Contents
Volume 2 / 2016

Articles
FRANCESCO BENOZZO
Origins of Human Language:
Deductive Evidence for Speaking *Australopithecus*

LOUIS-JACQUES DORAIS
Wendat Ethnophilology:
How a Canadian Indigenous Nation is Reviving its Language

JOHANNES STOBBE
Written Aesthetic Experience. Philology as Recognition

MAHMOUD SALEM ELSHEIKH
The Arabic Sources of Rāzī's *Al-Manṣūrī fī 'ṭ-ṭibb*

MAURIZIO ASCARI
Philology of Conceptualization: Geometry and the
Secularization of the Early Modern Imagination

KALEIGH JOY BANGOR
Philological Investigations: Hannah Arendt's *Berichte*
on Eichmann in Jerusalem

MIGUEL CASAS GÓMEZ
From Philology to Linguistics: The Influence of Saussure
in the Development of Semantics

CARMEN VARO VARO
Beyond the Opposites: Philological and Cognitive Aspects
of Linguistic Polarization

LORENZO MANTOVANI
Philology and Toponymy. Commons, Place Names and
Collective Memories in the Rural Landscape of Emilia

Discussions
ROMAIN JALABERT – FEDERICO TARRAGONI
Philologie et révolution

Crossings
SUMAN GUPTA
Philology of the Contemporary World:
On Storying the Financial Crisis

Review Article
EPHRAIM NISSAN
Lexical Remarks Prompted by *A Smyrneika Lexicon*,
a Trove for Contact Linguistics

Reviews
SUMAN GUPTA
Philology and Global English Studies: Retracings (Maurizio Ascari)

ALBERT DEROLEZ
The Making and Meaning of the *Liber Floridus:*
A Study of the Original Manuscript (Ephraim Nissan)

MARC MICHAEL EPSTEIN (ED.)
Skies of Parchment, Seas of Ink: Jewish Illuminated
Manuscripts (Ephraim Nissan)

CONSTANCE CLASSEN
The Deepest Sense: A Cultural History of Touch (Ephraim Nissan)

Vol.
2
2016

Philology

Philology

An International Journal
on the Evolution of Languages, Cultures and Texts

Peter Lang

Vol. 2 / 2016

Contents
Volume 2 / 2016

Articles
FRANCESCO BENOZZO
Origins of Human Language:
Deductive Evidence for Speaking *Australopithecus*

LOUIS-JACQUES DORAIS
Wendat Ethnophilology:
How a Canadian Indigenous Nation is Reviving its Language

JOHANNES STOBBE
Written Aesthetic Experience. Philology as Recognition

MAHMOUD SALEM ELSHEIKH
The Arabic Sources of Rāzī's *Al-Manṣūrī fī 'ṭ-ṭibb*

MAURIZIO ASCARI
Philology of Conceptualization: Geometry and the
Secularization of the Early Modern Imagination

KALEIGH JOY BANGOR
Philological Investigations: Hannah Arendt's *Berichte*
on Eichmann in Jerusalem

MIGUEL CASAS GÓMEZ
From Philology to Linguistics: The Influence of Saussure
in the Development of Semantics

CARMEN VARO VARO
Beyond the Opposites: Philological and Cognitive Aspects
of Linguistic Polarization

LORENZO MANTOVANI
Philology and Toponymy. Commons, Place Names and
Collective Memories in the Rural Landscape of Emilia

Discussions
ROMAIN JALABERT – FEDERICO TARRAGONI
Philologie et révolution

Crossings
SUMAN GUPTA
Philology of the Contemporary World:
On Storying the Financial Crisis

Review Article
EPHRAIM NISSAN
Lexical Remarks Prompted by *A Smyrneika Lexicon*,
a Trove for Contact Linguistics

Reviews
SUMAN GUPTA
Philology and Global English Studies: Retracings (Maurizio Ascari)

ALBERT DEROLEZ
The Making and Meaning of the *Liber Floridus:*
A Study of the Original Manuscript (Ephraim Nissan)

MARC MICHAEL EPSTEIN (ED.)
Skies of Parchment, Seas of Ink: Jewish Illuminated
Manuscripts (Ephraim Nissan)

CONSTANCE CLASSEN
The Deepest Sense: A Cultural History of Touch (Ephraim Nissan)

Vol.
2
2016

Philology

Philology

An International Journal
on the Evolution of Languages, Cultures and Texts

Peter Lang

Vol. 2 / 2016

Philology

Philology

An International Journal
on the Evolution of Languages, Cultures and Texts

General editor: Francesco Benozzo

Volume 2 / 2016

PETER LANG
Bern · Berlin · Bruxelles · Frankfurt am Main · New York · Oxford · Wien

Editorial Address:

Francesco Benozzo
Università di Bologna
Dipartimento di Lingue, Letterature e Culture Moderne
Via Cartoleria 5
I-40124 Bologna, Italy
francesco.benozzo@unibo.it

Subscriptions:

Peter Lang AG, International Academic Publishers
Wabernstrasse 40
CH-3007 Bern
Switzerland
Phone +41 31 306 17 17
Fax +41 31 306 17 27
E-Mail: info@peterlang.com
www.peterlang.com

1 volume per year

Subscription Rates:
CHF 59.– / €* 52.– / €** 54.– / € 49.– / £ 39.– / US-$ 64.–
* incl. VAT (valid for Germany and EU customers without VAT Reg No)
** incl. VAT (valid for Austria)

Cover Photo by Dieter Mueller

ISSN 2297-2625 e-ISSN 2297-2633

Contents

Volume II / 2016

Articles

Francesco Benozzo
Origins of Human Language:
Deductive Evidence for Speaking *Australopithecus* 7

Louis-Jacques Dorais
Wendat Ethnophilology:
How a Canadian Indigenous Nation is Reviving its Language..... 25

