Chomsky

Ideas and Ideals

NEIL SMITH

Chomsky
Ideas and Ideals

Neil Smith

Chomsky

Ideas and Ideals

Noam Chomsky is one of the leading intellectual figures of modern times. He has had a major influence on linguistics, psychology, and philosophy, and a significant effect on a range of other disciplines from anthropology to mathematics, education to literary criticism.

In this rigorous yet accessible account of Chomsky's work and influence, Neil Smith analyzes Chomsky's key contributions to the study of language and the study of mind. He gives a detailed and partly historical exposition of Chomsky's linguistic theorizing, and examines the ideas (from deep and surface structure to the economy considerations of the Minimalist Program) for which he is best known. Smith discusses the psychological and philosophical implications of Chomsky's work, and argues that he has fundamentally changed the way we think of ourselves, gaining a position in the history of ideas on a par with that of Darwin or Descartes. Finally, he examines Chomsky's political ideas and how these fit intellectually with his scholarly work. Smith argues that, despite Chomsky's own disavowal of any very close connection, there are fundamental ideas of rationality, creativity, and modularity that draw together the disparate strands of his vast output. Throughout, Smith explores the controversy surrounding Chomsky's work, and explains why he has been both adulated and vilified.

This much needed book will be welcomed by a wide range of readers: students and researchers in linguistics, philosophy, psychology, cognitive science, and politics, and anyone with an interest in the impact of Chomsky's work.

NEIL SMITH is Professor and Head of Linguistics at University College London. He is the author of *An Outline Grammar of Nupe* (1967); *The Acquisition of Phonology* (1973); *Modern Linguistics: the Results of Chomsky's Revolution* (with Deirdre Wilson, 1979); *The Twitter Machine: Reflections on Language* (1989); *The Mind of a Savant* (with Ianthi Tsimpli, 1995), and he has edited a volume on *Mutual Knowledge* (1982). In addition, Neil Smith has published around one hundred essays, articles and reviews in a wide variety of publications, including *Journal of Linguistics, Lingua, Journal of Neurolinguistics*, and *Glot International*.

Dedication to my friends

Dear friends, I say friends here
In the larger sense of the word:
Wife, sister, associates, relatives,
Schoolmates, men and women,
Persons seen only once
Or frequented all my life:
Provided that between us, for at least a moment,
Was drawn a segment,
A well-defined chord.

   . . . remember the time
Before the wax hardened.

<div align="right">"To my friends" by Primo Levi (Levi, 1990:5)</div>

Acknowledgments

Contents

vii

Introduction

A Child of the Enlightenment.   Chomsky, 1992b: 158

Chomsky's achievement

Why is Chomsky important? He has shown that there is really only one
human language: that the immense complexity of the innumerable lan-
guages we hear around us must be variations on a single theme. He has
revolutionized linguistics, and in so doing has set a cat among the philo-
sophical pigeons. He has resurrected the theory of innate ideas, demon-
strating that a substantial part of our knowledge is genetically deter-
mined; he has reinstated rationalist ideas that go back centuries, but
which had fallen into disrepute; and he has provided evidence that
"unconscious knowledge" is what underlies our ability to speak and
understand. He has overturned the dominant school of behaviorism in
psychology, and has returned the mind to its position of preeminence in
the study of humankind. In short, Chomsky has changed the way we
think of ourselves, gaining a position in the history of ideas on a par with
that of Darwin or Descartes. And he has done this while devoting the
majority of his time to dissident politics and activism: documenting the
lies of government, exposing the hidden influences of big business, devel-
oping a model of the social order, and acting as the conscience of the
West.

In this century his peers in influence are such disparate figures as
Einstein, Picasso, and Freud, with each of whom he has something in
common. Like Freud – but with added intellectual rigor – he has changed
our conception of the mind; like Einstein, he blends intense scientific
creativity with radical political activism; like Picasso, he has overturned
and replaced his own established systems with startling frequency. Per-
haps his greatest similarity is to Bertrand Russell, whose early work,
Principia Mathematica, redefined the foundations of mathematics, and
who devoted much of his life to political writing and activism. But while
everyone knows something about mathematics, that most people have

even heard of linguistics is largely due to Chomsky. His renown in linguistics, philosophy, and psychology first ensured that a few people would listen to his political views; subsequently, his political fame, or notoriety, has attracted attention to his academic work, which has brought the study of language into the mainstream of scientific research, and simultaneously made it relevant to the rest of the humanities and the natural sciences.

