Historical perspectives

The origin of language

Henri Cohen
Historical perspectives

- First reflections on language origins
- Early language deprivation experiments
- Christian era reflections on language origins
- PreDarwinian theories of language origins
- The SLP Ban (1866)
- Darwin’s view on language & periDarwinian
- Modern reflections
First reflections on language origins

Reflections on language since Antiquity

- **Gorgias** (485-380), **Protagoras** (490-420): the power of words: “Language as a framework for expressing the implication of action and the ways decisions about such actions are made”

- **Plato** (428-348): relation between words and ideas

- **Aristotle** (384-322): the phenomenon of language (On Interpretation)

- **Dyonysios Thrax** (170-90), **Varro** (116-27) (structure & grammatical elements)

Reflections on the origin of language Ambivalent meaning

- meaningful speech
- language structure
- speech organs
- names and meanings
- plurality of languages
- brain structures
First reflections on language origins

- Not much on biology in the philosophical literature (although questions of rational doubt: Is language natural or established by man?)

- Hermogenes, in Plato’s *Cratylus*: etymological account of the origin of words (smallest elements of meaning)
  Names are allotted arbitrarily to persons and objects; There is nothing to hinder us from changing the names if it seems convenient; One name is no better than another; It is merely necessary that those who use the name should agree about it.
  - in extreme form (communication limited to one finger)
  - No stable, basic element of meaning in language itself
  - paved the way for classical mentalism

- Empedocles (490-430 BPE): first naturalistic account (S-R theory)
  - External events caused utterances
  - Sharing of same S-R pairings leads to joint reference
First reflections on language origins

Striking story by Herodotus (mid-5th C BPE), now inscribed in western reflections on language:

Pharaoh Psammetichus (664-610 BPE):
- devised experiment to determine oldest people of the earth
- placed 2 newborn infants in the care of a goatherd who never spoke to them
- after 2 years, the children repeatedly approached him with outstretched hands crying "bekos"
- Psammetichus conceded that Phrygians, not Egyptians, oldest people (bekos = bread, in Phrygian).
First reflections on language origins

- Story of Psammetichus told in many contexts and serves many purposes
  - **Ethnographical role**: P’s explicit purpose was not linguistic (which was the oldest human group?)
  
  Identification of oldest people on basis of linguistic evidence

- Discussions of P’s inquiry reinterpreted it as addressing language issues.
  - **Historical role**: bristles with impressive detail - information about language attitudes, experiences; social and cultural issues (evidence for earlier cultures’ general curiosity about language)

Different ways of recounting the story, but overarching purpose: An instrument for understanding the ancient world: what it reveals about the people who carried out the enquiry, or about the people who recorded it.
First reflections on language origins

- **Epigenetic role**: controversy about the identity of original, natural human language.

Prominent topic in 16th-century Europe as long standing belief that Hebrew as OL became object of debate.

Idiosyncratic versions of the story told by 16th century writers, to fit their perspective of OL (Launay 1980).

- e.g., juxtapose Herodotus’ story with the Genesis passage about the Tower of Babel;
- or between the two Egyptian infants and Adam and Eve.

**Guillaume Postel** (1510-1581)
**Pierre Messie/ Pero Mexia** (1497-1551)
**Guillaume de Sallus du Bartas** (1544-1590)

- using the story to frame historical questions:
  **Claude Fauchet** (1530-1601): What P’s two children may actually have experienced (comparing Herodotus’ report to attested facts about the language of the deaf mute).
First reflections on language origins

Other purposes of Psammetichus story

- **Epistemological role**: Investigating the source of linguistic knowledge
- Also, what is inborn vs. what is acquired from the environment.
- Nature-Nurture theme is very popular in research on language learning.

- **Glottogenetic role**: question about the origin of language
Substantiate the claim that OL is a puzzle that has always stirred men’s imagination (Leroy, 1967; 24).

Thus, a necessity for the historical continuity of discussion about OL.
Early language deprivation experiments
The Forbidden Experiment (Shattuck, 1980)

Frederick II of Sicily (1194 - 1250), Holy Roman Emperor; spoke 6 languages, incl. Arabic. Great thirst for knowledge and learning; simply did not believe things that could not be explained by reason.

He was alleged to have carried out experiments on people (as recorded by Salimbene di Adam in his Chronicles).

