



Language Evolution WiSe 2023/2024

Lecture 1: Organization & Introduction

24/10/2023, Christian Bentz



Overview

Section 1: Organization

Course Credits

Preliminary Schedule

Section 2: Literature

Book-length Introductions

Handbook

Edited Volumes

Introductory Articles

Section 3: Introduction

Becoming Human

Language: What, how, when?

References



Section 1: Organization



ALMA

Language Evolution | Veranstaltung

Zurück

Semesterauswahl
Semester: Winter 2023/24

Semesterplanung
Grunddaten **Parallelgruppen / Termine** Vorlesungsverzeichnis Gekoppelte Prüfungen Module / Studiengänge

Language Evolution ▾

[Daten für iCalendar \(.ics\) exportieren](#) [Einzeltermine anzeigen](#) [Details einblenden](#)

Typ: Semesterkurs
Semesterwochenstunden: 4.0
Lehrsprache: englisch
Verantwortliche/-r: Ph.D. Christian Bentz

Änderungen	Rhythmus	Wochentag	Von - Bis	Ausfalltermin	Startdatum - Enddatum	Erw. Tn.	Bemerkung	Durchführende/-r	Raum
	wöchentlich	Di	14:00 - 16:00 c.t.	<ul style="list-style-type: none"> 17.10.2023 26.12.2023 02.01.2024 	24.10.2023 - 06.02.2024	20		Ph.D. Christian Bentz	Seminar-/Besprechungsraum 181 (OSA-Keplerstr.)
	wöchentlich	Do	14:00 - 16:00 c.t.	<ul style="list-style-type: none"> 19.10.2023 28.12.2023 04.01.2024 	26.10.2023 - 08.02.2024	20		Ph.D. Christian Bentz	Seminar-/Besprechungsraum 181 (OSA-Keplerstr.)

HISinOne

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Moodle

The screenshot shows the Moodle interface for a course titled "Language Evolution". At the top left, there is a navigation menu with "Home", "Dashboard", and "My courses". The course title "Language Evolution" is prominently displayed at the top of the main content area. Below the title, there are tabs for "Course", "Settings", "Participants", "Grades", "Question bank", and "More". The "General" section is expanded, showing a "Collapse all" button and a list of items under "Ankündigungen" (Announcements). Below this, there are sections for "Lecture Slides" and "Literature". The background of the course page features a geometric pattern of overlapping triangles in shades of orange and yellow. In the top right corner, there are icons for notifications, a user profile (CB), and an "Edit mode" toggle. A help icon (?) is visible in the bottom right corner of the course page.

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Course Credits

- ▶ Exam on **Thursday 21st December 2023: 6 ECTS**
- ▶ Research Project: presentation in one of the slots in 2024. **6 ECTS**

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Schedule (2023)

24/10/2023	Lecture 1	Organization & Introduction	Section 1: Organization			
26/10/2023	Lecture 2	Human Evolution I: Hominin Fossils		Section 2: Literature		
31/10/2023	Lecture 3	Human Evolution II: Morphology			Section 3: Introduction	
02/11/2023	Lecture 4	Human Evolution III: Archaeology				References
07/11/2023	Lecture 5	Human Evolution IV: Genetics				
09/11/2023	Lecture 6	Human Evolution V: Dispersals				
14/11/2023	Lecture 7	Language Evolution: Theories				
16/11/2023	Lecture 8	Methods I: Formal Language Theory				
21/11/2023	Lecture 9	Methods II: Quantitative Linguistics				
23/11/2023	Lecture 10	Methods III: Information Theory				
28/11/2023	Lecture 11	Methods IV: Experiments				
30/11/2023	Lecture 12	Current Topics: Evolutionary Semiotics I				
05/12/2023	Lecture 13	Current Topics: Evolutionary Semiotics II (online)				
07/12/2023	Lecture 14	Current Topics: Evolutionary Semiotics III (online)				
12/12/2023	Lecture 15	Current Topics: Animal Communication				
19/12/2023	Lecture 16	Revision & Allocations of Projects				
21/12/2023	Lecture 17	Exam				



Schedule (2024)

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- 09/01/2024 **Lecture 18** Hao-han Yu (Project 7: Time Depth)
- 11/01/2024 **Lecture 19** [Ruiyu Wang \(Project 1: Sign Entropy\)*](#)
[Ruitong Liu \(Project 1: Sign Entropy\)*](#)
- 16/01/2024 **Lecture 20** Anne Honold (Project 6: Compositionality)
[Alexandra Din \(Project 7: Time Depth\)*](#)
- 18/01/2024 **Lecture 21** Valentin Pickard (Project 8: Bird Song)
- 23/01/2024 **Lecture 22** Matthias Drews (Project 9: Primate Com.)
- 25/01/2024 **Lecture 23** Nikita Beklemishev (Project 10: Whale Song)
- 30/01/2024 **Lecture 24** Yanxing Yang (Project 5: Cave Signs)
- 01/02/2024 **Lecture 25** Zhexuan Li (Project 5: Cave Signs)
- 06/02/2024 **Lecture 26** Kimberly Sharp (Project 4: Calendars)
- 08/02/2024 **Lecture 27** Yueyun Xiao (Project 4: Calendars)

