



Module Study Guide

Origins of Language

6SSEL045
Year Three

*BA English Language and
Linguistics
2019/20*

Course Tutor

Dr Martin Edwardes

Visiting Lecturer

email: martin.1.edwardes@kcl.ac.uk

or: k1216036@kcl.ac.uk

Office hour: 13:00-16:00 Tuesdays

“It is worth considering why language evolution poses unique problems for the disciplines involved. Language itself is rather difficult to define, existing as it does both as transitory utterances that leave no trace, and as patterns of neural connectivity in the natural world’s most complex brains. It is never stationary, changing over time and within populations which themselves are dynamic. It is infinitely flexible and (almost) universally present. It is by far the most complex behavior we know of – the mammoth efforts of 20th century language research across a multitude of disciplines only serve to remind us just how much about language we still have to discover.

“There are good reasons to suppose that we will not be able to account for the evolution of language without taking into account all the various systems that underlie it. This means that language evolution is necessarily an interdisciplinary topic. There is inevitable skepticism regarding whether we will ever find answers to some of the questions surrounding the evolution of language and cognition. Whether this skepticism is justified will depend on how well we can marshal the evidence and tools from all the disciplines ...”

Morten H. Christiansen & Simon Kirby (2003). Language evolution: consensus and controversies. In *Trends in Cognitive Sciences* 7:7 July 2003

“...language is not, as we are led to suppose by the dictionary, the invention of academicians or philologists. Rather, it has been evolved through time...by peasants, by fishermen, by hunters, by riders.”

Jorge Luis Borges (2002), *This Craft of Verse*

At some point in our distant past, our ancestors used a communication system we would not call language; at some point in our more recent past, our ancestors communicated in a language-like way. This module is about the journey from non-language to language, and the physical, cognitive, social and cultural changes that our lineage must have undergone to make language possible.

We look at the likely events in our evolution, the order in which they probably occurred, and the effects they had on our communicative systems, to identify how human language, one of the strangest evolutionary adaptations, could have happened.

Educational aims of the module:

- To help students to understand language as a natural communication system comparable to other natural communication systems.
- To introduce students to the principles of neo-Darwinian evolution and its role in the development of modern human communication.
- To provide the tools and methods needed for informed speculative writing.

The module is assessed through two assignments:

- **A summary** on a single topic from the list given on webpage http://martinedwardes.me.uk/eaorc/eaorc_languageroute.html (400 words, 15% of the grade).
- **A literature review essay** discussing some key aspects of the origins of language (3,000 words, 85% of the grade).

The module is designed to help you to:

- Understand how language works as a natural communication system.
- Recognise the different theories of language origins, and the way they work together (or not) to produce metatheories.
- Understand the way the components of language are likely to have evolved, and the timescales involved.
- Be aware of the role of language origins as a basic concept in linguistics.
- Know how to write a useful report summary or academic abstract.

Lectures: Tuesday, 10:00-12:00, Room WBW 2/21

Week 1

What is language, and why is it an evolutionary conundrum? Was there a Eureka moment in the evolution of language, or was it a slow process requiring the development of a range of different skills? Is language a single thing or many things?

Interactive content

What counts as language?

Week 2

Animal communication: When animals signal, are they intentionally communicating, or is communication merely a side-effect? How and why is animal communication different from human language?

Interactive content

What happens when a human tells a lie?

Week 3

Teaching animals to use human language: Chimpanzees, bonobos, a gorilla, an orang utan, a grey parrot, dogs and dolphins. What do their achievements tell us about human language?

Interactive content

What does it feel like to think without language?

Week 4

How human children acquire language: is there a predictable single route toward language, or do we each find our own way? What can child language acquisition tell us about how the species acquired language?

Interactive content

Why do we all have infantile amnesia?

Week 5

Sound and gesture: productive complexity; vocal and aural systems; facial and gestural signalling by modern humans; was language originally gestural?

Interactive content

The evolution game

READING WEEK

Feel free to email me if you have any questions about the assignment(s).