- shutting a prisoner up in a cask to see if the soul could be observed escaping though a hole when the prisoner died;

- feeding two prisoners, sending one out to hunt and the other to bed and then have them disemboweled to see which had digested their meal better;

- imprisoning children without any contact to see if they would develop a natural language once their voices matured (Hebrew, Arabic, Latin, Greek, parents' tongue).
Outcome: no speech, only clapping of the hands and gestures.
James IV of Scotland (1473 - 1513), fluent with languages.

- Sent 2 children to be raised by a mute woman alone on an island
- Is language innate or learned?

Outcome: reportedly good Hebrew.
Early language deprivation experiments

* Jalal-ud-Din Muhammad Akbar (Akbar the Great; 1542-1605); 3rd Mughal emperor India-Hindustan.

* Learned, tolerant, refined; influenced culture and religion.

* A’s Ho: Language was learned by people listening to each other and therefore a child could not develop language alone.

* Ordered a house built for 2 infants and stationed a mute nurse to care for them.
  - The children did not acquire speech, which seemed to prove that language is acquired and does not emerge spontaneously in the absence of exposure to speech.
Early language deprivation experiments

- Father François Catrou's account was first published in 1705. On p.137 of the 1708 edition, Akbar's language experiment appears thus:

  “Akbar ordered 12 infants to be brought up by dumb nurses; not a word was to be spoken in their presence until they were 12 years of age. When the time arrived the children were brought before Akbar. Proficients in the learned tongues were present to catch the first words, to decide upon the language to which it belonged. The children could not say a word; they spoke only by signs. The experiment was an utter failure.”

- Mohsin Fani, living in Lahore during the 17th century, gives an account of the Gung Mahal experiment:

  "... a number of children were put in a place called Gangmahel, where every thing necessary was furnished to them; but none could articulate a letter; having remained there to their fourteenth year, they were found to be dumb; which made it evident, that letters and language are not natural to man, that is, cannot be used unless they have been acquired by instruction, and it is then only that the use of conversation becomes possible.”
Christian era reflections on language

- Reflections on story of Tower of Babel, and origin of multitude of languages. Problems communicating with other people (from missionaries).

- **Dante Alighieri (1265-1321)** questions the biblical myths:

  > Now I think that we have to investigate to which humans speech was first given, what was said in the beginning as well as to whom, where, when and, finally, in what language this first speech emanated (1304).

- In *De Vulgari Eloquentia*, makes important statements concerning the nature, origin, and development of language.

- Particularly interesting is Dante's theory of the relatedness of European languages.

- The historical treatment of languages began with him.
In Chapter VII Dante uses the Tower of Babel story as part of his explanation of the causes of language diversity.

Each different occupational group at Babel came to employ its own common dialect.

Such a construction project necessitated specialized, technical languages; thus there were as many dialects existing at the tower as there were Occupations. The higher up a group worked the more barbaric was its language.

Dante derived his impressions on the origin of speech from the traditional (i.e. scriptural and patristic) accounts of the confusion of tongues and the resulting diversity of languages.
Christian era reflections on language

For Dante language began in the East where Hebrew, the "original" language, was spoken. After the confusion of tongues at the Tower of Babel, the different languages were dispersed. The language group reaching Europe had three major divisions:
- the northern or Germanic sub-group,
- the southern or Romance sub-group,
- and Greek.

In the southern European group three further divisions were made, viz. the Romance languages of French, Spanish, and Italian.

Italian was then separated into its many dialects. Thus Dante traced and legitimized the development of language from the primordial tongue all the way to the dialect of his dearly-loved Tuscany.
The Enlightenment
Pre-Darwinian reflections

Emerging from centuries of darkness and ignorance into a new age enlightened by reason, science, and humanity.

The 18th century: noteworthy for European cultural expression.
- most evident in philosophy, which sought to find in human affairs natural laws similar to those science had discovered in the physical universe.

Early enlightenment rooted in the Scientific Revolution (greatest impact of Newtonian science)

- John Locke (An essay concerning human understanding, 1690)
- Voltaire (Candide, 1759)
- Montesquieu (L’esprit des lois, 1748)
- Diderot (L’Encyclopédie, 1751)
- Jean-Jacques Rousseau (Le contrat social, 1762)
- Immanuel Kant (Critic of pure reason, 1781)
- David Hume (A treatise of human nature, 1739)
The Enlightenment
Pre-Darwinian reflections

* Question of the origin of language is connected with that of the evolution of the human species from a speechless animal.