Johannes Stobbe
Written Aesthetic Experience. Philology as Recognition 47

Mahmoud Salem Elsheikh
The Arabic Sources of Rāzī's *Al-Manṣūrī fī ʾṭ-ṭibb* 73

Maurizio Ascari
Philology of Conceptualization: Geometry and the
Secularization of the Early Modern Imagination..... 121

Kaleigh Joy Bangor
Philological Investigations: Hannah Arendt's *Berichte*
on Eichmann in Jerusalem 141

Miguel Casas Gómez
From Philology to Linguistics: The Influence of Saussure
in the Development of Semantics 165

Carmen Varo Varo
Beyond the Opposites: Philological and Cognitive Aspects
of Linguistic Polarization..... 217

Lorenzo Mantovani
Philology and Toponymy. Commons, Place Names and
Collective Memories in the Rural Landscape of Emilia 237

Discussions

Romain Jalabert – Federico Tarragoni
Philologie et Revolution 255

Crossings

Suman Gupta
Philology of the Contemporary World:
On Storying the Financial Crisis 275

Review Article

Ephraim Nissan
Lexical Remarks Prompted by *A Smyrneika Lexicon*,
a Trove for Contact Linguistics 297

Reviews

Suman Gupta
Philology and Global English Studies: Retracings (Maurizio Ascari) 335

Albert Derolez
The Making and Meaning of the *Liber Floridus:*
A Study of the Original Manuscript (Ephraim Nissan) 339

Marc Michael Epstein (ed.)
Skies of Parchment, Seas of Ink: Jewish Illuminated
Manuscripts (Ephraim Nissan) 358

Constance Classen
The Deepest Sense: A Cultural History of Touch (Ephraim Nissan) 395

10.3726/PHIL2016_7

Articles

Origins of Human Language: Deductive Evidence for Speaking *Australopithecus*

Francesco Benozzo
Università di Bologna

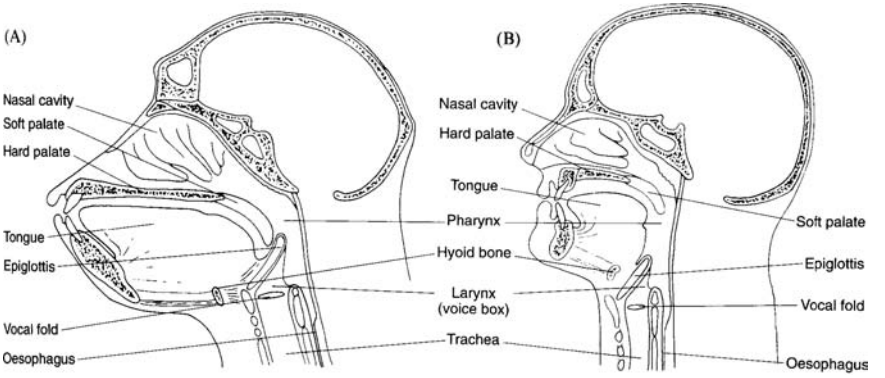
Abstract This article argues for a much greater antiquity of human language than has normally been assumed in recent research, indicating four deductive arguments to provide evidence for a positive answer to the question whether the capacity for language was already optionally present in some *Australopithecus*, and then emerged with *Homo* as one of his unique traits. The author considers the following four arguments: (1) the lithic-geolinguistic prehistoric correlation, (2) the millennial stability of languages, (3) the new revolutionary discovers on the language of animals, and (4) the process of human world formation. The provisional conclusion of this article are that *Homo* was born *loquens* (2.5 million years ago), languages appeared with *Homo* himself, and language existed much earlier on (before 2.5 million years ago).

Keywords origins of human language, primates' language, *Australopithecus*, Ethnophilology, languages' stability

The Dichotomy between Primate Calls and Human Speech

This article argues for a much greater antiquity of human language than has normally been assumed in recent research, according to which language, the most distinctive behavioural adaptation of the planet, evolved in only one species, in only one way, with strong and unbridgeable differences with all other natural ways of communicating. In the last years the debate among specialists about the origins of human language has reached good points and created fruitful paradigms. Reflecting on the hundreds of studies published in this field, one reaches the conclusion that the insurmountable border shared by different paradigms, the true critical point, is always the same one: the claim that primate calls and human speech cannot be considered in the same way, because of their supposed functional and

neurological dichotomy. This seems to be the most serious problem for any explanation of the origins of human language, because this dichotomy does not permit any explanation of it in terms of evolutionary continuity.



The comparison of chimpanzee (A) and human (B) vocal-tract anatomy (graphic elaboration: Department of Linguistics, University of Pennsylvania <http://www.ling.upenn.edu/courses/Fall_2016/ling001/com_bio.html>)

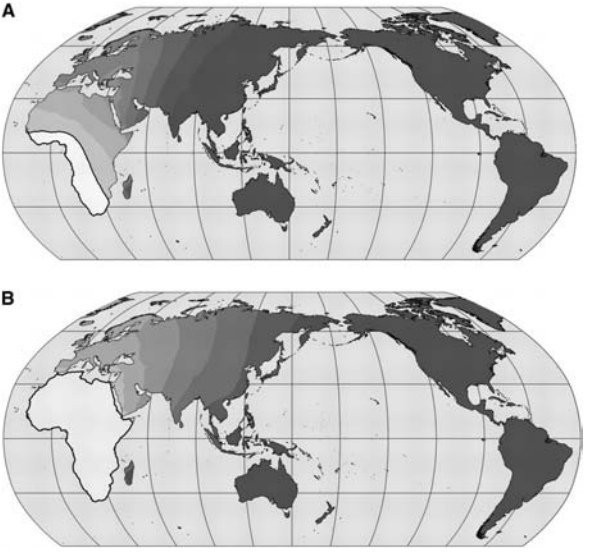
Nevertheless, if we carefully read the most recent research on the subject, we actually face a refusal of the myth of a "modern human revolution". Considering the archaeological record of the whole Old World, especially the one of Africa, we face a situation where a gradual process of cultural growth took hundreds of thousands of years (McBrearty – Brooks, 2000). Current paleoetnological approaches argue against a saltationist scenario, and toward a gradual process of culture-gene co-evolution extending to the present day (Templeton, 2015), adducing a broad range of evidence in order to suggest that primates shared with us something like modern speech and language (Dediu – Levinson, 2013).