Week 6

Tools and cognitive complexity: Tools require cognitive complexity, as does language; but does this mean that the two systems share a common origin, or that they share the same process?

Interactive content

Manual dexterity = vocal dexterity?

Week 7**NO LECTURE****Interactive content**

Project work seminar
Tutorials

Week 8

Human cooperation and sharing: Humans co-operate in ways that are unprecedented in nature, and language facilitates this co-operation; but did language lead to co-operation or co-operation lead to language? Or is the story more complicated? The Ratchet Effect and the Red Queen effect.

Interactive content

Prisoners' Dilemma, Monty Hall and snowdrift games, plus iteration.

Week 9

Socialisation and culture: As well as co-operating for the practicalities of surviving and thriving, humans also co-operate in the arbitrary spheres of socialisation and culture: we co-operate in ways that seem to be of little value to us as individuals. What makes this a good thing to do?

Interactive content

Can you groom with words?

Week 10

Self-awareness and language: Humans have an awareness of their own selfness, an awareness that seems to bring only disadvantages to the individual. Is this the "dark curse" of language, or its greatest gift?

Interactive content

What counts as language (2)?

Spring Break

Feel free to email me if you have any questions about the assignment(s).

Summary Assignment

Deadline:
5pm Thu 26 March 2020

The first assignment for this module is a 400-word summary or abstract, on a single topic involved in language evolution. It receives 15% of the final grade mark.

Where to Find the Topics List

- See: http://martinedwardes.me.uk/eaorc/eaorc_languageroute.html
- Or see the back pages of this Guide.
- If you feel that there are relevant topics which are not included on the diagram, contact the lecturer. The list is not definitive, and other topics may well need to be added. If the lecturer agrees, you can then produce your own topic summary.

How to write your summary

- See http://martinedwardes.me.uk/eaorc/eaorc_lang_machint.html to read a sample text.
- Look at other abstracts and summaries in academic papers for further examples.
- Read the e-learning booklet *Writing Abstracts*, available on KEATS.
- Your summary should consist of a discussion and reference list. No other information is needed.
- Your discussion should not contain subheadings.

Questions to consider:

- What are the key features of the topic?
- What is their logical order? Keep to the order selected.
- How does one feature relate to other features? Identify linking factors.
- How do these features define the chosen topic?

Marks will be given for:

- **Breadth:** the topic you choose to summarise should be described comprehensively; you should ensure the key features of the topic are listed but not covered in depth.
- **Structure:** your summary should define the topic, discuss the key features or key uses of the topic, and give a single concluding sentence.
- **Clarity:** your summary should be simple to read and understand without being simplistic.
- **Standardisation:** your summary needs to follow a standard format for a summary/abstract. This standard format is set out in detail in a separate document.
- **Referencing:** you should use references sparingly. Your reference list should contain between three and seven items, one of which should be your key text.

Origin of Language Essay

Deadline:

5pm Tue 5th May 2020

The second assignment for this module is a 3,000-word essay on a relevant topic of language evolution. It receives 85% of the final grade mark. You should decide on your topic in discussion with the lecturer.

Example Essay Topics

1. Discuss the development of some of the physical attributes that led to human language.
2. Describe the physical features that distinguish human language from other ape communication.
3. Discuss the cognitive differences between humans and other apes. What makes our cognition so unusual in the natural world?
4. Describe the correspondences and differences between human tool-making and language. What common physical and cognitive skills do they both use?
5. Discuss the role of human socialisation and culture in the development of language. What social features make human language possible and other ape languages impossible?

This is only a small sample of possible essays. Agree your own essay topic with the lecturer!

Questions to consider:

- Which process will you discuss? It must be described in sufficient detail, so don't try to cover too much.
- What is the order of events in the process? Keep to the order, and make sure information is in the right place.
- How does one event in the process lead to the next? Identify linking factors.
- How far does this process get you toward language? You are not expected to cover the whole of language evolution, but the process you discuss should be contextualised.