This book is not a biography. I am concerned with Chomsky's ideas, rather than the details of his private life. This is not through lack of interest. Fascinating snippets of information emerge from his interviews: endearing tales of childhood visits to a baseball match with his school-teacher or insights about his feelings when forced to take boxing at college. However, Chomsky is "really a hermit by nature" and has repeatedly emphasized that his personal views are irrelevant to his scientific ideas; indeed, that "to the extent that a subject is significant and worth pursuing, it is not personalized." For those who want personal glimpses beyond the following few notes, the book by Barsky and the interviews with Bar-samian and Peck are the best sources (see Bibliography).

Chomsky was born on 7 December 1928. From the age of two, he spent ten years in a progressive Deweyite school in Philadelphia, where there was a congenial emphasis on individual creativity. From there he moved on to a regimented and stifling high school, about which he claims to remember "virtually nothing." Thereafter he attended the University of Pennsylvania where he met Zellig Harris, a leading linguist and political theorist, who had a profound influence on his life. He graduated in 1949, with an undergraduate thesis about Modern Hebrew, that was later revised and extended as his master's thesis. That same year he married Carol Schatz, a fellow student who has made a significant contribution to language and linguistics in her own right. He entered graduate school later the same year and in 1951 became one of the Society of Fellows at Harvard, from where he moved to the Massachusetts Institute of Technology (MIT) in 1955. He has been there ever since, although a large part of each year is devoted to traveling around the world giving countless lectures and interviews.

Apart from his major influence on linguistics, philosophy, and psychology, Chomsky has had a minor but not insignificant effect on a range of disciplines from anthropology to mathematics, from education to literary criticism. To understand this pervasive influence requires a grasp of the defining characteristics of Chomsky's scientific program of Generative Grammar, and some insight into the appeal of his social and political thought. What follows is an attempt to explain Chomsky's work by analyzing and putting into context the key contributions he has made to

the study of language and the study of mind. This involves dealing with issues, some of them technical and profound, in linguistics, psychology, and philosophy. His work in all these areas has been systematically innovative and systematically controversial. Misunderstanding of his views is widespread in all three communities of scholars, and part of my aim is to explain why it is that he has been both adulated and vilified. In some instances the task is straightforward: the preconceptions that cause the misapprehensions are reasonably superficial and clear. In others it is harder to see why the hostility is so uncomprehending.

The book is intended to be accessible to everyone. Accordingly, I have chosen not to clutter the text with footnotes, but detailed references, sources, and suggestions for further reading are collected together at the end of the book. All quotations are identified there and it should be possible to locate any source in a few moments. References are in all instances to Chomsky's work, unless explicit indication to the contrary is given. Much of Chomsky's work is extremely technical and I have attempted to simplify his ideas in the interest of comprehensibility. Nonetheless, I have occasionally included a brief technicality in order to make it clear to my professional colleagues what it is I am simplifying. In every case, it is worth emphasizing that the linguistic examples I cite will need mulling over, if their implications are to be fully grasped.

Chapter 1 begins by putting language and the study of language in a wider context as part of the scientific investigation of human nature. This involves a discussion of the structure of mind, with evidence drawn from studies of both normal and pathological cases of the dissociation of human faculties, and with language as the "mirror of the mind." This opening chapter is followed by a detailed and partly historical exposition of Chomsky's linguistic theorizing, which constitutes the bedrock on which the rest is built. The aim of this section is to give the reader some understanding of current theory by showing how we got where we are. An account is given of the ideas for which Chomsky is best known (deep and surface structure, for instance) and why they are no longer part of his current Minimalist framework; but most importantly, I try to give a flavor of the kind of argument that Chomsky has used in his work over the last fifty years. The next two chapters are devoted to the psychological and philosophical implications of Chomsky's work. Chapter 3 looks at the vexed question of what is meant by psychological reality, and provides evidence for it from language processing, from the child's acquisition of a first language, and from language breakdown in pathology. At the core of this chapter is a discussion of Chomsky's solution to "Plato's problem," the puzzle of how children can acquire their first language on the basis of so little evidence. Chapter 4 turns to the philosophical aspects of

Chomsky's ideas, outlining his intellectual commitments to realism, mentalism and naturalism, and explaining the controversies which have sparked so much debate in the philosophical community. The final chapter is devoted to a discussion of his political ideas and how these fit in intellectually with his "academic" work. Despite Chomsky's own disavowal of any very close connection, it can be argued that there are fundamental ideas of rationality, creativity, and modularity which draw the disparate strands of his output together. The book ends with an annotated bibliography.