Chronological Inadequacy of Linguistics

The most successful hypothesis among linguists continues to be the one that makes the assumption that the capacity for modern language is relatively recent, arising approximately 50,000–80,000 years ago, without

any significant evolution since human ancestors left Africa (Templeton, 2015 (Tattersall, 2010; Chomsky, 2010a; 2010b; Berwick *et al*., 2013). This chronological frame is too narrow, and not consistent with recent discoveries in the field of human evolution.

Nearer to common sense (at least for their chronological implications) seem the conclusions reached by Quentin Atkinson, who, after analyzing different languages from around the world suggests that, like our genes, human speech originated in sub-Saharan Africa. Studying the phonemes used in 504 human languages, Atkinson pointed out that the number of them is highest in Africa and decreases with increasing distance from Africa: this pattern fits a "serial founder effect" model in which small populations on the edge of an expansion progressively lose diversity. He notes that this pattern of phoneme usage around the world mirrors the pattern of human genetic diversity, which also declined as humans expanded their range from Africa to colonize other regions. As this decline in phoneme usage cannot be explained by demographic shifts or other local factors, one can conclude that it provides strong evidence for an African origin of modern human languages, about half a Mya (million years ago) (Atkinson, 2011).



A visualization of Atkinson's theory (shaded bends represent the decreasing diversity of sounds in local languages) (after Atkinson, 2011)

Much nearer to a plausible scenario are the conclusions presented in Mario Alinei's glottogenetic studies, on which I will linger later.

Phillip Tobias' Question: Was There a Capacity for Language in *Australopithecus*?

I would like to start from the question posed twenty years ago by the lamented paleoanthropologist Phillip V. Tobias. After Tobias' works, the presence of some form of language in early hominids, comparable or not comparable to human language, can be considered as proved beyond any sensible doubt. Taking for granted that *Homo habilis* spoke a human language, his question is no longer whether *Homo habilis* spoke, but whether the capacity for language was already optionally present in some *Australopithecus*, and then emerged with *Homo* as one of his unique traits. Tobias claims that the ability for spoken language has been a characteristic of the hominids at least since the emergence of the genus *Homo* in the Later Pliocene, about 2.5 Mya. However, as he himself summarizes, "we know that about 2 1/2 million years ago there was a great cladogenetic split in hominid phylogeny. Hominids were faced by one of these evolutionary choices" (Tobias, 1996). This is the crucial starting point of his question:

> Did brains capable of articulated language first appear before or after the split? If they arose after the split, then it is a special uniquely derived trait, an anthropomorphic trait, of the genus *Homo*. We have on the other hand to countenance the possibility that this faculty might have appeared *before* rather than *after* the bifurcation. If it arose in an advanced *Australopithecus africanus* before the split, it is likely that the propensity to speak would have been handed on to both or all lineages derived from the split. Several lines of evidence suggest that the rudiments of speech centres and of speaking were present already before the last common ancestral hominid population spawned *Homo* and the robust australopythecines (Broca's bulge in *Australopithecus africanus*; tool-making perhaps by a derived. *Australopithecus africanus* and a hint of an inferior parietal lobule in one endocast, SK 1585, of *Australopithecus robusts*). Both sets of shoots would then have inherited the propensity for spoken language. The function would probably have been *facultative* in *Australopithecus robusts* and. *Australopithecus boisei*, but *obligate* in *Homo* (ibid., p. 91).

In this article I am going to indicate four deductive arguments to provide evidence for a positive answer to the question posed by Tobias.

First Evidence: Lithic-Geolinguistic Correlation

A first answer is represented by the hypothesis of a lithic-geolinguistic correlation exposed by Mario Alinei in 1996, and guiltily unheeded by glottogenetists (Alinei, 1996). Alinei notes that the areal distribution of the three earliest types of lithic tools (chopper, bifacial, flake/blade) corresponds with the areal distribution of the three world types of language (isolating, inflecting – or fusional – and agglutinative). More in detail:

1) The chopper area in South East Asia corresponds quite closely with the South-eastern area of isolating languages. Also the few isolating African languages fall within the area without bifacials in Western Africa.
2) The area of Mode 1 tools in Central Asia and Eastern Europe looks very much like the focus area of the people who much later inhabited Northern Asia and North-eastern Europe, and spoke agglutinative languages that eventually became, among others, Uralic, Altaic and Paleosiberian. Agglutinative languages, in other words, occur precisely where bifacials never arrived, and Mode 1 tools were superseded by leptolithic tools.
3) The area of bifacials in Northern Africa and in South-Western Asia corresponds quite closely with the area of inflecting languages, which includes not only Afroasiatic (= Hamito-Semitic--) and the Indo-Arian branch of Indoeuropean, but also Kartvelian and other Caucasian languages. The apparent contradiction of Anatolia, which lies in the bifacial area, and thus should show inflecting, instead of agglutinative languages, is clearly the result of recent events: recall the extinction of several Indo-European and other languages of Anatolia, prior to the arrival of Turkish from Central Asia.