How to write your essay

There is no magic formula for writing an essay. Read the essay guide by David Gauntlett, *Essay Writing: The essential guide* (see KEATS) for some ideas for improving your essay writing. You may also find some useful tips in books like Michael Billig's *Learn to Write Badly: How to succeed in the social sciences* (Cambridge University Press, Cambridge, UK, 2013). However, avoid sources which offer a standard formula: essays have different aims, and different aims need different approaches.

Marks will be given for:

- **Breadth:** the process you choose to discuss should be sufficient to show linguistic development, but not so large that you cannot give each event in the process sufficient attention.
- **Structure:** your essay should have narrative form – a beginning, a middle, and an end.
- **Argumentation:** your discussion should be sensible and have a clear, logical sequence.
- **Evidence:** you should not assert; always provide supporting evidence or argument.
- **Completeness:** while you are describing only one part of a larger process, your description should be comprehensive.
- **Referencing:** you should use appropriate references which support your arguments.
- **Novelty:** if you are able to add new ideas, so much the better.

Resources to support your learning

The essential books for the course are:

- 📖 **Mike Beaken (2018)**. *The Making of Language* (2nd Edition Revised). Scitsiugnil Press: London, UK. <http://martinedwardes.me.uk/scitsiugnil/>
- 📖 **Martin Edwardes (2019)**. *The Origins of Self: An anthropological perspective*. UCL Press: London, UK. <https://www.uclpress.co.uk/products/125998>

These books are free. Copies can be downloaded to your own PC or memory stick.

Other key texts

- 📖 **Rudolf Botha (2016)**. *Language Evolution: The Windows Approach*. Cambridge University Press: Cambridge, UK.
- 📖 **Morten H Christiansen & Nick Chater (2016)**. *Creating Language: Integrating evolution, acquisition, and processing*. MIT Press: Cambridge, Mass, USA.
- 📖 **Daniel Everett (2017)**. *How Language began: The Story of Humanity's Greatest Invention*. Profile Books: London, UK.
- 📖 **James R Hurford (2014)**. *The Origins of Language: A slim guide*. Oxford University Press: Oxford, UK.

Useful Edited Books

Each chapter is written by different authors, who each have their own approach. The editors ensure there is order and continuity to the chapters, but they do not dictate the approach the authors take.

- 📖 **Martyn Barrett (1999)**. *The Development of Language: Studies in developmental psychology*. Psychology Press Ltd: Hove, E.Sussex, UK.
- 📖 **Rudolf Botha & Martin Everaert (2013)**. *The Evolutionary Emergence of Language: Evidence and inference*. Oxford University Press: Oxford, UK.
- 📖 **Rudolf Botha & Chris Knight (2009)**. *The Cradle of Language*. Oxford University Press: Oxford, UK.
- 📖 **Rudolf Botha & Chris Knight (2009)**. *The Prehistory of Language*. Oxford University Press: Oxford, UK.
- 📖 **Morten H Christiansen & Simon Kirby (2003)**. *Language Evolution*. Oxford University Press: Oxford, UK.
- 📖 **Daniel Dor, Chris Knight & Jerome Lewis (2014)**. *The Social Origins of Language*. Oxford University Press: Oxford, UK.
- 📖 **Nick C Ellis & Diane Larsen-Freeman (2009)**. *Language as a Complex Adaptive System*. Wiley-Blackwell: Oxford, UK.
- 📖 **T Givón & Bertram F Malle (2002)**. *The Evolution of Language out of Pre-Language*. John Benjamins BV: Amsterdam, Nlids.
- 📖 **Barbara J King (1999)**. *The Origins of Language: What nonhuman primates can tell us*. SAR Press: Santa Fe, NM, USA.
- 📖 **Richard K Larson, Viviane Déprez & Hiroko Yamakido (2010)**. *The Evolution of Human Language: Biolinguistic perspectives*. Cambridge University Press: Cambridge, UK.
- 📖 **Maggie Tallerman (2005)**. *Language Origins: Perspectives on evolution*. Oxford University Press: Oxford, UK.
- 📖 **Andrew Whiten, Robert A Hinde, Christopher B Stringer & Kevin N Laland (2012)**. *Culture Evolves*. Oxford University Press: Oxford, UK.
- 📖 **Geoff Williams & Annabelle Lukin (2004)**. *The Development of Language: Functional perspectives on species and individuals*. Continuum: London, UK.
- 📖 **Alison Wray (2002)**. *The Transition to Language*. Oxford University Press: Oxford, UK.

