The 'Language Instinct' Debate

Educating Eve: The 'Language Instinct' Debate is a book by Geoffrey Sampson, providing arguments against Noam Chomsky's theory of a human instinct for (first) language acquisition. Sampson explains the original title of the book as a deliberate allusion to Educating Rita (1980), and uses the plot of that play to illustrate his argument. The Language Instinct (1994) is a book that presents the linguistic theories of Chomsky and others to a general audience, authored by cognitive scientist Steven Pinker to admit non-specialist readers to the considerations.

The title, Educating Eve, was dropped after the first edition because the allusion to Educating Rita "was deemed unduly mysterious".[1] The revised edition (2005) contains an additional chapter and "many passages, from a few words up to new chapter-sections, that discuss relevant scientific findings which have emerged since the first edition, or respond to objections made by critics of that edition."[2]

ABSTRACT

Sampson critically evaluates the ability of theories of linguistic nativism to accommodate the growing understanding of human brain processing over the course of the late 20th century. He proposes an alternative explanation, borrowing some ideas and
some studies have demonstrated foetal exposure to the mother's voice results in absorbing language-

absolutely

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OVERVIEW

"Eve was not a born know-all. She was ignorant. But she was a good learner."[9] — Geoffrey Sampson, 

Educating Eve

The book has seven chapters introduced by a foreword by Paul Postal who claims an agnostic position regarding the debate. He expresses serious concerns regarding the strength of the "nativist" argument; but despite

being unconvinced of the alternative view, he commends Sampson for challenging nativism and attempting to make a case for an alternative.

The first chapter of Educating Eve considers broad contours of the nature versus nurture debate in regard to human knowledge generally, before narrowing this down to the rise of late 20th century linguistic nativism in particular. It concludes with an overview of the methodology of the rest of the book. Chapter 2 reports evidence that was available to the "first wave" of nativists (like Chomsky) during the 1960s and 1970s. Chapter 3 reports the results of research that have become available since then. Chapter 4 turns to examining the distinctive arguments of "new wave" nativists (like Pinker). Chapter 5 presents a case for an alternative view. Chapter 6

In chapter 7 Sampson concludes with a short personal perspective on sociological changes in the nature of academic discourse over the 40 years of the debate regarding nativism. He attributes the popularity of nativism to various features of these sociological changes.

FOREWORD

Paul Postal starts his foreword (to the 2005 edition), by noting the rise to "dominance" of Chomsky's belief in an innate basis for first language learning; he calls it the "innateness position". He mentions Chomsky's own terms for this hypothesized "faculty of language" or "linguistic organ".

Ray Jackendoff
Peter Culicover

CHAPTER 1: CULTURE OR BIOLOGY?

Plato, Phaedo 72e and Meno 86a-b


René Descartes
John Locke
Karl Popper

CHAPTER 2: THE ORIGINAL ARGUMENTS FOR A LANGUAGE INSTINCT

In the second chapter of Debate, Sampson first presents and numbers seven "empirical premisses" he finds in Chomsky's work. He then provides his responses to each of these premises, numbered according to the same system (the numbers being utilized throughout the book). This article reverses Sampson's layout, so that premise and response can be seen together, since the premisses are logically independent, whereas the responses depend directly on the premisses. Quotes from Chomsky below are those identified by Sampson. Editorial emmendments (in [brackets]) are Sampson's.

Emphasis (in italics) is original per Chomsky.

1 SPEED OF ACQUISITION

Chomsky

"Knowledge of language is normally attained through brief exposure"[4]

"Mere exposure to the language, for a remarkably short period, seems to be all that the normal child requires to develop the competence of the native speaker."[5]

"Given an input of observed Chinese sentences, [the brain] produces (by an induction of apparently fantastic complexity and suddenness) the rules of Chinese grammar"[6]

"Grammar ... [is] acquired by virtually everyone, effortlessly, rapidly, in a uniform manner ... Knowledge of physics, on the other hand, is acquired selectively and often painfully, through generations of labor and careful experiment, with the intervention of individual genius and generally through careful instruction".[7]