Alinei also shows how the three types of lithic innovations correspond to the three major lexical types from a cognitive developmental point of

view, in the spirit of Gibson's view that "the level of cognitive complexity applied to making tools may provide insights to the levels of cognitive capacity available for linguistic and other functions" (Gibson, 2006, p. 119). More in detail: the production of choppers could be seen as the operational antecedent of the first production of lexemes, on the basis of the equation:

1) truncated cobble = segment of vocal flow (*isolating lexeme*); just as the natural cobble is truncated on one side, modified as to obtain its new, tool function, the continuous, uninterrupted vocal flow is actively interrupted and made discontinuous, as to obtain its new, lexical function. Alinei adds that "the main difference between the animal call and the human lexeme is precisely in the voluntary interruption of the vocal emission, and in the attribution of a fixed value to the resulting fragment, which therefore becomes reproducible".
2) bifacial = lexeme with the addition of a synthetical morpheme (*inflecting lexeme*); the bifacial is the result of a retouch involving the whole surface of the original: whereas from the truncated cobble there can emerge only the notion of the word/syllable as a phonic segment, from the working of the whole surface of the bifacial a more complex notion can emerge, namely that of a deeper, structural modification of the previously isolating lexeme, and of its adaptation to its context by means of an affix (grammatical morpheme). "Moreover, while the isolating lexeme could only have either a semantic meaning or a grammatical meaning, now the inflected lexeme will incorporate a double function, both semantic and grammatical".
3) flake/blade = *agglutinative lexeme*, with a sequence of analytical morphemes. The technology of prepared cores for the production of specialized leptolithic tools can, in Alinei's opinion, successfully explain the emergence of the agglutinative type of lexemes: "Prepared cores no longer have the shape of the final tool (as choppers and bifacials), but serve as an intermediate matrix from which several, parallel tools (thin flakes or blades) can be obtained, one after another. In much the same way, the agglutinative lexeme is formed by the juxtaposition of several affixes to the original lexeme, each of which has its particular grammatical function".

In Chomskyan terms Alinei's study proves that populations of *Homo habilis* and *erectus* already spoke monosyllabic languages, and that some

of these early populations, in Africa and in the Far East, never changed the *superficial structure* of their languages, although they developed their *deep grammatical structure* in the course of the Paleolithic. I would say that if we assume a linguistic stability of such a huge scale, we are coherently obligated to admit and postulate an even deeper scenario, projecting the emergence of language back to some *Australopithecus*. The lithic-geolinguistic correlation can be considered itself a proof that language should have existed, optionally, in some *Australopithecus*, becoming part of the human evolutionary heritage with *Homo*. If I don't mistake, here we have the possibility to reconcile Chomsky's theory of innatism with a new idea of evolutionary theory: language, in fact, would definitely be innate in humans, but as the effect of a developmental process which was already ongoing with some *Australopithecus*. In other words, the claim that a human faculty is innate simply implies that its origin must be placed earlier than the emerging of *Homo*.

Furthermore, this geographical continuity of modern humans from the earliest populations of the Old World after the first diaspora out of Africa, would offer evidence for a multiregional origin of modern humans.

Second Evidence: The Millennial Stability of Languages

At this point, I would like to go back to Chomsky's innatism, positively considering his opposition to the assumption of traditional linguistics, i.e. that languages *evolved* from proto-languages. This point of view well fits with the idea expressed by the Paleolithic Continuity Paradigm (PCP: see <www.continuitas.org>), which, in opposition to the traditional idea of languages as growing, evolving and dying "organisms", assumes the existence of modern languages and dialects at least since prehistory, and explains the illusory "evolution" (for example the Latin evolution in the so called "Romance" languages) as a social phenomenon, corresponding to the social changes occurred in stratified societies (Latin seems to evolve into Italian, French etc., but actually it disappears with the passing of elite classes that spoke it, and leaves besides the other spoken languages). Only as the result of an optical illusion we say that Latin *ego developed/transformed/evolved/become* Italian *io*, French *je*, Spanish *yo*,

Occitan and Catalan *jo*, Portuguese and Rumanian *eu*. etc. Speakers have actually always pronounced a unique word for expressing the consciousness of themselves as individuals; nothing evolved, nothing transformed into something different. All these pronouns (and their parallel: Greek ἐγὼ, German *ich*, English *I*, Dutch *ik*, Scandinavian *jag*, Slovenian, Russian and Polish *ja*, etc.) still represent the same word used at the time of its lexicalization, at least in Upper Paleolithic (see Alinei, 2006).

To offer another example: when we consider words such as Piedmontese *sciùo* 'carcass', Emilian *cìv* 'larva', Calabrian *cibə* 'ant' and Iripinian *cevo* 'dead animal', we cannot affirm that they *come from* Latin *cibus* 'food', but we only can state that in the period when these words were used for the first time, carcasses and small insects were named as 'food'. Essentially, these words didn't change at all (Benozzo – Alinei, 2016).

Again, dealing with the verbs *impigar*, *pigàr*, *impizèr*, *impièr*, *appiccià*, *mpezà*, *pià*, documented in nowadays Italian dialects with the meaning of 'to light (a fire)', only as the result of an evolutionary mirage we state that they *came/derived/developed from* Latin *picare*, **piceare*, *impiculare* 'to produce pitch, to plaster with tar', and that these Latin verbs *came/derived/developed from* the Latin word for 'pitch' (*pix*, *picem*, *picula*), and that these Latin words for 'pitch' *came/derived/developed from* the Latin word for pine (*pinus*). What we should merely observe here, bearing in mind that one of the most important technological innovations of European Mesolithic was the production of tar and pitch from trees, would be the existence of a single word and verb which simply and progressively adapted itself to the various prehistoric techniques: this correlation between present-day verbs used in the Italian area and the process of pitch creation in the Sauveterrian cultural complex (10,000–7,800 B.P.) – an industry clearly linked to the Upper Palaeolithic and Early Epipalaeolithic traditions and to the Final Italic Epigravettian – shows us, above all, the existence of a millenary stability (Benozzo, 2010).