*online via videos

*online via zoom



Section 2: Literature

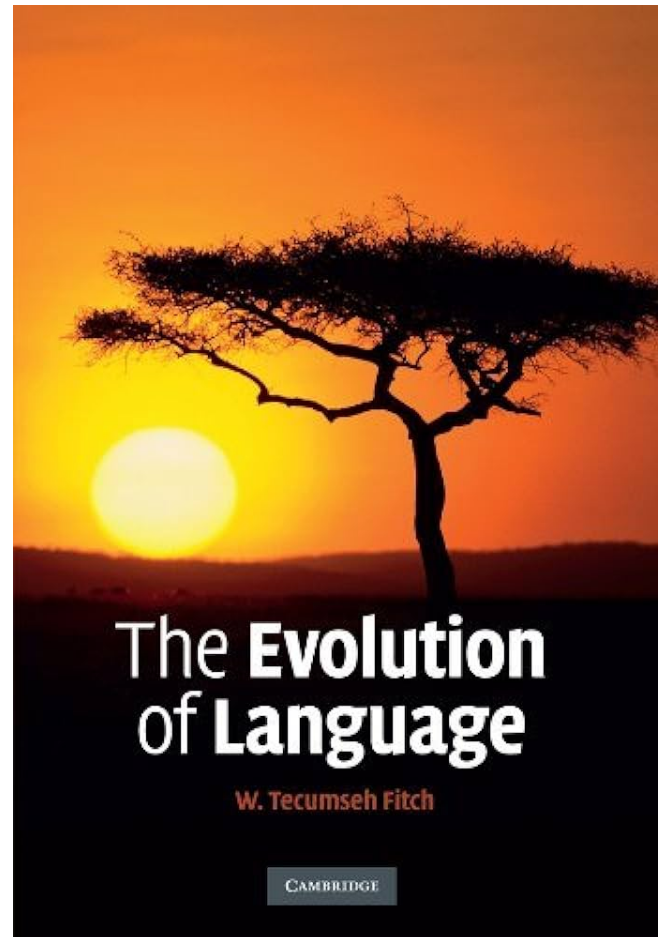


Book-length Introductions

Fitch, Tecumseh W. (2010). The evolution of language. Cambridge: Cambridge University Press.



Tecumseh W. Fitch



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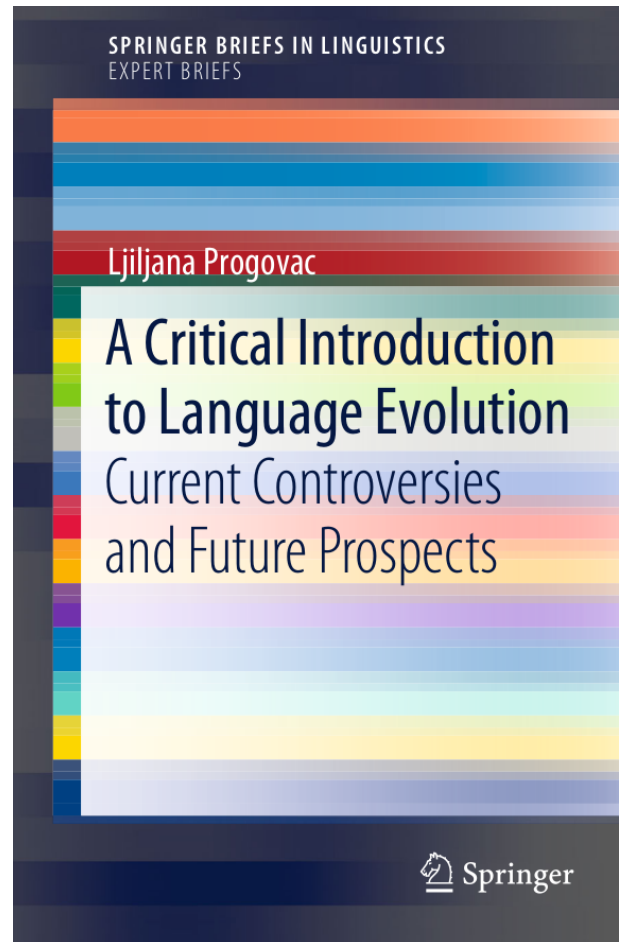


Book-length Introductions

Progovac, Ljiljana. (2019). A critical introduction to language evolution. Current controversies and future prospects. Springer.



Ljiljana Progovac



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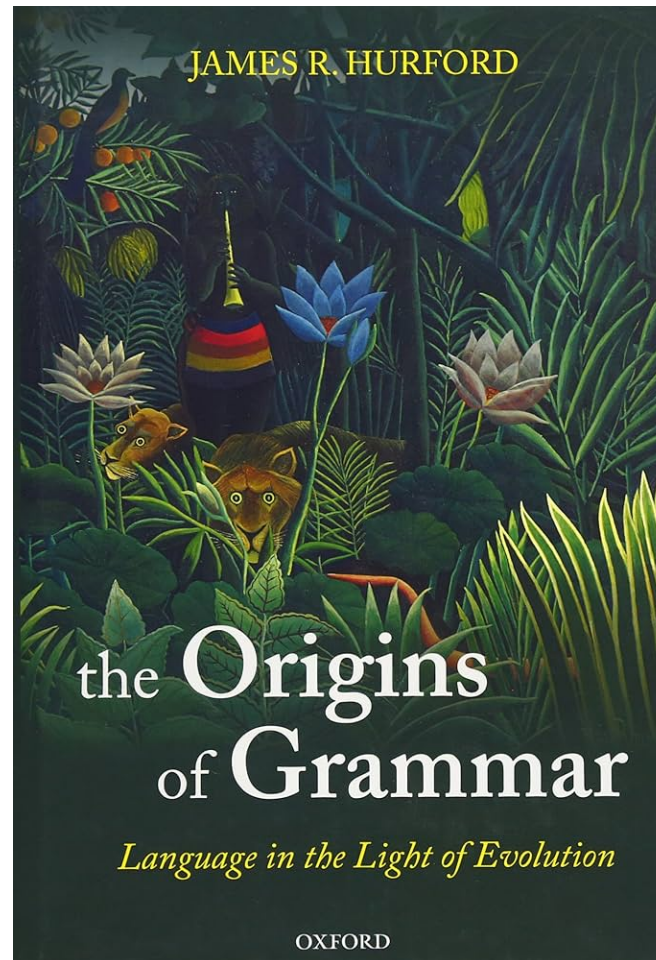


Book-length Introductions

Hurford, James R. (2011). *The origins of grammar*. Oxford: Oxford University Press.