* As it was believed that man had been created in the form in which he exists today, speech might well be accepted as part of his original endowment, like his senses or his reason.

* Three facts came gradually to be recognized:
  - the large number of different languages,
  - the gradual change to which all languages seem subject,
  - the fact that children do not inherit their language.

* Appreciation of these facts encouraged 18th C speculation on the origin of language.

* Also natural to assume that earliest man was inventive - many thinkers did not see why he should not have invented signs for communication.
The Enlightenment
Pre-Darwinian reflections

The contributions by Condillac (1746), Thomas Reid (1764) and Monboddo (1773), are probably those that best reflect the spirit of the Enlightenment.
The Enlightenment
Pre-Darwinian reflections - Condillac

- Etienne Bonnot de Condillac (1715-1780)
  - greatly influenced by Voltaire’s portrayal of Locke and Newton.
- 1746: publishes *Essai sur l’origine des connaissances humaines*
- Condillac’s main philosophical contribution represents a major disagreement with Locke: believed that there is no knowledge without language.
Condillac stresses that man’s first efforts at communication must have involved only the use of signs that are self-explanatory (threatening postures), not signs whose meaning depends on convention.

The first signs were not intended as such, but were the normal reactions to particular situations.

In time, men would learn the effects of their movements on their companions and would come to perform deliberately for that purpose actions which had at first no reference to other persons.

Important step in Condillac’s argument: that actions not originally intended as signals to others at all came in time to be deliberately made as signals (secondary effect of these actions was first noted and then exploited).

Then, use of signs led to development of mental powers; in turn leading to an improvement in the signs (also suggested that thinking without language is impossible) —> Language and reason grow up together.
How did explanatory gestures and pantomime lead to the sound languages of today?

It was no doubt the difficulty of understanding this transition that led many to ignore gesture and pantomime in their accounts of language’s origin, and propose fanciful theories which made speech derive from a natural and unique human impulse.

What causes man to make sounds in the first place, before he can think of adapting them for purposes of communication?

Condillac: cries of various kinds were among initial natural reactions and came to be used as signs in the same way as did gestures: becoming converted to signs they gradually lost their natural emphasis and were imitated by controlled or “articulate” sounds.

- A groan was originally a spontaneous expression of emotion; but when it was deliberately made in order to summon help, it became a simulated groan. Once a certain number of such sounds had come in use in this way others would be added by analogy; and being accompanied by gestures, they came to be associated with the objects to which the gestures referred.
Two other points in Condillac's account: order in which
- the different kinds of idea came to have names,
- words were put together to convey ideas.

Condillac assumes that the elements of spoken language must
at first have followed the order which was natural in sign
language.

He seems to have based his view on theoretical considerations.

Investigations of Tylor (1871): In the gesture-language of deaf-
mutes the order of the signs is determined by the relative
importance in the communication of the constituent ideas.

Condillac held that common objects (tree, fruit) would be the
first to receive names.
Condillac's views, although purely speculative, were not improved on by the linguists of the 19th C.

When he says that the words or signs were 'invented', they preferred to say that they 'arose' or 'were produced'.

When he gives a simple example from his own language, they preferred to illustrate from Gothic or Sanskrit.
From the early 19th C, the premises that language is an invention and that non-vocal forms of communication preceded the oral languages of today were regarded as unacceptable.

This was in part due to the influence of Herder’s essay of 1772.
The Enlightenment
Pre-Darwinian reflections - Herder

- Herder accepted at first that languages of conventional sounds were preceded by "languages of nature": self-explanatory signs (gestures, facial expressions, emotional cries, onomatopoeic sounds).

- “Visible objects which make no sound will have been named by sounds accompanied by gestures which would make clear what objects these sounds designated.”

- Earlier remarks on the origin of imagery in poetry and the origin of metre.

- In the 18th C, significance of the fossil record was not appreciated.

- Herder thus believed that much of the poetry (which he took for the oldest extant) was written when languages of conventional sounds had only just begun to come into general use:

  - accounted for the profusion of imagery in old poetry by pointing to the difficulty experienced in expressing abstract ideas at that early stage in the history of oral language, when only concrete phenomena had been named.
The Enlightenment
Pre-Darwinian reflections - Herder

* With his Abhandlung über den Ursprung der Sprache, Herder no longer regarded language as an invention.