Useful Authored Books

These are written by the authors, and contain only the opinions and ideas of those authors. The books provide analytical depth of the topic covered, but are written from a single perspective.

- 📖 **Julie Tetel Andresen (2014)**. *Linguistics and Evolution: A developmental approach*. Cambridge University Press: Cambridge, UK.
- 📖 **Derek Bickerton (2009)**. *Adam's Tongue: how humans made language, how language made humans*. Hill & Wang: New York, USA.
- 📖 **Bart de Boer (2001)**. *The Origins of Vowel Systems*. Oxford University Press: Oxford, UK.
- 📖 **Robbins Burling (2005)**. *The Talking Ape: how language evolved*. Oxford University Press: Oxford, UK.
- 📖 **Michael C Corballis (2002)**. *From Hand to Mouth: the origins of language*. Princeton University Press: Oxford, USA.
- 📖 **Terrence Deacon (1997)**. *The Symbolic Species*. Penguin: London, UK.
- 📖 **Jean-Louis Dessalles (2007)**. *Why We Talk: the evolutionary origins of language*. Oxford University Press: Oxford, UK.
- 📖 **Robin I M Dunbar (1996)**. *Grooming, Gossip and the Evolution of Language*. Faber & Faber Ltd: London, UK.
- 📖 **Martin Edwardes (2010)**. *The Origins of Grammar: An anthropological perspective*. Continuum: London, UK.
- 📖 **Vyvyan Evans (2014)**. *The Language Myth: Why language is not an instinct*. Cambridge University Press: Cambridge, UK.
- 📖 **Daniel Everett (2012)**. *Language: The cultural tool*. Profile Books: London, UK.
- 📖 **Dean Falk (2009)**. *Finding Our Tongues: Mothers, infants and the origins of language*. Basic Books: New York, USA.
- 📖 **William Tecumseh Fitch (2010)**. *The Evolution of Language*. Cambridge University Press: Cambridge, UK.
- 📖 **Stanley I Greenspan & Stuart G Shanker (2004)**. *The First Idea: How symbols, language and intelligence evolved from our primate ancestors to modern humans*. Da Capo Press: Cambridge, Mass, USA.
- 📖 **Bernd Heine & Tania Kuteva (2007)**. *The Genesis of Grammar: a reconstruction*. Oxford University Press: Oxford, UK.
- 📖 **Ray Jackendoff (2012)**. *A User's Guide to Thought and Meaning*. Oxford University Press: Oxford, UK.
- 📖 **Sverker Johansson (2005)**. *Origins of Language: Constraints on hypotheses*. John Benjamins BV: Amsterdam, NlDs.
- 📖 **Philip Lieberman (2000)**. *Human Language and our Reptilian Brain: the subcortical bases of speech, syntax, and thought*. Harvard University Press: Cambridge, Mass, USA.
- 📖 **Peter MacNeilage (2008)**. *The Origin of Speech*. Oxford University Press: Oxford, UK.
- 📖 **David McNeill (2012)**. *How Language Began: gesture and speech in human evolution*. Cambridge University Press: Cambridge, UK.
- 📖 **Neil Mercer (2000)**. *Words & Minds: how we use language to think together*. Routledge: London, UK.
- 📖 **Steven Mithen (2005)**. *The Singing Neanderthals: the origins of music, language, mind and body*. Weidenfeld & Nicolson: London, UK.
- 📖 **Pierre-Yves Oudeyer (2006)**. *Self-Organization in the Evolution of Speech*. Oxford University Press: Oxford, UK.
- 📖 **Steven Pinker (1994)**. *The Language Instinct*. Penguin: London, UK.
- 📖 **Geoffrey Sampson (2005)**. *The 'Language Instinct' Debate (revised edition)*. Continuum: London, UK.
- 📖 **Thom Scott-Phillips (2015)**. *Speaking Our Minds: Why human communication is different, and how language evolved to make it special*. Palgrave Macmillan: Basingstoke, UK.
- 📖 **Michael Tomasello (2003)**. *Constructing a Language: A usage-based theory of language acquisition*. Harvard University Press: Cambridge, USA.
- 📖 **Michael Tomasello (2008)**. *Origins of Human Communication*. MIT Press: Cambridge, Mass, USA.