James R. Hurford



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Handbook

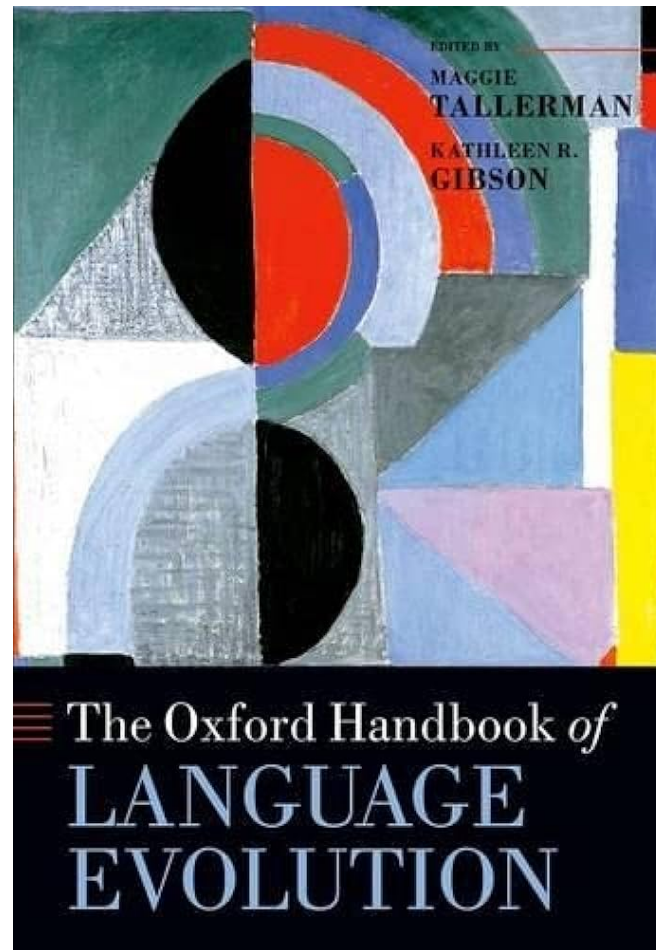
Tallermann, Maggie (2012). The Oxford handbook of language evolution. Oxford: Oxford University Press.



Maggie Tallermann



Kathleen R. Gibson



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Edited Volumes

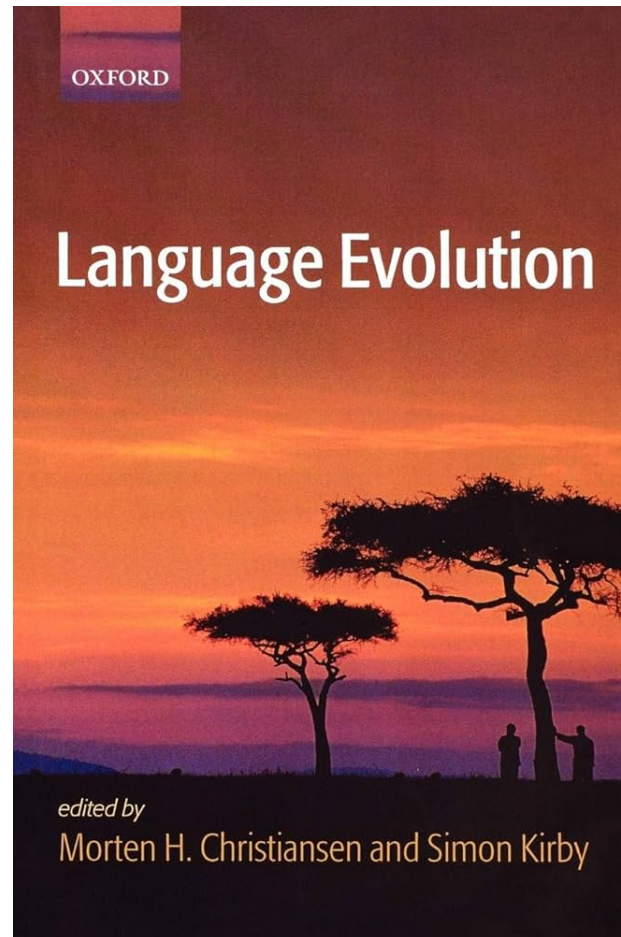
Christiansen, Morten H. and Simon Kirby (Eds.) (2003). *Language evolution*. Oxford: Oxford University Press.



Morten H. Christiansen



Simon Kirby



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Edited Volumes

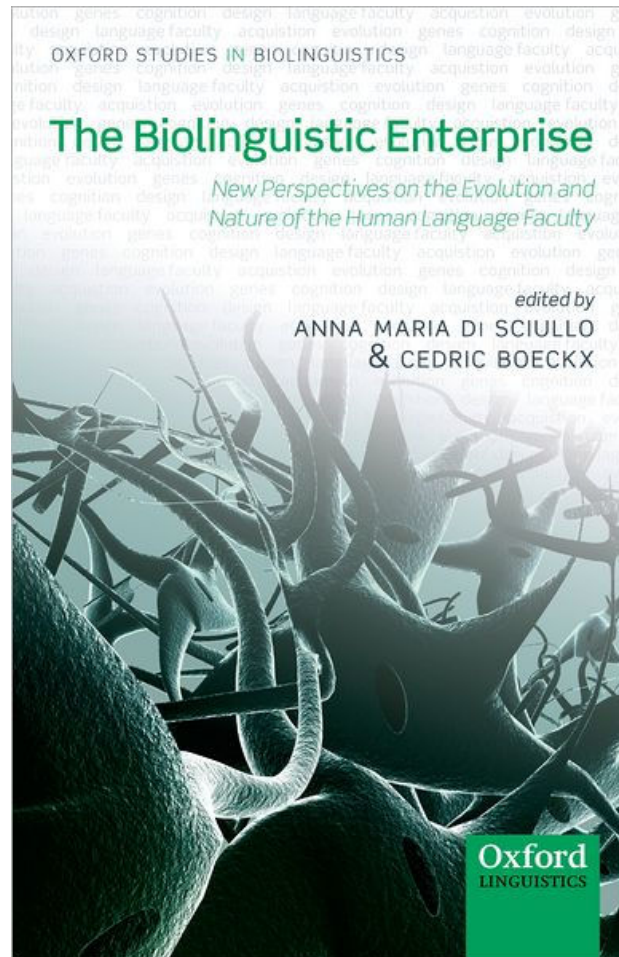
Di Sciullo, A. & Boeckx, C. (Eds.)
(2011). *The biolinguistic enterprise.*
New perspectives on the evolution
and nature of the human language
faculty. Oxford: Oxford University
Press.