Sampson

Sampson distinguishes two variants of Chomsky's argument from speed: his main case (i) that speed is absolutely fast[8] and a less frequent case (ii) that it is relatively fast—faster than learning physics, for example.[9] Sampson notes that the period of language acquisition is normally reckoned from birth.[9] though some studies have demonstrated foetal exposure to the mother’s voice results in absorbing language-
specific information. However the duration of time is reckoned, though, Sampson challenges (i)—absolute speed—by asking: "Why is it appropriate to regard a learning period of two years or so as 'remarkably fast' rather than 'remarkably slow'?" More specifically, he asks: "How long would human beings have to take to acquire language before Chomsky would no longer see the speed-of-acquisition argument as applicable? Ten years? Fifty years?" Sampson notes that Chomsky's view is actually that language learning would not be possible at all without innate knowledge—time alone would never produce it.

Sampson challenges (ii)—relative speed—by noting a false analogy between tacit language knowledge and descriptive knowledge of physics. On the one hand, descriptive knowledge of language is considered by many professionals to be incomplete even after the work of generations of scholars, and familiarity with this knowledge is neither acquired universally nor quickly by individuals. On the other, tacit knowledge of physics is, broadly speaking, universal and relatively fast. Sampson describes this as "mastery of the 'tacit knowledge' which enables a person to conform his behaviour to the patterns appropriate to the physical world he inhabits: to pour a liquid without spilling it, to use a skipping rope, to succeed in throwing a ball roughly where he wants it to go, etc."

2 AGE-DEPENDENCE

Chomsky

"There seems to be a critical age for learning a language, as is true quite generally for the development of the human body. There is reason to believe that the language acquisition system may be fully functional only during a 'critical period' of mental development or, more specifically, that its various maturational stages... have critical periods."

"A young child of immigrant parents may learn a second language in the streets, from other children, with amazing rapidity."

Sampson

3 POVERTY OF DATA

Chomsky

"It is clear that the language each person acquires is a rich and complete construction hopelessly underdetermined by the fragmentary evidence available."

"The native speaker has acquired a grammar on the basis of very restricted and degenerate evidence; the grammar has empirical consequences that extend far beyond the evidence."

"We cannot avoid being struck by the enormous disparity between... the generative grammar that expresses the linguistic competence of the native speaker and the meager and degenerate data on the basis of which he has constructed this grammar."

Sampson

4 CONVERGENCE AMONG GRAMMARS

Chomsky

"The grammars that are in fact constructed vary only slightly among speakers of the same language, despite wide variations not only in intelligence but also in the conditions under which language is acquired."

"To a very good first approximation, individuals are indistinguishable (apart from gross deficits and abnormalities) in their ability to acquire grammar... Individuals of a given community each acquire a cognitive structure that is rich and comprehensive and essentially the same as the systems acquired by others."

"Every child... acquires knowledge of his language, and the knowledge acquired is, to a very good approximation, identical to that acquired by others on the basis of their equally limited and somewhat different experience."

Sampson

5 LANGUAGE UNIVERSALS

Chomsky

"We discover a substantial system of principles that do not vary even among languages that are, as far as we know, entirely unrelated."

"All known formal operations in the grammar of English, or of any other language, are structure-dependent. This is a very simple example of an invariant principle of language, what might be called a formal linguistic universal... Given such facts, it is natural to postulate that the idea of 'structure-dependent operations' is part of the innate schematism applied by the mind to the data of experience."

"The proper names, in any language, must designate objects meeting a condition of spatiotemporal contiguity, and that the same is true of other terms designating objects."

"It surpasses belief that language-learners are regularly provided with specific instruction or evidence to bring them to recognize that [certain sentences violating the opacity conditions] are ungrammatical."

Sampson

6 NON-LINGUISTIC ANALOGIES

Chomsky

"Think for example of the capacity to deal with the number system, common to humans apart from pathology and as far as we know, unique to humans.... On should not be misled by the fact that some birds, for example, can be taught to pick $n$ elements from an array for small $n$ – about up to seven. The very essence of the number system is the concept of adding one, indefinitely. The concept of infinity is not just 'more' than seven..."