The task of summarizing Chomsky is daunting, and I am conscious of Leonardo da Vinci's aphorism that "abbreviators do injury to knowledge." Chomsky's output is vast: he has published about seventy-five books, hundreds of articles, and written tens of thousands of letters. His mastery of a huge literature is awe-inspiring: in current affairs throughout the world, in politics, history, linguistics, philosophy, psychology, mathematics . . . there are few areas where he has no knowledge. To achieve this mastery of many fields demands "fanaticism" plus in his words, the ability and dedication to "work like a maniac." It also takes immense courage, ceaseless energy and the sacrifice of any leisure. He wrote: "It takes a big ego to withstand the fact that you're saying something different from everyone else." He views his own contribution as "pre-Galilean," though Berlinski is probably right to consider him "As big as Galileo." At the end of the sixteenth century Galileo founded the experimental method which underpins the whole of modern science; at the end of the twentieth century Chomsky is generally viewed as the originator of the cognitive revolution which is beginning to extend that method to the study of the mind.

Not everyone shares this positive evaluation of him. The philosopher Richard Montague reportedly called him one of the "two great frauds of twentieth century science" (the other was Einstein, so at least he was in good company); he has been vilified as an "opportunist, . . . applauder of corruption, and apologist for government indifference to protests against war and colonialism"; he has been called the "great American crackpot" and "outside the pale of intellectual responsibility." He has been repeatedly jailed for his political activism and has frequently been the victim of death threats. Such polarization of opinion demands explanation, and one of the reasons for writing this book is to provide the foundations for such an explanation. Chomsky says: "You have a responsibility to explain why what you are doing is worth doing." For me, his work is illuminating, but I think it is under-appreciated and worth broadcasting more widely, so I have tried to distill the essence into a few brief chapters.

On heroes and influences

Most people *need* heroes to act as role models, whose exploits they can emulate or, more mundanely, simply use as a basis for defining the kind of activity it is appropriate, morally defensible, and at least partly feasible to follow. This is not the mindless homage of hero-worship. Close scrutiny usually leads to the discovery that one's heroes – like everyone else in the world – have feet of clay, which can be an encouragement if it puts them on the same mundane plane as oneself. I am happy to admit that Chomsky is a hero for me. It does not follow that I always agree with him, though if I didn't agree with him on many issues, I almost certainly wouldn't have written this book: I do not identify with those who idolize political leaders because of their strength of leadership, irrespective of the direction in which they lead.

For Chomsky "Nobody is a hero," and he usually avoids answering questions about whom he admires, though the list of those who have influenced him and whom he respects is lengthy. It includes anarchist thinkers like Mikhail Bakunin, Peter Kropotkin, and Rudolf Rocker; the left Marxist Anton Pannekoek; a long series of philosophers: Descartes, Humboldt, and Rousseau; John Dewey and Charles Sanders Peirce; more recently Nelson Goodman and W. V. Quine; linguists like Zellig Harris and Otto Jespersen; and libertarians like A. J. Muste and Bertrand Russell ("one of the very few people that I actually admire"). At a greater remove, it would doubtless include Galileo, Kant, and Newton. Some of the influences are less obvious than others: Ahad Ha-'am, a cultural Zionist at the turn of the century, whose work was later considered not only to be anti-Zionist, but to show "an excess of rationalism," was an early influence on both Chomsky and his parents. His father, William Chomsky, not only influenced him politically, but also exposed him early in life to classical Semitic philology: his book *Hebrew: The Eternal Language* (dedicated to Noam and his brother) appeared in the same year, 1957, as his son's *Syntactic Structures*, the accepted beginning of the Chomskyan revolution.