Anna Maria Di Sciullo



Cedric Boeckx



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Introductory Articles

- ▶ Fitch, Tecumseh W. (2018). The Biology and evolution of speech: A comparative analysis. *Annual Review in Linguistics*.
- ▶ Klein, Richard G. (2017). Language and human evolution. *Journal of Neurolinguistics*.
- ▶ Fitch, Tecumseh W. (2017). Empirical approaches to the study of language evolution. *Psychonomic Bulletin & Review*.
- ▶ Hausser et al. (2014). The mystery of language evolution. *Frontiers in Psychology*.
- ▶ Berwick et al. (2013). Evolution, brain, and the nature of language. *Trends in Cognitive Sciences*.

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Journal

OXFORD
ACADEMIC

Journals Books

Journal of Language Evolution

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Journal of Language Evolu

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Year 2023 ▾ Issue Volume 8, Issue 1, January 2023, Pages 1–102 ▾ [Browse by volume](#)



Volume 8, Issue 1
January 2023

[Cover image](#)

EISSN 2058-458X

Research Articles

[Correction](#)

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Volume 8, Issue 1, January 2023

RESEARCH ARTICLES

Iconicity in the emergence of a phonological system?

Mara Moita and others

Journal of Language Evolution, Volume 8, Issue 1, January 2023, Pages 1–17, <https://doi.org/10.1093/jole/lzad009>

Abstract ▾ [View article](#)

Constraints on communicating the order of events in stories through pantomime

Marta Sibierska and others

Journal of Language Evolution, Volume 8, Issue 1, January 2023, Pages 18–32, <https://doi.org/10.1093/jole/lzad008>

Abstract ▾ [View article](#)

<https://academic.oup.com/jole>

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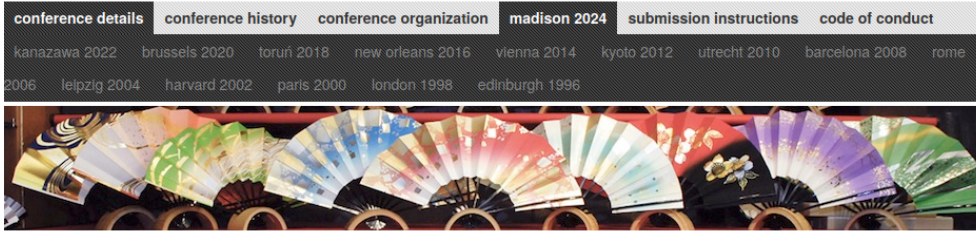
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Conference

EVOLANG

Evolution of Language International Conferences



next conference

- [Madison 2024](#)

past conferences

- [Kanazawa 2022](#)
- [Brussels 2020](#)
- [Toruń 2018](#)
- [New Orleans 2016](#)
- [Vienna 2014](#)
- [Kyoto 2012](#)
- [Utrecht 2010](#)
- [Barcelona 2008](#)
- [Rome 2006](#)
- [Leipzig 2004](#)
- [Harvard 2002](#)
- [Paris 2000](#)
- [London 1998](#)
- [Edinburgh 1996](#)

conference details

The Evolang conference series provides the major meeting for researchers studying the origins and evolution of language. Submissions may be in any relevant discipline, including, but not limited to: anthropology, archeology, biology, cognitive science, genetics, linguistics, computational modeling (including mathematical, agent-based, and neural-network models), paleontology, physiology, primatology, philosophy, semiotics, and psychology.

Normal standards of academic excellence apply. Submitted papers should make clear how they advance the study of language evolution and relate any novel results to up to date scientific literature. Submissions should make clear the method by which their claims are substantiated, the nature of the relevant data, and/or the core of the theoretical argument. Submissions centered around empirical studies should not rest on preliminary results. All submissions are refereed by at least three relevant referees, and acceptance is based on a scoring scheme pooling the reports of the referees. In recent conferences, the acceptance rate has been about 50%. The conference showcases both oral presentations and poster presentations.

next conference

Evolang XV will take place in [Madison, WI USA](#) in May, 2024 with [Gary Lupyan](#) as the chief local organizer.

Dates: May 18-21, 2024

Venue: Monona Terrace; Madison, WI, USA

Workshop proposals deadline (extended): Oct 13, 2023

Abstract submission deadline (extended): Oct 13, 2023

<https://www.evolang.org/>

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Section 3: Introduction



A model of Lucy the Australopithecus at the Field Museum in Chicago (Tim Boyle/Getty Images)

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Becoming Human



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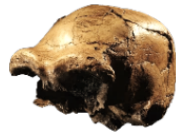


What makes us human?

Singing
Australopithecus



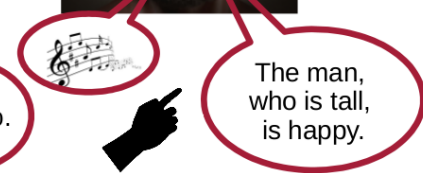
Mimetic
Homo erectus



Semantic
Homo antecessor
(heidelbergensis)



Syntactic
Homo sapiens



You. Go.

The man, who is tall, is happy.

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Fitch (2017). Empirical approaches to the study of language evolution.



What is human language? How and when did it evolve?