* Also opposed to the notion that it was of divine origin (the Deity would hardly have designed an instrument so full of obvious imperfections).

* Herder, proposes to look at what distinguishes man from other animals (and may be responsible for his distinctively human character of speech).

* Man is not guided by instincts to anything like the same extent as are other animals (man is surpassed in every one of his senses by other animals)
  - The narrower the specialization, the more wonderful the skills, the more restricted the Kreis.
  - For man, behavior is less assured, less instinctive.
Herder declares that this singularity in man may provide the clue to his special gift of language.

The weakness of his argument lies in the comparative vagueness of the Kreis characteristics in question. Cannot explain the difference in mechanism between the animal with very precise specialized behaviour, and the mammal with much more varied behavior.

He imagines primitive man contemplating a landscape on which a lamb appears.
- if a wolf, he would have pounced upon his victim,
- if any other animal, whose instincts were otherwise engaged, he would merely have passed it by.
- But being man, undisturbed by any instinct, he only desires to become acquainted with the lamb.

Herder believes that man is stirred by a desire for pure knowledge,
- has a perfectly disinterested curiosity which is satisfied as soon as he has noted, labelled, and catalogued a fact, without asking how that fact may concern any of his interests.
Herder supposes that the fundamental linguistic act of giving a name is prompted by this instinct of inquiry; - believes that knowing the lamb is possible only by means of a "mark" (Merkmal), recognition of a quality that distinguishes the lamb from the background against which it is perceived.

Furthermore, this Merkmal must be a noise, a sound--in the case of the lamb its bleating, not its shape, colour or smell.

The argument is that man responds to an object by naming it, with a kind of unemotional curiosity, - whereas the vocal responses of animals are always emotional, expressing desire or fear.

In contrast: Condillac, lacking information about languages of remote regions, tried to imagine how language could have come into existence by consulting his knowledge of human inventive powers, of man's needs, and of his resources.
Reflections on language origins

Construction of alternative theories of language origin

- **JJ Rousseau** (1781, 1755)
  First language must have been a love song.
  First signs could be understood by the receivers
  Primary mode of communication (gestures or cries)
  How could syntax evolve?
  Thought & language: egg and chicken situation

- **Lord Monboddo** (Burnett; 1773)
  We learned to speak from birds

- **John Webb** (1669)
  Chinese: primitive language of mankind (preserved by Noah)
**Reflections on language origins**

**Rousseau:**
Elaborate pastoral tableau of 2 young pairs of first speakers, in the southern versus northern climates, each of whom invents language

**Condillac:**
First speakers also a pair, children living isolated from society
Reflections on language origins

**Vico:**
Inventors of speech placed in wild, natural settings populated by animals; Proposed that first word was derived by imitation from the environment

**Herder:**
First speaker’s initial word motivated by sheep bleating; and the word meant ‘sheep’.
Darwin’s views on language origins

- Little mention of human evolution in *Origin of Species* (1859)

- Opponents to his theory seized on special quality of human mind and language to battle against Darwin

  - Alfred Wallace: Natural selection is unable to explain origin of human mind and language.

  - Max Müller: formidable opponent (the AntiDarwin; the Darwin of the mind)
Friedrich Max Müller

Prolific writer and popular lecturer; essays and addresses on Asian mythology, Western folklore, comparative linguistics, the philosophy of language and thought, and the origins and historical development of the world's religions.

His work in the origins and growth of language, mythology, and religion typified Victorian armchair scholarship: always convinced of its social and cultural superiority.

Though a religious man, Muller was one of only a few scholars who disagreed with Darwin's theory of the "descent" of man from apes on purely scholarly, not religious, grounds.
What is it that man can do, and of which we find no signs, no rudiments, in the whole brute world? I answer without hesitation: the one great barrier between the brute and man is Language. Man speaks, and no brute has ever uttered a word. Language is our Rubicon, and no brute will dare to cross it. ... Language is something more palpable than a fold of the brain, or an angle in the skull. It admits of no cavilling, and no process of natural selection will ever distill significant words out of the notes of birds or the cries of beasts.
The SLP ban

Important to understand context of the period.

Major part of 19th C, French social science was concentrated in and around a single institution: the Académie des sciences morales et politiques (inaug. 1832): official centre for moral and political studies, under constitutional regime of the July Monarchy (1830-48).