A fuller list of books relevant to language origins is available at http://martinedwardes.me.uk/eaorc_books.html.

For your summary, you will also need the list of possible routes to language given at http://martinedwardes.me.uk/eaorc_languageroute.html

This is a work in progress, it is not a definitive solution. Suggestions from the module students (i.e. you) change this each year.

Useful Papers

These are published in journals and reflect the particular work of the authors. They represent a sample of the papers available.

- 📖 **Richard A. Blythe & Thomas C. Scott-Phillips (2014)**. Simulating the Real Origins of Communication. In *PLoS ONE* 9:11.
- 📖 **Johan J. Bolhuis, Ian Tattersall, Noam Chomsky & Robert C. Berwick (2014)**. How Could Language Have Evolved? In *PLoS Biology* 12:8, e1001934.
- 📖 **J.M. Burkart, O. Allon, F. Amici, C. Fichtel, C. Finkenwirth, A. Heschl, J. Huber, K. Isler, Z.K. Kosonen, E. Martins, E.J. Meulman, R. Richiger, K. Rueth, B. Spillmann, S. Wiesendanger & C.P. van Schaik (2014)**. The evolutionary origin of human hyper-cooperation. In *Nature Communications* 5:4747.
- 📖 **Nick Chater, Florencia Reali & Morten H. Christiansen (2009)**. Restrictions on biological adaptation in language evolution. In *PNAS* 106:4, pp1015-1020.
- 📖 **Michael C. Corballis (2013)**. Wandering tales: evolutionary origins of mental time travel and language. In *Frontiers in Psychology* 4:485.
- 📖 **Martin Edwardes (2014)**. Awareness of self and awareness of selfness: why the capacity to self-model represents a novel level of cognition in humans. In *Selected Papers from the 4th UK Cognitive Linguistics Conference*, <http://uk-cla.org.uk/proceedings>, pp68-83.
- 📖 **Francesco d’Errico, Christopher Henshilwood, Graeme Lawson, Marian Vanhaeren, Anne-Marie Tillier, Marie Soressi, Frédérique Bresson, Bruno Maureille, April Nowell, Joseba Lakarra, Lucinda Backwell & Michèle Julien (2003)**. Archaeological Evidence for the Emergence of Language, Symbolism, and Music – An Alternative Multidisciplinary Perspective. In *Journal of World Prehistory* 17:1.
- 📖 **Marc D. Hauser, Charles Yang, Robert C. Berwick, Ian Tattersall, Michael Ryan, Jeffrey Watumull, Noam Chomsky & Richard Lewontin (2014)**. The mystery of language evolution. In *Frontiers in Psychology* 5:401.
- 📖 **Bernd Heine & Kyung-An Song (2010)**. On the genesis of personal pronouns: Some conceptual sources. In *Language and Cognition* 2:1, pp117-147.
- 📖 **Ray Jackendoff (1999)**. Possible stages in the evolution of the language capacity. In *Trends in Cognitive Sciences* 3:7, pp272-279.
- 📖 **Simon Kirby, Hannah Cornish & Kenny Smith (2008)**. Cumulative cultural evolution in the laboratory: An experimental approach to the origins of structure in human language. In *PNAS* 105:31, pp10681-10686.
- 📖 **George Lakoff (2014)**. Mapping the brain’s metaphor circuitry: metaphorical thought in everyday reason. In *Frontiers in Human Neuroscience*, December 2014, 8:958.
- 📖 **Alicia P. Melis & Dirk Semmann (2010)**. How is human cooperation different? In *Phil. Trans. R. Soc. B* 365, pp2663-2674.
- 📖 **Christiane Schreiweis, Ulrich Bornschein, Eric Burguière, Cemil Kerimoglu, Sven Schreiter, Michael Dannemann, Shubhi Goyal, Ellis Rea, Catherine A. French, Rathi Puliyadi, Matthias Groszer, Simon E. Fisher, Roger Mundry, Christine Winter, Wulf Hevers, Svante Pääbo, Wolfgang Enard & Ann M. Graybiel (2014)**. Humanized Foxp2 accelerates learning by enhancing transitions from declarative to procedural performance. In *PNAS* 111:39, pp14253-14258.
- 📖 **Lauren J. Silbert, Christopher J. Honey, Erez Simony, David Poeppel & Uri Hasson (2014)**. Coupled neural systems underlie the production and comprehension of naturalistic narrative speech. In *PNAS* 111:43 E4687-E4696.
- 📖 **Katie E. Slocombe & Klaus Zuberbühler (2005)**. Functionally Referential Communication in a Chimpanzee. In *Current Biology* 15, pp1779-1784.
- 📖 **Ralf D. Sommerfeld, Hans-Jürgen Krambeck & Manfred Milinski (2008)**. Multiple gossip statements and their effect on reputation and trustworthiness. In *Proc. R. Soc. B* 275, pp2529-2536.
- 📖 **Sławomir Waciewicz & Przemysław Żywicznyński (2014)**. Language Evolution: Why Hockett’s Design Features are a Non-Starter. In *Biosemiotics* 2014, pp 1875-1342.
- 📖 **Stuart K. Watson, Simon W. Townsend, Anne M. Schel, Claudia Wilke, Emma K. Wallace, Leveda Cheng, Victoria West & Katie E. Slocombe (2015)**. Vocal Learning in the Functionally Referential Food Grunts of Chimpanzees. In *Current Biology* 25, pp1-5.
- 📖 **Polly W. Wiessner (2014)**. Embers of society: Firelight talk among the Ju/’hoansi Bushmen. In *PNAS* 111:39, pp14027-14035.
- 📖 **Yoad Winter (2014)**. On the Grammar of a Senegalese Drum Language. In *Language* 90:3, pp644-668.

