speech processing». *Nature Reviews Neuroscience*, 8, 393-402.
- HIERRO, José (2002): *Guardados en la sombra. Textos de la prehistoria literaria de José Hierro*. Edición de Luce López-Baralt. Madrid, Ediciones Cátedra, 1^a edición.
- JACKSON, John H (1889): «On the comparative study of diseases of the nervous system». *British Medical Journal*, 2, 355-362.
- JIMÉNEZ LOZANO, José: «Poética. Pero también se nos regala el lenguaje». [Online search: http://www.jimenezlozano.com/v_portal/informacion/informacionver.asp?cod=192&te=83&idage=199;30/06/2014].
- JUNG-BEEMAN, Mark (2005): «Bilateral brain processes for comprehending natural language». *Trends in Cognitive Neuroscience*, 9(11), 512-518.
- KARDONG, Kenneth V. (2007): *Vertebrados. Anatomía comparada, función y evolución*. Madrid, McGraw-Hill Interamericana de España, cuarta edición.
- LACLAU, Ernesto (2003): «¿Por qué los significantes vacíos son importantes para la política?» Mesa redonda organizada por la Escuela de la Orientación Lacaniana (EOL) en el Instituto Clínico de Buenos Aires, el 22 de julio de 2003.
- LEZAK, Muriel D., Diane B. HOWIESON, Erin D. BIGLER and Daniel TRANEL (2012): *Neuropsychological Assessment*. New York, Oxford University Press, fifth edition.
- LUCRECIO (2003): *La naturaleza de las cosas*. Traducción, introducción y notas de Miguel Castillo Bejarano. Madrid, Alianza editorial.
- LURIA, Alexander Romanovich (1984): *Conciencia y lenguaje*. Colección aprendizaje, Volumen XIII. Madrid, Visor Libros, 2^a edición.
- MARKRAM, Henry (2011): «A history of spike-timing-dependent plasticity». *Frontiers in synaptic neuroscience*, 3, 1-24.
- MERLEAU-PONTY, Maurice (1993): *Fenomenología de la percepción*. Traducción de Jem Cabanes. Barcelona, Planeta-De Agostini.
- MONOD, Jaques (1972): *El azar y la necesidad. Ensayo sobre la filosofía natural de la biología moderna*. Barcelona, Barral editores, cuarta edición.
- NÖE, Alva (2006): *Action in perception*. Cambridge, MIT University Press.
- OSORIO DE ITA, Gustavo (2011): «Jean Cohen y el análisis del texto poético: Isopatetismo». [Consulta en línea: <http://circulodepoesia.com/2011/06/jean-cohen-y-el-analisis-del-texto-poetico-isopatetismo/>; 30/06/2014].
- OUTES, Diego L. and Jacinto C. ORLANDO (2008): «Alcmeón de Crotona. El cerebro y las funciones psíquicas». *Alcmeón, Revista Argentina de Clínica Neuropsiquiátrica*, 15(1), 34-49.

- PEARCE, John M.S. (2001): «Aphasia and Wernicke's arch. Historical note». *Journal of Neurology, Neurosurgery and Psychiatry*, 70(5), 699.
- PESSOA, Fernando (2001): *Un corazón de nadie*. Antología poética (1913-1935). Edición bilingüe de Ángel Campos Pámpano. Barcelona, Galaxia Gutenberg, Círculo de lectores.
- PIAGET, Jean and Bärbel INHEIDER (2007): *Psicología del niño*. Madrid, Ediciones Morata, decimoséptima edición.
- PLATÓN (1969): *La república*. Clásicos políticos. Edición bilingüe, traducción, notas y estudio preliminar por José Manuel Pabón y Manuel Fernández Galiano. Madrid, Instituto de estudios políticos. Reimpresión de la 1^a edición de 1949.
- PLATÓN (2012): *Apología de Sócrates, Menón, Crátilo*. Madrid, Alianza editorial, Clásicos de Grecia y Roma, séptima reimpresión.
- RICŒUR, Paul (2006): *Sí mismo como otro*. Madrid, Siglo XXI editores, tercera edición.
- RIZZOLATTI, Giacomo and Corrado SINIGAGLIA (2006): *Las neuronas espejo. Los mecanismos de la empatía emocional*. Barcelona, Paidós.
- RAMACHANDRAN, Vilayanur S. (2000): «Mirror neurons and imitation learning as the driving force behind the great leap forward in human evolution». [Online search: <http://edge.org/conversation/mirror-neurons-and-imitation-learning-as-the-driving-force-behind-the-great-leap-forward-in-human-evolution>; 30/06/2014].
- VALLEJO, César [1922] (1970): *Trilce*. Buenos Aires, Biblioteca clásica y contemporánea, Editorial Losada, tercera edición.
- VARGAS, Martín (2011): «Proyecto de Sección de Neurociencia Clínica de la AEN». Revista de la Asociación Española de Neuropsiquiatría, 31(3), 589-597.
- VÁSQUEZ ROCCA, Adolfo (2006): «El concepto de filosofía y la noción de problema en Wittgenstein». Nómadas. Revista Crítica de Ciencias Sociales y Jurídicas, 13, 205-215.
- VENDRYES, Joseph (1967): *El lenguaje. Introducción lingüística a la historia*. Biblioteca de síntesis histórica, Serie I (La evolución de la humanidad), dirigida por Henri Berr. México D.F., Unión Tipográfica Editorial Hispano-American (UTEHA).
- WEINFIELD, Henry (2010): «Is there a measure on earth?: Holderlin's poem "In Lovely Blueness" in light of Heidegger's essay "...Poetically Man Dwells..."». *Journal of Philosophy: A Cross-Disciplinary Inquiry*, 6(13), 54.
- WITTGENSTEIN, Ludwig (2013): *Tractatus logico-philosophicus*. Traducción, introducción y notas de Luis M. Valdés Villanueva. Madrid, Editorial Tecnos, cuarta edición.
- ZAZO JIMÉNEZ, Eduardo (2011): «La crítica platónica de la poesía como crítica de la tradición oral». *Revista Tales*, 4, 75-87.

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