The Académie, in 1860's, is under the control of monarchists, public servants, Catholics, in general opposed to Darwin’s materialistic explanation for life.

Société d’Anthropologie de Paris, P-P Broca (1859), inspired by Honoré Chavée (founded 1st Fr. Linguistics journal)
- Interested in language and linguistics

1824-1880
Broca entertains both proximal and conflictual relationships with Darwinism.

He was interested in language, not so much as a specific characteristic of the species, but as a specific property of the speaker (via the clinical characterization of aphasia; 1861).

He abandoned, rapidly, classification of peoples on the basis of language; favored physical anthropometry (iris pigmentation, skull measurements).

Abel Hovelacque (1843-1896), now responsible for linguistic questions at SAP (La Linguistique, 1876; Reinwald publisher – also Darwin’s)
The SLP ban

- Reticence of Broca (still pushing transformism) & students (Antonio de la Calle, Girard de Rialle...) has forced a detour of linguistic Darwinism to Germany, where *Origin of species* is enthusiastically acclaimed.

- **August Schleicher** (1821-1868) eminent Indo-Europeanist, specialist of Germanic languages, 1863, applies Darwinism to linguistic theory.
  - Language is an organism (development, maturity, decline).

  His book is the first work published by the EPHE Library, the year it was founded, with a preface by Michel Bréal (1832-1915).

- Also in 1863, Bréal is elected perpetual secretary of SLP.
The SLP ban

Compromise, negotiated with great difficulty between the Catholic founders, young university scholars (Bréal was at Collège de France) and the top ranking officials from Ministry of Public Instruction led the SLP to adopt, until it was dropped in 1876, the in-famous Article 2.

Purpose was not a dogmatic definition of the scientific domain; main objective was to dispose of competition from S.A.P. members and neutralize the Catholics who had come from the Société d'Ethnographie.

STATUTS DE 1866

Approuvés par décision ministérielle du 8 mars 1866

Article premier. - La Société de Linguistique a pour but l'étude des langues, celle des légendes, traditions, coutumes, documentst, pouvant éclairer la science ethnographique. Tout autre objet d'études est rigoureusement interdit.

ART. 2. - La Société n'admet aucune communication concernant, soit l'origine du langage~ soit la création d'une langue universelle.
THE

DESCENT OF MAN,

AND

SELECTION IN RELATION TO SEX.

By CHARLES DARWIN, M.A., F.R.S., &c.

IN TWO VOLUMES.—Vol. I.

WITH ILLUSTRATIONS.

LONDON:
JOHN MURRAY, ALBEMARLE STREET.
1871.

[The right of translation is reserved.]
Darwin’s views on language origins

- Müller + Wallace’s positions taken very seriously by D.

- The descent of man (1871) - Concerned with presenting a credible explanation of language evolution
* In his letters, Darwin mentions, quite early, the relationship between evolution of species and that of language.

* Languages share a common ancestry, having become distinct languages over time.

* You tell me you do not see what is new in Sir J. Herschell's idea about the chronology of the old Testament being wrong.— I have used the word Chronology in dubious manner, it is not to the days of Creation which he refers, but to the lapse of years since the first man made his wonderful appearance on this world— As far as I know everyone has yet thought that the six thousand odd years has been the right period but Sir J. thinks that a far greater number must have passed since the Chinese, the [ … ], the Caucasian languages separated from one stock.

  [To Caroline Darwin; Feb 27, 1837]
Darwin’s views on language origins

- He was also interested in the relationship between geology and language.

- Your metaphor of the pebbles of preexisting languages, reminds me that I heard Sir J. Herschel at the Cape say, how he wished someone wd treat languages, as you had Geology, & study the existing causes of change & apply the deductions to old languages.
  [To Charles Lyell; March 8, 1850]

- I remember years ago at the C. of Good Hope; Sir J. Herschel saying to me—I wish some one would treat language as Lyell has treated Geology
  [To J.M. Rodwell; Nov. 5, 1860]
Darwin’s views on language origins

I wish I had time to write you an account of the very absurd lengths to which Bowen & Agassiz ... are going ... coming near to deny that we are genetically descended from our great-great-grandfather; & insisting that evidently affiliated languages e.g. Latin Greek Sanscrit owe none of their similarities to a community of origin,—are all autochtonal. Agassiz (foolish man) admits that the derivation of languages & that of Species or forms stand on the same foundation, & that he must allow the latter if he allows the former,—which I tell him is perfectly logical.