Useful Articles

Journals

- Journal of Language Evolution <https://academic.oup.com/jole>
- Frontiers in Ecology & Evolution <https://www.frontiersin.org/journals/ecology-and-evolution#>
- Animal Behaviour journal <https://www.journals.elsevier.com/animal-behaviour/>
- Journal of Human Evolution <https://www.journals.elsevier.com/journal-of-human-evolution/>
- Evolutionary Anthropology [http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1520-6505](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1520-6505)
- Biolinguistics (<http://www.biolinguistics.eu/index.php/biolinguistics>)
- Language and Cognition (<http://journals.cambridge.org/action/displayJournal?jid=LCO>)
- Interaction and Iconicity in the Evolution of Language, special issue of *Interaction Studies* <https://benjamins.com/#catalog/journals/is.18.3.01ple/details>
- Language evolution volume of the journal *Theoria et Historia Scientiarum* <http://apcz.pl/czasopisma/index.php/THS/issue/view/467/showToc>

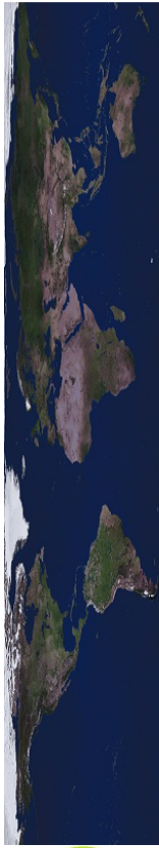
General Articles

- Calculating the origins of language <http://www.ox.ac.uk/news/2016-12-23-calculating-origins-language>
- Phonetic Clues Hint Language Is Africa-Born <http://www.nytimes.com/2011/04/15/science/15language.html>
- 6 Early Theories about the Origin of Language <http://mentalfloss.com/article/48631/6-early-theories-about-origin-language>
- Do All Languages Derive from a Single Common Ancestor? http://www.slate.com/blogs/lexicon_valley/2014/08/21/origin_of_languages_tower_of_babel_proto_languages_and_the_brothers_grimm.html
- Ancient Cave Drawings and Early Human Language Linked in New Study <https://news.nationalgeographic.com/2018/02/acoustic-caves-rock-art-language-origin-spd/>
- The writing on the wall <http://news.mit.edu/2018/humans-speak-through-cave-art-0221>
- Ludwig Noiré and the Debate on Language Origins in the 19th Century <https://hiphilangsci.net/2016/09/28/ludwig-noire-and-the-debate-on-language-origins-in-the-19th-century/>
- Apes Point to Origins of Human Language <https://www.livescience.com/4427-apes-point-origins-human-language.html>
- Human language may have evolved to help our ancestors make tools <http://www.sciencemag.org/news/2015/01/human-language-may-have-evolved-help-our-ancestors-make-tools>
- How humans evolved language, and who said what first <https://www.newscientist.com/article/2075666-how-humans-evolved-language-and-who-said-what-first/>
- Darwin Correspondence Project: The Origin of Language <https://www.darwinproject.ac.uk/commentary/human-nature/origin-language>

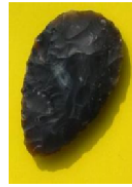
Other Useful Resources

Other useful websites

- Some of Jim Hurford's writing: <http://www.lel.ed.ac.uk/~jim/articles.html>
- Some of Thom Scott-Phillips' writing: <http://thomscottphillips.wordpress.com/publications/>