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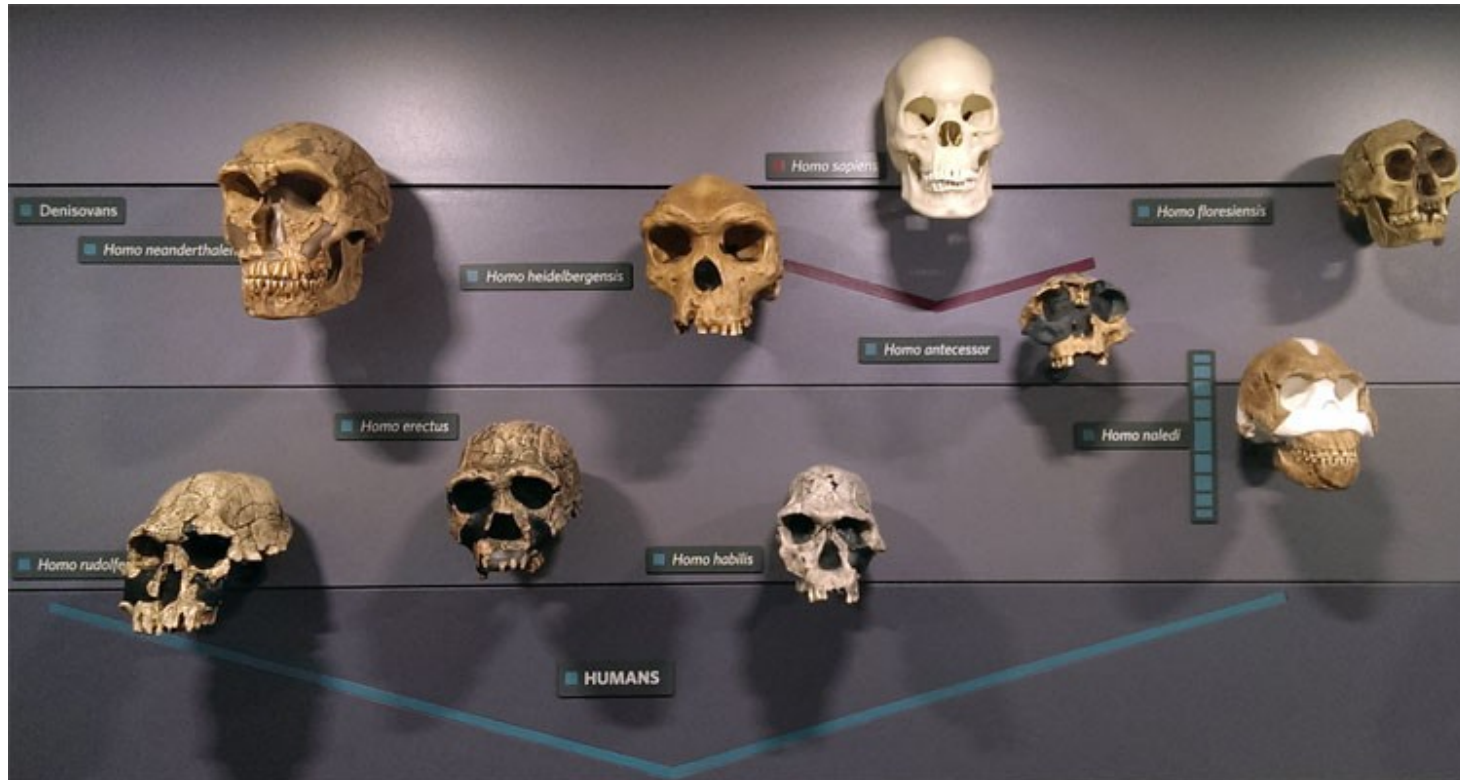
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Human Fossils & Archaeology



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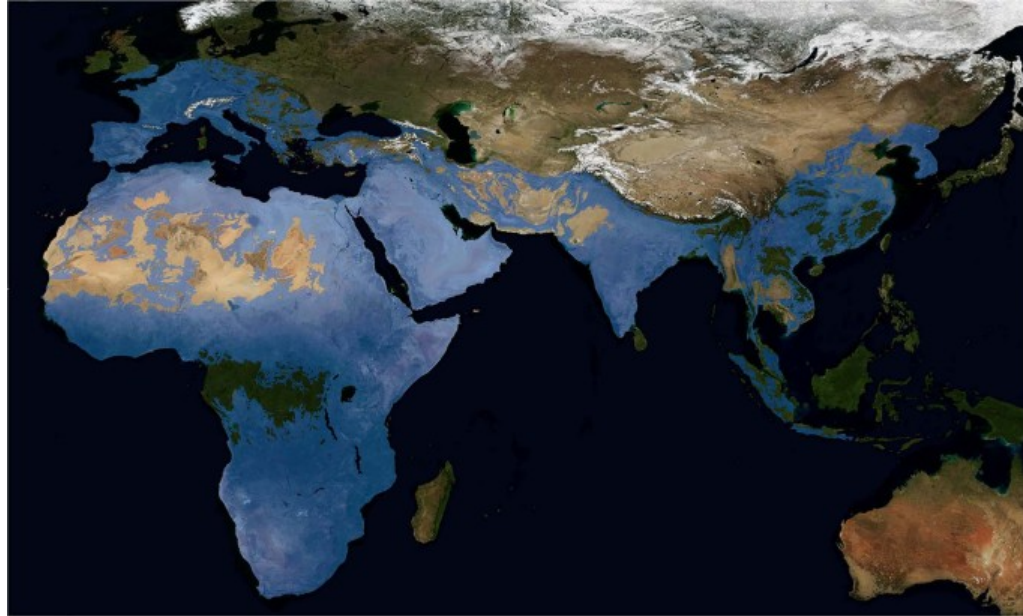
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<https://www.nhm.ac.uk/>