[To C. Lyell; Feb 2, 1861]

You have amused me much by your account of Agassiz's denying the community of descent of allied languages.

[To Asa Gray; Feb 17, 1862]
Darwin’s views on language origins

- Chapter III: COMPARISON OF THE MENTAL POWERS OF MAN AND THE LOWER ANIMALS.
  - Lays the groundwork on comparative cognition: animals have emotions, memory, attention + other mental traits in common with humans (Müller had already accepted that point)
  - Language remains the key issue. This faculty has justly been considered as one of the chief distinctions between man and the lower animals.
  - Great modesty and caution in D’s observations
  - Combination of comparative data, biological perspective and evolutionary insight
    - ahead of his time;
    - Complex view / contrast to single phenomenon: necessity of several mechanisms to produce complex language
  - D’s model can be part of contemporary debate on LE, but received little consideration.
  - Complex vocal learning, shared with many birds (Fitch, Hauser, Janick, Marler, Nottebohm)
Adherence to empirical, data-driven approach
- Knowledge of nonhuman primate behavior + insights from other vertebrates
- Model must be subject to the laws of evolutionary theory (insects, birds,...)

Aiming to reveal general principles (sexual selection) to explain unique human traits.

Gradualistic model, but no simple assumption of continuity of function from non-human primate calls and language
- Insisted that complex language distinguished the human species—humans had the “mental faculties” for “connecting definite sounds with definite ideas.”
Darwin’s views on language origins

D. theoretical preliminaries followed by his theory of LE
- Stage 1: general increase in intelligence and mental abilities
- Stage 2: sexually-selected attainment of capacity for complex vocal control: singing.
- Stage 3: Addition of ‘meaning’ to songs (driven by, and fueling further increases in intelligence)
Important distinction between the language faculty and particular languages
- biological capacity enabling acquisition of language ≠ learning a specific language (French or Latin)

For D, LF ("instinctive tendency to acquire an art") shared by all members of human species.
- but is not a true instinct, as every language has to be learnt. It differs, however, from all ordinary arts, for man has an instinctive tendency to speak, as we see in the babble of our young children.

I cannot doubt that language owes its origin to the imitation and modification of various natural sounds, the voices of other animals, and man's own instinctive cries, aided by signs and gestures.
Darwin’s views on language origins

Human capacity for language must be sought in the brain (see also Broca)
- In spite of peculiarities of the human vocal tract
- Articulate speech is “peculiar to man” but this does not suffice to distinguish human language (as everyone knows that parrots can talk)
- Humans’ large power of connecting definite sounds with definite ideas
- and this capacity obviously depends on the development of the mental faculties.

Relevance of birdsong to language evolution
- nearest analogy to language
- birds & humans, have fully instinctive calls, and an instinct to sing
- but the songs themselves are learned
- cultural transmission of regional dialects (birdsong & speech)

The sounds uttered by birds offer in several respects the nearest analogy to language, for all the members of the same species utter the same instinctive cries expressive of their emotions; and all the kinds which sing, exert their power instinctively; but the actual song, and even the call-notes, are learnt from their parents or foster-parents.
Darwin’s views on language origins

Darwin’s Ho

- The various aspects of language
  - acquired sequentially, under influence of selection pressures

- 1. greater development of protohuman cognition: Increase in intelligence in the hominid lineage

  The mental powers in some early progenitor of man must have been more highly developed than in any existing ape, before even the most imperfect form of speech could have come into use.

- 2. Evolution of spoken language, vocal imitation, driven by sexual selection
  - used mainly in singing
  - used in both courtship and territoriality
  - expression of emotions

- suggesting that the capacity to imitate vocally evolved analogously in humans and songbirds.
Darwin’s views on language origins

- How is the transition made from musical prelanguage to meaningful language?
  - How humans became “a singing creature, only associating thoughts with the tones?” (Humboldt, 1836).
  - Challenge for all musical protolanguage theories (Fitch, 2009).

- Darwin: … articulate language "owes its origins to the imitation and modification, aided by signs and gestures, of various natural sounds, the voices of other animals, and man’s own instinctive cries”

- However, the evolutionary process would not stop with the initial acquisition of meaning: "as the voice was used more and more, the vocal organs would have been strengthened and perfected".