- Some of Vyvyan Evans' writing: http://www.bangor.ac.uk/linguistics/about/vyv_evans.php.en
- Some of Bernd Heine's writing: <http://www.prof-bernd-heine.de/html/publications-since-2002.html>
- Suzanne Kemmer's The Origins and Evolution of Human Language: <http://www.ruf.rice.edu/~kemmer/Evol/info16.html>
- Free online linguistics resource, with an emphasis on diachronic linguistics: <http://www.nativlang.com/index.php>
- The Evolutionary Anthropology Online Research Cluster (EAORC): <http://martinedwardes.me.uk/eaorc.html>



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Routes to Language

Map

The model shows a series of capacities, given in a rough time order and with dependencies indicated. A timescale is not given, but the capacities are colour-coded by probable species, as follows:
Orange: pre-Australopithecus **Yellow:** Australopithecus **Green:** Homo genus, all species **Blue:** Homo erectus & subsequent species **Purple:** Homo heidelbergensis & subsequent species **Red:** Homo sapiens

This page is an attempt to describe a meta-model of language origins. It is intended to be a topic for discussion and not a definitive map of how language evolved. The route to language given here illustrates how a comprehensive theory of language origins could be structured, not how language actually originated.

The approach used in this model is cognitivist, so the proposal makes certain basic assumptions. All of these assumptions are disputed, so it is important to make them explicit:

- Language is not a single system with a single origin.
- Language exapts existing cognitive, sound-making and gesture-making systems, it does not rely on novel, language-specific systems.
- Language has meaning (lexis and semantics), structure (grammar and syntax) and phonology (sound and gesture). Any comprehensive attempt to describe language origins should address all of these.
- Language is a social phenomenon, and this must be central to any explanation of language origins.
- Language is a tool; it changes its environment. A full hypothesis of language origins needs to explain these environmental changes.

This is the model as at 31 December 2019. This is not a final version.

but the capacities are colour-coded by probable species, as follows:

Green: Homo genus, all species **Blue:** Homo erectus & subsequent species **Purple:** Homo heidelbergensis & subsequent species **Red:** Homo sapiens

These species allocations are arbitrary and open to discussion.

This model should be viewed as a hypothesis (or, to be more accurate, a hypothesis about a hypothesis), and criticisms and suggestions for improvement are most welcome.

If this project is of interest, or if you have any thoughts about it, you can contact me at martin.edwards@bopenworld.com to discuss it further.