Archaeology: Stone Tools



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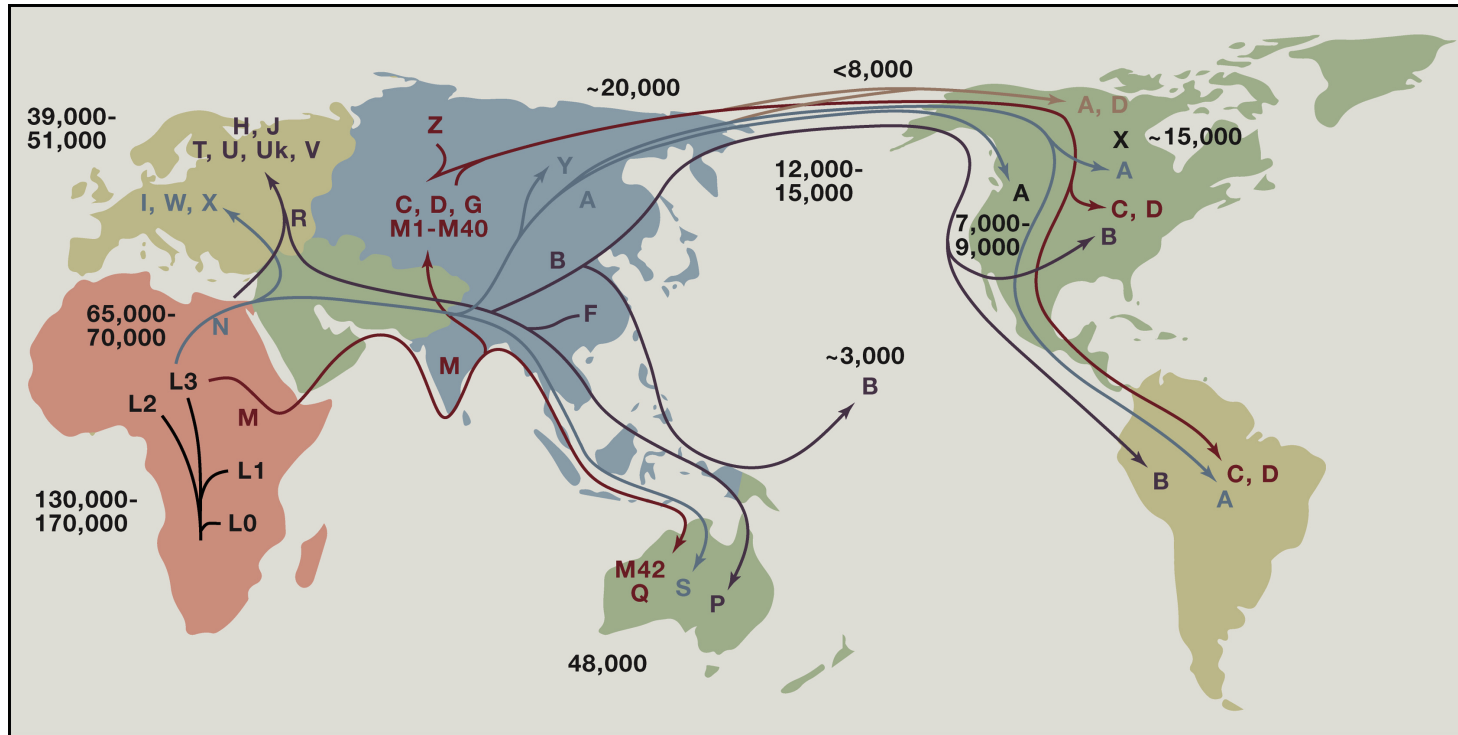
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Human Genetics



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Wallace (2015). Mitochondrial DNA Variation in Human Radiation and Disease.



Human Dispersals



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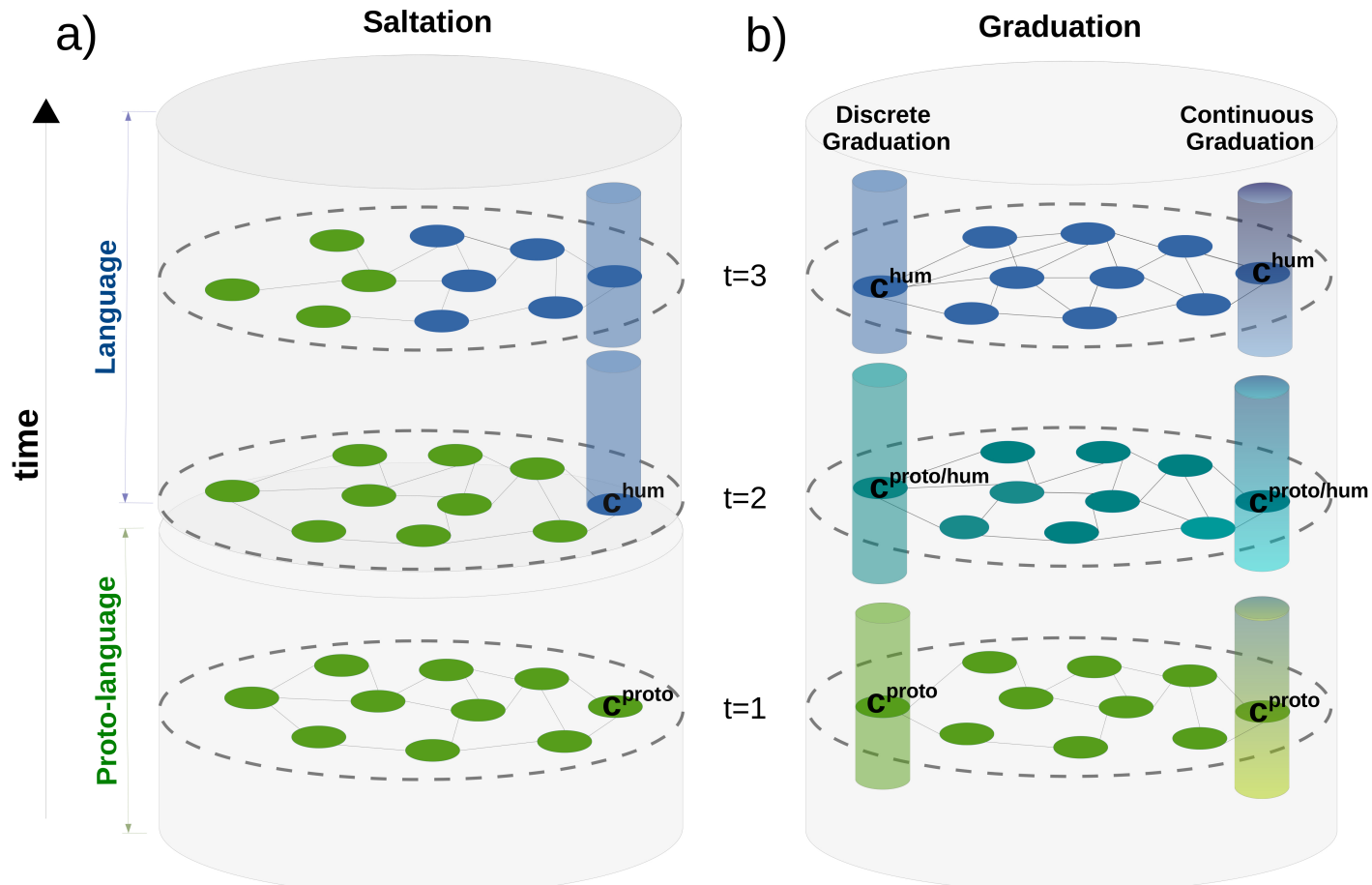
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Video: <https://www.youtube.com/watch?v=vJ5p3pZIBi4>