- Additionally, language would have "reacted on the mind by enabling and encouraging it to carry on long trains of thought" which "can no more be carried on without the aid of words, whether spoken or silent, than a long calculation without the use of figures or algebra".
Darwin’s views on language origins

Speech is a physiological function of the human organism, and has been developed simultaneously with its organs, the larynx and tongue, and with the functions of the brain. Hence it will be quite natural to find in the evolution and classification of languages the same features as in the evolution and classification of organic species. The various groups of languages that are distinguished in philology as primitive, fundamental, parent, and daughter languages, dialects, etc., correspond entirely in their development to the different categories which we classify in zoology and botany as stems, classes, orders, families, genera, species and varieties. The relation of these groups, partly coordinate and partly subordinate, in the general scheme is just the same in both cases; and the evolution follows the same lines in both.

Vocalizations and gestures

 Explicit acknowledgment of the role of gesture in meaning (Hewes, Stokoe, Corballis, Arbib, Tomasello)

- vocal communication "aided by signs and gestures"

... But the pre-existence in all mammals of "vocal organs, constructed on the same general plan as ours would lead any further development of communication to target the vocal organs rather than the fingers".
There are other actions which are commonly performed under certain circumstances and which seem to be due to imitation or some sort of sympathy. Thus a person cutting anything with a pair of scissors may be seen to move their jaws simultaneously with the blades of the scissors. Children learning to write often twist about their tongues as their fingers move, in ridiculous fashion.

Sir Richard S. Paget: a more central, causal role for gesture in the evolution of language: “Early humans communicated via “pantomime,” unconsciously making the same gestures with their mouths; eventually, they dedicated their hands fully to labor and spoke orally instead”.

Darwin has not only given us the origin of species, but also the origin of speeches!
Some difficulties with D’s model (?)

- Sexual selection, a driving force in evolution of language?
  - Equally developed in males and females
  - Expressed at birth (≠ sexual maturity)

- Potential answers:
  - Sexual selection was initial driving force; song in males at sexual maturity
  - Then, during evolution of meaningful language, equally developed in males and females: kin communication as selective force (adults and young; mothers and babies)
Modern views on language origins

1976: Origins and Evolution of Language and Speech
S Harnad, H Steklis, J Lancaster

1st conference in 200+ yr sponsored by an Academy of Science

Inclusion in the conference of the Darwinist framework;

Considering Origins and Evolution as referring to specific conditions, behavioral and neural precursors, ...

Distinction between language and speech

Over 100 presenters and discussants on all possibly relevant topics and issues (exception: Genetic issues)
Modern views on language origins

- Study of LE and OL no longer a fairy tale
- Now better equipped with information (gesture, behavior, thought, genes) in humans and close and distant species - know better what clues to look for and what paths to take in reconstructing LE.
- Not possible to recover every step of the way - but possible to identify major biological and evolutionary landmarks

More recently:
- Pinker & Bloom (1990) BBS paper
- EVOLANG biennial meetings (1996+; Hurford & Knight)
Modern views on language origins

Some questions about LE:
A cogent/coherent view of evolution of language is still lacking

- Has language evolved in layered stages?
- Pantomime/Gestural primacy?
- Recursion as a fundamental language operation (already accounted for in motor system?)
- How language and human genome shaped each other? (and FoxP2)
- Brain evolution and culture-biology interactions (did language evolve the brain?)
- When has natural selection come into play in the path of LE?
- How do we define language?
In 1769, the Berlin Academy set the Origin of Language as its prize essay topic for 1771 (in French)

Supposing that men are abandoned to their natural faculties, are they in a position to invent language? And by what means might they arrive at this invention by themselves? What is required is a hypothesis which will explain the matter clearly and satisfy all the difficulties.
“In examining the history of mankind, as well as in examining the phenomena of the material world, when we cannot trace the process by which an event has been produced, it is often of importance to be able to show how it may have been produced by natural causes. Thus, although it is impossible to determine with certainty what the steps were by which any particular language was formed, yet if we can show, from the known principles of human nature, how all its various parts might gradually have arisen, the mind is not only to a certain degree satisfied, but a check is given to that indolent philosophy which refers to a miracle whatever appearances, both in the natural and moral worlds, it is unable to explain.”

Dugald Stewart (1753-1828),
*Elements of the philosophy of the human mind.*
3rd vol. 1827.
I, pink... therefore, I ham...