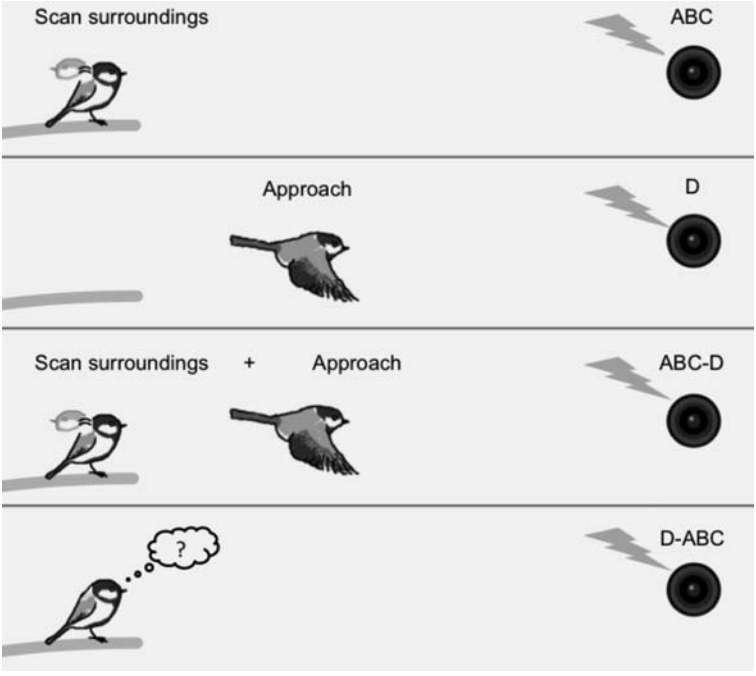
The greatest blunder of historical linguistics, in its outdated evolutionist vision of language, is probably this idea that languages change: according to this view, each speech and each linguistic variant (either geographical or social) represents an organism submitted to the evolutionary law of change, and developed from a common "mother tongue". But the only observable character of any language is that of conservatism, stability, or inertia. As Alinei states, "by restricting itself to the study of change solely on the basis of written old and modern languages, and by completely

ignoring the sociolinguistic aspect of structural change, historical linguistics has deprived itself of the main instrument for the understanding of the phenomenon of change, and, consequently, for the reconstruction of the historical process of linguistic evolution" (Alinei, 2005, p. 27).

The abundant number of studies published in these years in the frame of PCP, which is now a paradigm followed also by previously skeptical and critical eminent scholars, is a precise demonstration of a long-term, millennial stability of living languages. Conservation is the law of language and languages, and change is the exception: changes are not caused by an alleged 'biological law of language', but by major external (ethnic or social) factors (language contacts and hybridization), in concomitance with the major ecological, socio-economic and cultural events that have shaped each area of the globe.

Third Evidence: Compositional Syntax in Animals

In March 2016 the journal *Nature communication* published an article illustrating the most extraordinary discover in the field of non-human language up to the present: a discover which I would define "revolutionary". Toshitaka N. Suzuki, David Wheatcroft and Michael Griesser report the first experimental evidence for compositional syntax in a wild animal species, the Japanese great tit (*Parus minor*), demonstrating that these birds use the over ten different notes in their vocal repertoire either solely or in combination with other notes, according to a model of compositional syntax which works in a socio-ecological context. Evidently, this conclusion represents a turning point in studies about the nature and the origin of language, because it challenges the long-standing view that compositional syntax is unique to human language, and claims that it may have evolved independently in animals as one of the basic mechanisms of information transmission (Suzuki – Wheatcroft – Griesser, 2016).



Variety of calls according to Suzuki – Wheatcroft – Griesser, 2016

To be precise, even before March 2016 a few studies on certain groups of songbirds, white-handed gibbons (*Hylobates lar*), chestnut-crowned babblers (*Pomatostomus ruficeps*), had showed that, like humans, these animals have what has been broadly classified as "syntactic-like" song production and complex cognitive behaviors (Clarke, 2006; Quattara *et al*., 2009; Collier *et al*. 2014; Engesser *et al*. 2015). Beckers *et al*. (2014) already claimed that "thousands of bird species have articulatory capabilities that equal or surpass those of humans, and they develop their vocalizations through vocal imitation in a way that is very similar to how human infants learn to speak" (p. 548).

Nevertheless, the presence of compositional syntax in human language has continued to be stressed by the supporters of the functional and neurological dichotomy between primate calls and human speech as the most evident and insolvable difference between the two. Human brain and language are characterized by a "syntactic complexity", connected with a capacity for auditory recognition memory, which, unlike humans,

contemporary monkeys and ancestral primates wouldn't be endowed with (Luuk, 2014; Wildgen, 2015). A shared point of view among linguists is that "while the lexical/semantic language system (vocabulary) probably appeared during human evolution long before the contemporary man (*Homo sapiens sapiens*), the grammatical language historically represents a recent acquisition and is correlated with the development of complex cognition (metacognitive executive functions)" (Ardila, 2015: 2).

After the study on *Parus minor* we must now admit that neurobiological features might have existed in non-human primates which could have become evolutionary substrates for proto-syntactic learning in humans. This is then another crucial point for assuming that language, although innate in humans, must already have existed with some *Australopithecus*. I would propose to speak here of "evolutionary convergence" and not of "common descent".

Fourth Evidence: Human Words Formation is Illustrated by Primates' 'Linguistic' Response to Stimuli

An often quoted example of the dichotomy between primate calls and human speech is the one offered by Laura-Ann Petitto, one of the leading researchers of primate communication, who observes that a chimpanzee uses the label for 'apple' to refer to

> the action of eating apples, the location where apples are kept, events and locations of objects other than apples that happened to be stored with an apple (the knife used to cut it), and so on and so forth – all simultaneously, and without apparent recognition of the relevant differences or the advantages of being able to distinguish among them (Petitto, 2005, p. 93).