"Work of the past years has shown that much of the detailed structure of the visual system is 'wired in', though triggering experience is required to set the system in operation."
7 SPECIES-SPECIFICITY

Chomsky

"Note that if it were discovered that some other organism had something like 'the number faculty,' this would in any event not bear on the question of whether it is intrinsic to the human mind." [13]

Sampson

CHAPTER 3: HOW PEOPLE REALLY SPEAK


British National Corpus

CHAPTER 4: THE DEBATE RENEWED

Norwegian: Expensive, Russian – goodbye.
Russian: Nothing. Four half.
Norwegian: Give four, nothing good.
Russian: No brother. How me sell cheap? Big expensive flour on Russia this year.
Norwegian: You no true say.
Russian: Yes. Big true, me no lie, expensive flour.
Norwegian: If you buy – please four pood. If you no buy – then goodbye.
Russian: No nothing brother, please throw on deck.

Note: a pood is a Russian measure of weight equal to about ten stone.

[I tell you (that) it's absolutely true (that flour is expensive)]

"I tell you it's absolutely true that flour is expensive" or
"It's absolutely true, I'm not lying, flour is expensive"?

Original
B'reshit bara Elohim et hasshamayim w'et haaretz

Gloss
In the beginning created God the heavens and the earth

Translation
"In the beginning of creation, when God made the heavens and the earth". — New English Bible

Sampson notes that "An adverbial clause (when God made . . .); a verbless with clause

CHAPTER 5: LANGUAGE STRUCTURE TURNS QUEEN'S EVIDENCE

David Lightfoot
Herbert A. Simon

CHAPTER 6: THE CREATIVE MIND

Mind and brain
Popper a nativist?
Popper and emergence
The possible and the real
Was Eve a material girl?

CHAPTER 7: CONCLUSION

ANNOTATED JOURNAL COMMENTARY

The Linguistic Review 19 (2002). [devoted to debating linguistic nativism]

Cowley, and some others, view Sampson and Pinker as standing at extreme ends of a nature–nurture spectrum, as applied to explaining language acquisition. Cowley notes philosophical difficulties with each extreme, as they are argued by Sampson and Pinker: Sampson's version of the nurture position also argues for a philosophical dualism; whereas Pinker's version of the nature position also argues for an ontological reality for syntax. Both
these auxiliary arguments are unsatisfactory to many writers who address the relevant broader philosophical questions. Cowley proposes an alternative: that language acquisition involves culturally determined language skills, apprehended by a biologically determined faculty that responds to them. In other words, he proposes that each extreme is right in what it affirms, but wrong in what it denies. Both cultural diversity of language, and a learning instinct, can be affirmed; neither need be denied.

SEE ALSO
Genie (feral child)
Poverty of the stimulus

NOTES AND REFERENCES

WORKS CITED IN NOTES AND REFERENCES

Karl Popper
(German) Die beiden Grundprobleme der Erkenntnistheorie Tübingen: Mohr Siebeck Verlag, 1979. [An unpublished typescript also circulated from the early 1930s, since edited by TE Hansen for his biography of Popper.]
(German) Logik der Forschung: zur Erkenntnistheorie der Modernen naturwissenschaft Wien: Springer Verlag, 1935.
Noam Chomsky
Steven Pinker
Geoffrey Sampson

SELECTED BIBLIOGRAPHY OF OTHER WORKS


EXTERNAL LINKS

The ‘Language Instinct’ Debate — Geoffrey Sampson’s own page for the book
Linguistic Nativism Reconsidered — MPhil/PhD seminar bibliography by Shalom Lappin @ department of philosophy staff page, official King’s College London site
The ‘Language Instinct’ Debate — LINGUIST List review by Haitao Liu, originally posted 29-September, 2005.
Educating Eve — an unrelated project documenting outstanding women graduates from Cambridge University
The Year's Work in English Studies

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