Language Evolution: Theories



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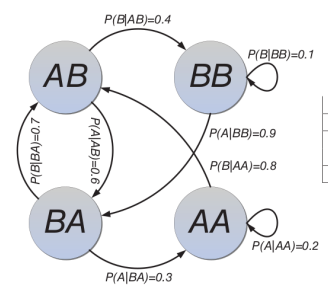
Section 3:
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Bentz (2018) Adaptive languages.

Language Evolution: Methods

Quantitative Linguistics



	A	B
$P(X AA)$	0.2	0.8
$P(X AB)$	0.6	0.4
$P(X BA)$	0.3	0.7
$P(X BB)$	0.9	0.1

Experiments



Fig. 3. An example evolved language in the first experiment. This language exhibits systematic underspecification, enabling learners to reproduce the whole language from a fragment.

Kirby et al. (2008). Cumulative cultural evolution in the laboratory.

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Kershenbaum (2014). Acoustic sequences in non-human animals.



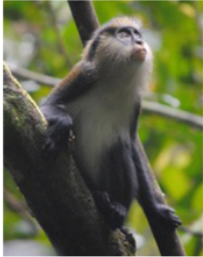
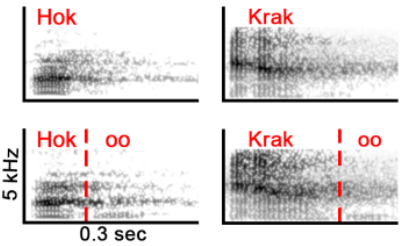


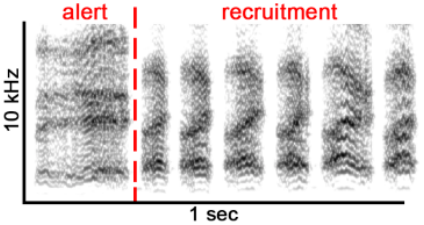

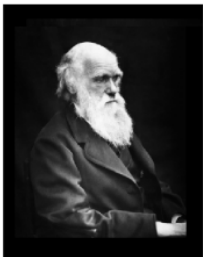
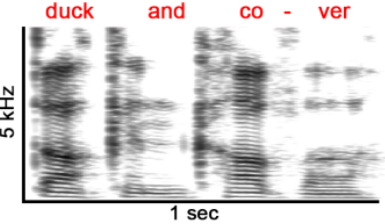
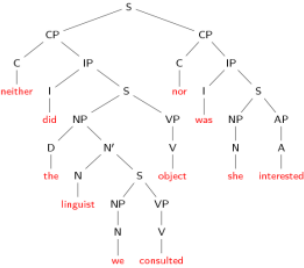
Current Topics: Animal Communication

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	simple	complex
a) 		
b) 		
c) 		

Townsend et al. (2018) Compositionality in animals and humans.