In her conclusion, then, chimpanzees "do not really have 'names for things' at all. They have only a hodge-podge of loose associations".

Commenting on this reasoning, Robert Berwick, Angela Friederici, Johan Bolhuis and Noam Chomsky peremptorily assert: "This is radically different from humans" (Berwick *et al*., 2013, p. 93). On the contrary, and with the same confidence, I have to assert that *this is exactly how human words sprout*.

If we consider the way how children categorize reality through words we easily observe that it is almost identical, and sometimes precisely identical, to the one illustrated by Petitto for chimpanzees. In fact, if we give a child the option of pronouncing only one word for an object placed in a context, as it happens in the experiment of Petitto with the label 'apple', he/she will use it to refer to an action, a location, an event, or even another object near the one he/she refers about. Moreover, he/she will refer to these different things simultaneously, and "without apparent recognition of the relevant differences or the advantages of being able to distinguish among them". What will produce the disambiguation among the different referents named with the same word will only be the "social" use of the same word, its large diffusion, its cognitive success among more individuals belonging to a community. Children's most evident attitude in using words is *generalization*, and not *identification* (Axelsson *et al*., 2016).

One should underline the following considerations: "children's name generalizations are so strongly linked to non-strategic forces on attention that other potentially useful guides to attention have no effect. […] *They did not associate the object name with properties relevant to the object's function, even when that information was noticed*"; "In all the experiments, *children generalized the novel name to objects that were different from the exemplar*; and in all experiments *they did so consistently by picking out either the global or local properties as relevant*" (Smith, 1996, p. 167; my italics; cf. also Golinkoff – Mervis – Hirsh-Pasek, 1994). Another distinctive feature of children communication is, like for the chimpanzees studied by Petitto, the apparent random and nonsense extension of a name among objects which are already familiar. Generalization of objects' names is not only determined, as we could think, by the shape of referents: different experiments demonstrate, on the contrary, that names are used for different referents and things, following a process which is not of associative kind, but rather governed by vague and *arbitrary* forms of metonymy (for example a shoehorn is named as *shoe* [exactly as the chimpanzee 'names' as *apple* the knife which cuts the apple!]) and by actions made by the children themselves with the object (for example the action of throwing a shoe is named as *shoe* [exactly as the chimpanzee 'names' as *apple* the action of eating the apple!]). Moreover, all these names can be used simultaneously (exactly as the chimpanzee simultaneously uses the 'label' for apple referring to different things!) (Imai *et al*., 1994; Prinz, 2014).

This is precisely the manner in which our words originate and originated. Only after some kind of socialization a sign initially used as a sort of individual choice or generalization can exist as a reckonable word: everybody who uses a sign must know it, the key of its code must be universally known. This principle is not in contradiction with what Saussure calls "*arbitrariness* of the sign", but rather flows from it: precisely because a sign is arbitrary, it requires adequate publicity to exist (see Alinei, 2003).

Words often maintain traces of these 'generalizations' (for example description of actions in order to refer to an object, reference to the location where the object is found or a part of the object in order to refer to the whole thing, association with other objects to refer to the one to be named): a *building* is in origin the description of the action of 'building' it; the Italian name of the 'comb' (*pettine*) is in origin the name of the 'sheep' (*pecus*) which was combed; the name for the 'stag' in various European languages (for example "Romance" languages affiliated to Latin *cervus*, Welsh *carw*, Breton *karo*, Icelandic *hjörtur*, German *Hirsch*) is in origin the name of its horns (the Indo-European root **ker* 'horn, horned'); a perfect example of the different assortment of motivations used to refer to an object (a single part of the object, its shape, its material, its aim) is illustrated by the words used for eye-glasses: English *glasses* from *glass*, German *Brille* and Dutch *bril* from the crystal *beryl*, Hungarian *szemüveg* and Finnish *silmaläsit* from the periphrasis '(something for the) eye', Italian *occhiali* and Turkish *gözlük* from the respective words for *eyes*, Spanish *gafas* from the Spanish word for 'earpiece', French *lunettes* from an association of the shape of the lenses with the one of 'small moons' (Benozzo & Alinei, 2015, *s.v.*).

Also the 'apple', mentioned in the experiment made on chimpanzees, has been lexicalized in many different ways by humans: German *Apfel*, Dutch *appel*, Swedish *äpple*, Gothic *apel*, Russian *jabloko*, Lithuanian *óbuolas*, Welsh *afal*, and English *apple* indicate that at its origin the speakers wanted to name the sweetness of it (the Indo-European root **ăb-ol- / *ăb-el-* indicates 'sweetness'), while Italian *mela* and Romanian *măr* (cfr Latin *malum* and Greek *mêlon*) refer to its 'smallness, littleness' (Indo-European *(s)mēlo-*, which originated also English *small*) and French *pomme*, Catalan *poma* or Albanian *pemë* (cfr. Latin *pōmum*) originally describes 'any fruit with seeds'. Moreover, the expression *apples!* – as the effect of an apparent 'primate attitude' which, if we adopted the preconceptionist conclusions of Petitto, would probably show no plausible 'human' reasons – means 'all right!' in slang, and – again – the word *apple* is commonly used to refer

to *pupil* (*apple of the eye*) or to cheekbones (Spanish *pómulos*, Portuguese *maçã do rosto* and French *pommettes*) (Pamies *et al*., 2015).

When we observe that a chimpanzee indifferently uses the label for 'apple' to refer to "the action of eating apples", "the location where apples are kept", or "events and locations of objects other than apples that happened to be stored with an apple", we are closely observing the same creative attitude recognizable behind the processes of human lexicalization.

Provisional Conclusions

As a linguist and philologist, I think that it is crucial to bear in mind the following assertion recently made by two eminent paleoanthropologists:

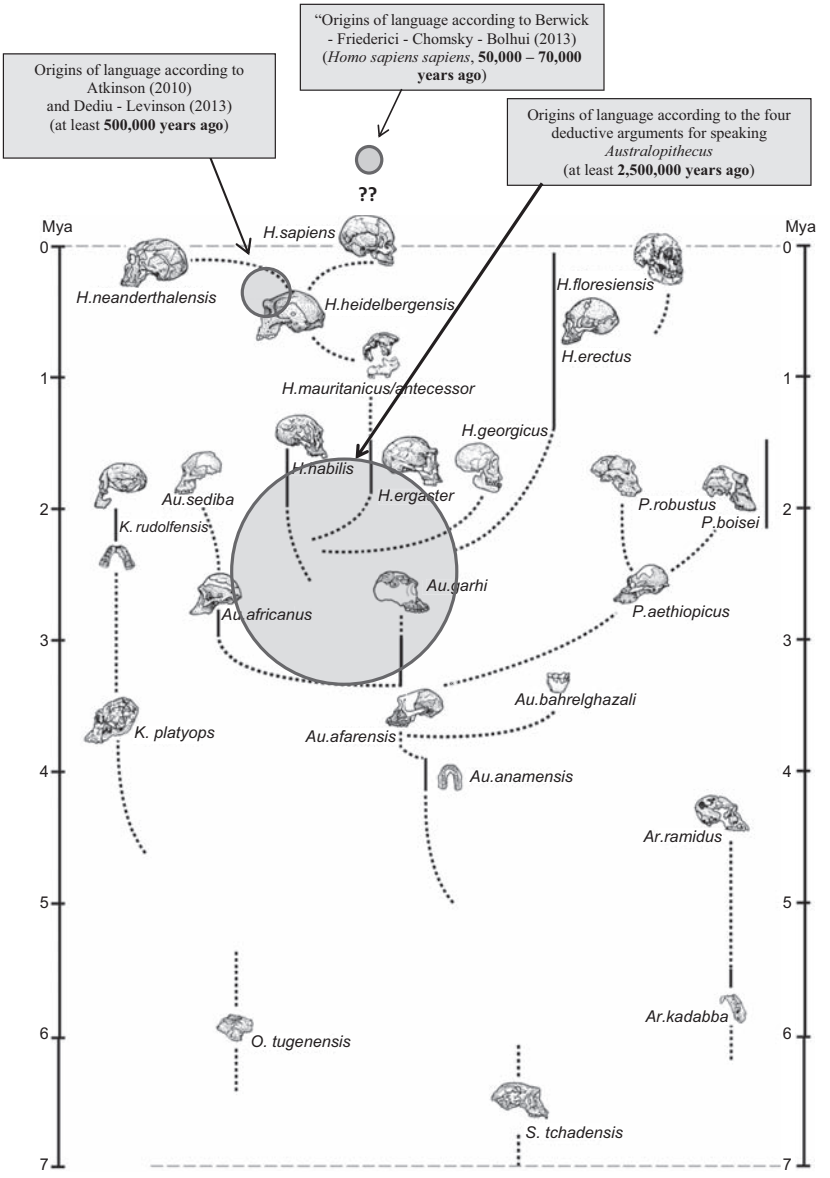
> The relationship between modern anatomy, cognition, culture and language is a complex one, and cannot be captured by a single saltationary event, let alone by a single 'gene' acquired at a specific moment in our evolutionary history, leaving unambiguous traces in the fossil or archaeological record. *This myth of a 'modern human revolution' is now totally rejected by paleoanthropologists and archaeologists, but it is disturbing to see it persisting – explicitly or implicitly – in discussion of language and cultural evolution* (Dediu & Levinson, 2014, p. 186).

A first answer to this solicitation can be offered by the four deductive arguments illustrated before. Bringing together the PCP, Chomsky's innatism, and the refusal of a conception of languages as evolving organisms, and considering the lithic-geolinguistic prehistoric correlation (1), the millennial stability of languages (2), the new revolutionary discovers on the language of animals (3) and the process of human world formation (4), I think that we can positively answer to the question posed by Tobias.

I would then point out the three following provisional conclusions:

1) *Homo* was born *loquens* (2.5 Mya)
2) languages appeared with *Homo* himself
3) language existed much earlier on (before 2.5 Mya).[1]

1 These my conclusions are now confirmed and asserted also by the eminent archaeologist and paleoanthropologist Marcel Otte: see Benozzo – Otte, 2017.



Summary of the main recent theories (including my proposal) about the evolution of human language (graphic of the evolution tree after Tattersall, 2012)

References

Ackermann, H. *et al*. (2014). Brain Mechanisms of Acoustic Communication in Humans and Nonhuman Primates: An Evolutionary Perspective. *Behavioral and Brain Sciences 37*, 529–546.

Alinei, M. (1996). The Correlation between Lithic and Linguistic Development: A Geolinguist's View. In Fachini (1996), pp. 107–116.

Alinei, M. (2003). The Role of Motivation ("Iconymy") in Naming: Six Responses to a List of Questions. In G. Sanga, G. Ortalli (Eds.), *Nature Knowledge. Ethnoscience, Cognition and Utility* (pp. 108–118). New York: Oxford Berghahn Books.

Alinei, M. (2005). Conservation and Change in Language. *Quaderni di Semantica 26*, 7–28.

Alinei, M. (2006). Darwinism, Traditional Linguistics And The New Palaeolithic Continuity Theory of Language Evolution. In N. Gontier – J.P. Van Bendegem – D. Aerts (Eds.), *Evolutionary Epistemology, Language and Culture A Non-Adaptationist, Systems Theoretical Approach* (pp. 121–147). Berlin – Heidelberg – New York: Springer.