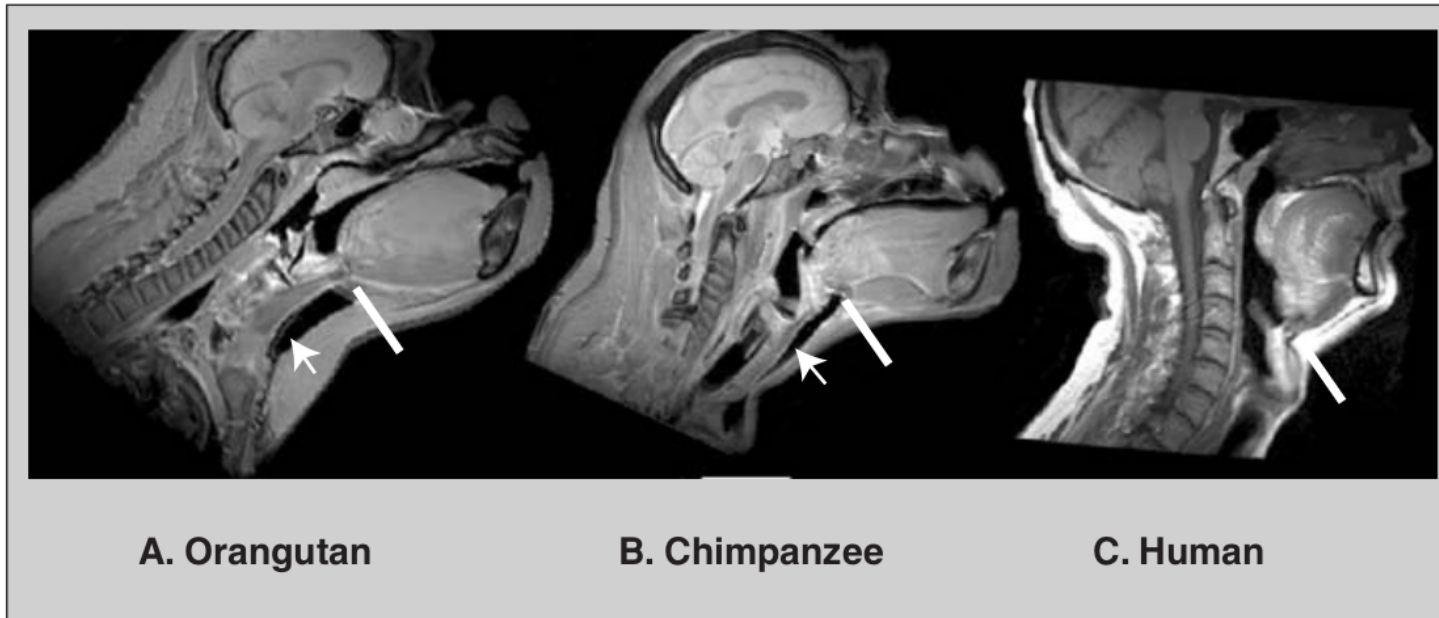
Current Topics: Evolution of Speech

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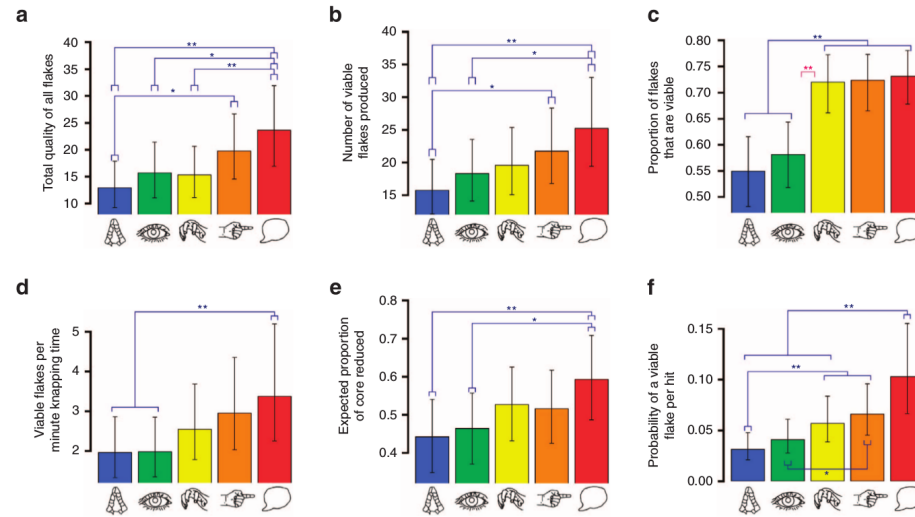
References



Fitch (2010) The evolution of language.



Current Topics: Stone Tools and Language



Morgan et al. (2015) Experimental evidence for the co-evolution of hominin tool-making teaching and language.

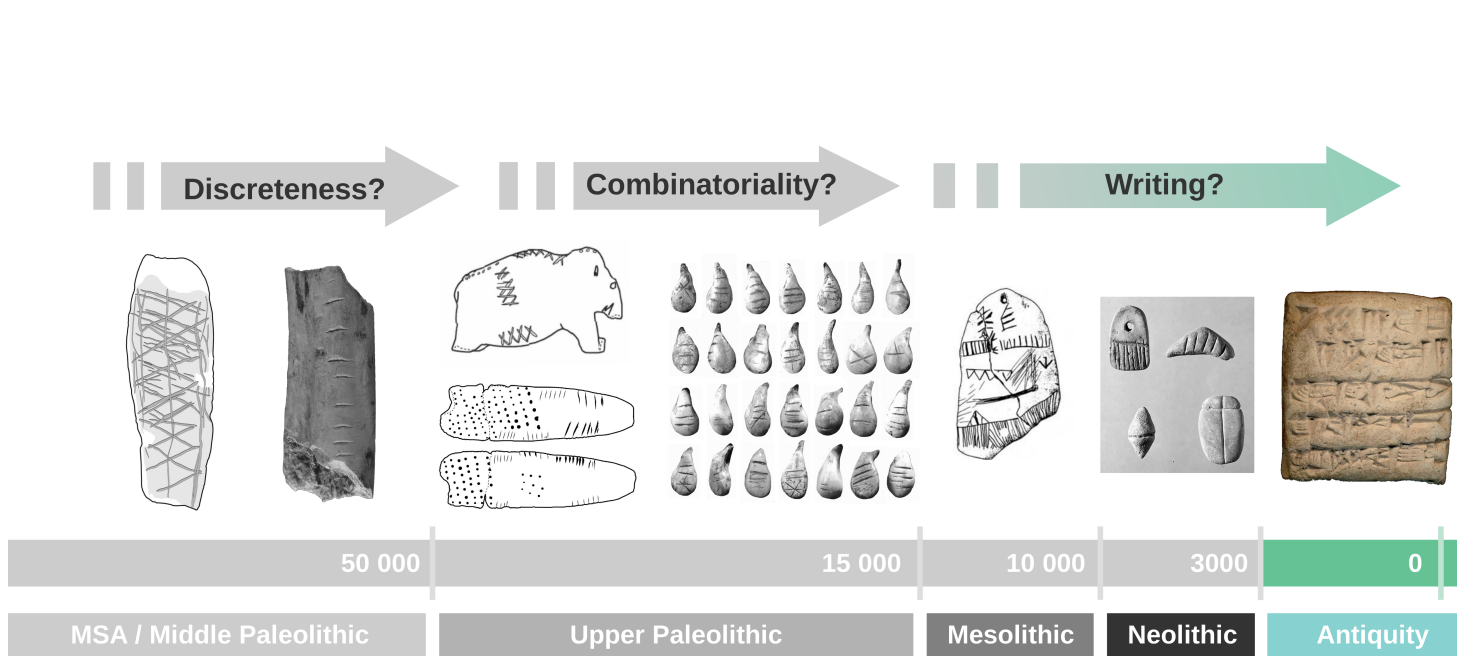
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Current Topics: Evolutionary Semiotics



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References

Bentz (2018). *Adaptive languages: An information-theoretic account of linguistic diversity*. Mouton de Gruyter.

Kershenbaum (2014). Acoustic sequences in non-human animals. *Biological Reviews*.

Kirby et al. (2008). Cumulative cultural evolution in the laboratory. *PNAS*.

Morgan et al. (2015) Experimental evidence for the co-evolution of hominin tool-making teaching and language. *Nature communications*.

Townsend et al. (2018) Compositionality in animals and humans. *Plos Biology*.

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Thank You.

Contact:

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Office hours:

During term: Wednesdays 10-11am

Out of term: arrange via e-mail