Ardila, A. (2015). A Proposed Neurological Interpretation of Language Evolution. *Behavioural Neurology*, 1–16.

Atkinson, Q.D. (2011). Phonemic Diversity Supports a Serial Founder Effect Model of Language Expansion from Africa. *Science 332*, 346–349.

Axelsson *et al*. (2016). Near or Far: The Effect of Spatial Distance and Vocabulary Knowledge on Word Learning. *Acta Psychologica 163*, 81–87.

Beckers, G.J.L. – Berwick, R.C. – Bolhuisa, J.J. (2014). Comparative Analyses of Speech and Language Converge on Birds. *Behavioral and Brain Sciences 37/6*, 547–548.

Benozzo, F. (2010). The Mesolithic Distillation of Pitch and its Ethnolinguistic Reflections. In G. Belluscio – A. Mendicino (Eds.), *Studi in onore di Eric Pratt Hamp per il suo 90° compleanno* (pp. 29–42). Rende: Università della Calabria.

Benozzo, F. – Alinei, M. (2015). *DESLI. Dizionario etimologico-semantico della lingua italiana*. Bologna: Pendragon.

Benozzo, F. - Otte, M. (2017). *Speaking Australopithecus. A New Theory on the Origins of Human Language*. Alessandria: Edizioni dell'Orso.

Berwick, R.C. – Friederici, A.D. – Chomsky, N. – Bolhui, J.J. (2013). Evolution, Brain, and the Nature of Language. *Trends in Cognitive Science 17*, 89–98.

Chomsky, N. (2010a). Some Simple Evo Devo Theses: How True Might they be for Language?. In R. Larson, V. Deprez, H. Yamakido (Eds.), *The Evolution of Human Language: Biolinguistic Perspectives* (pp. 45–62). Cambridge, MA: Cambridge University Press.

Chomsky, N. (2010b). *The Science of Language: Interviews with James McGilvray*. Cambridge, MA: Cambridge University Press.

Clarke, E. *et al*. (2006). The Syntax and Meaning of Wild Gibbon Songs. *PLOS ONE 1*.

Collier, K. *et al*. (2014). Language Evolution: Syntax Before Phonology? *Proceedings of the Royal Society of London 281*.

Dediu, D. – Levinson, S.C. (2013). On The Antiquity of Language: The Reinterpretation of Neandertal Linguistic Capacities and is Consequences. *Frontiers in Psychology 4*.

Dediu, D. – Levinson, S.C. (2014). The Time Frame of the Emergence of Modern Language and its Implications. In Ch. Knight – J. Lewis (Eds.), *The Social Origins of Language* (pp. 184–195). Oxford: Oxford University Press.

Engesser, S. *et al*. (2015). Experimental Evidence for Phonemic Contrasts in a Nonhuman Vocal System. *PLOS Biology 13*.

Facchini, F. (Ed.) (1996). *Colloquium VIII: Lithic Industries, Language and Social Behaviour in the First Human Forms*, The Colloquia of the XIII International Congress of Prehistoric and Protohistoric Sciences, Forlì (Italy) 8–14 September 1996. Forlì: Abacus.

Gibson, K.R. (1996). Technology, Language and Cognitive Capacity, in Facchini (2006), 117–123.

Golinkoff, R.M. – Mervis, C.B. – Hirsh-Pasek, K. (1994). Early Object Labels: The Case for a Developmental Lexical Principles Framework. *Journal of Child Language 21/1*, 125–155.

Imai, M. *et al*. (1994). Children's Theories of Word Meaning: The Role of Shape Similarity in Early Acquisition. *Cognitive Development 9*, 45–76.

Luuk E. (2014). The Evolution of Syntax: Signs, Concatenation and Embedding. *Cognitive Systems Research 27*, 1–10.

McBrearty S. – Brooks A. S. (2000). The Revolution that Wasn't: A New Interpretation of The Origins of Modern Human Behavior. *Journal of Human Evolution 39*, 453–563.

Ouattara, K. *et al*. (2009). Campbell's Monkeys Use Affixation To Alter Call Meaning. *PLOS ONE 4*.

Pamies, A. *et al*. (2915) "Fruits are Results": On the Interaction between Universal Archi-Metaphors, Ethno-Specific Culturemes and Phraseology. *Journal of Social Sciences 11*, 227–247.

Petitto, L-A. (2005). How The Brain Begets Language. In J. McGilvray (Ed.), *The Cambridge Companion to Chomsky* (pp. 84–101). Cambridge: Cambridge University Press.

Prinz, W. (2014). Action Representation: Crosstalk between Semantics and Pragmatics. *Neuropsychologia 55*, 51–56.

Smith, L.B. *et al*. (1996). Naming in Young Children: A Dumb Attentional Mechanism? *Cognition 60*, 143–171.

Suzuki, T.N. – Wheatcroft, D. – Griesser, M. (2016). Experimental Evidence for Compositional Syntax in Bird Calls. *Nature Communications 7*.

Tattersall, I. (2010). Human Evolution and Cognition. *Theory in Biosciences 129*, 193–201.

Tattersall, I. (2912). *Masters of the Planet: The Search for Our Human Origins*. New York: Palgrave Macmillan.

Templeton, A.R. (2015). Population Biology and Population Genetics of Pleistocene *Hominins*. In I. Tattersall (Ed.), *Handbook of Paleoanthropology* (pp. 2331–2370). Berlin – Heidelberg – New York: Springer.

Tobias, Ph.V. (1996). The Evolution of the Brain, Language and Cognition. In F. Facchini (1996), 87–94.

Wildgen, W. (2015). The Cultural Individuation of Human Language Capacity and the Morphogenesis of Basic Argument-Schemata. In A. Sarti – F. Montanari – F. Galofaro (Eds.), *Morphogenesis and Individuation* (pp. 93–110). Berlin – Heidelberg – New York: Springer.