Despite his ability to overthrow the edifices he has himself created, there is a timelessness about his moral commitments and the intellectual foundations of his work, that clearly date to his childhood. His views are never adopted unthinkingly, and none of the influences is accepted uncritically. In linguistics as in politics what is striking is Chomsky's ability to see to the heart of issues; to extract that which is defensible and constructive and to dismiss that which is dishonest, immoral or irrational. In both domains he defends the insights of those whose general position he has no time for and criticizes the perceived failings of his intellectual

allies. Moreover, he does it with grace and humor. Intellectually, he is perhaps closest in spirit, as well as achievement, to Darwin, who wrote to his friend and mentor Henslow: "I believe there exists, & I feel within me, an instinct for truth, or knowledge or discovery, of something [the] same nature as the instinct of virtue, & that our having such an instinct is reason enough for scientific researches without any practical results *ever* ensuing from them."

1 The mirror of the mind

> One reason for studying language – and for me personally the most
> compelling reason – is that it is tempting to regard language, in the
> traditional phrase, as "a mirror of mind." Chomsky, 1975a: 4

Frogs are not like us. They are better at catching flies but not, it seems, at
explaining how they do it. The frog mind is narrowly specialized to
control tasks such as locating small black specks, escaping predators and
finding mates, but not for reflecting on the ethics of eating insects or the
issue of equal rights for toads.

This view of the limited intellectual capabilities of amphibians is un-
likely to be controversial. If I extended it to apes the reaction might be
different, and it would clearly be false of humans. How do we know?
Because humans can tell us so and the others cannot. Although having a
language is not a prerequisite for having a mind, language is overwhel-
mingly our best evidence for the nature of mind. Language is definitional
of what it is to be human, and the study of language is a way in to the study
of the human, but not the frog, mind.

Despite the complexity and variety of animal communication systems,
no other creature has language like ours. Although chimpanzees and
bonobos can be taught to manipulate an impressive array of signs and use
them to communicate with us or with each other, human language, in
particular the syntax of human language, is *sui generis*. As far as we know,
even the singing of whales and the color communication of cuttle-fish
have nothing like syntax. In one respect this uniqueness is trivial: the
inherent interest of our abilities would not be diminished just because it
turned out that our close genetic relatives had even more in common with
us than we had previously suspected. But if we want to understand what
we are – how we are unique – our linguistic ability is central, and
Chomsky's work in generative grammar provides the most important and
radical insights in this domain. He has achieved this by studying language
with the rigor and the methodology of the hard sciences in combination

7

with the philosophical insight of the Cartesian tradition in a way that had previously never been attempted.

In this chapter I look first at the implications of the assumption that linguistics should be part of the natural sciences, and then at the position of language in relation to the rest of cognition. This involves investigating a range of human abilities, their interrelations and dissociations, the contrast between *knowledge* of language and the use of that knowledge, and taking a first glance at questions of innateness and the relation of language to thought.

Linguistics as a science

Linguistics had long been defined as the scientific study of language, but the science was restricted to taxonomy and a naïve methodology. Hockett, one of the leading figures of the American structuralism that Chomsky's revolution replaced, opens one of his early papers with the definitional claim that "linguistics is a classificatory science." One of Chomsky's achievements has been to make plausible the claim that linguistics is scientific in the more interesting sense that it can provide not only explicit descriptions but also explanations for the classification. There are several strands to such a claim. The first is that linguistics provides a general theory explaining *why* languages are the way they are: each language is a particular example of a universal faculty of mind, whose basic properties are innate. The second is that the theory should spawn testable hypotheses: like a physicist or a biologist, the linguist manipulates the environment experimentally to see what happens and, crucially, he or she may be wrong. The experiments are usually not as high-tech as those in the hard sciences, but they allow for testing: if your analysis entails that English speakers should find *John speaks fluently English* as acceptable as *John speaks English fluently*, then it is wrong and must be replaced by a better one. A corollary of this emphasis on seeking testable explanations is that the central concern is *evidence* rather than *data*. Every linguist (a term which is ambiguous between theorist of language and polyglot) has suffered the question "So how many languages do you speak?" It is often hard to convince people that the answer doesn't really matter. Having a little knowledge of half a dozen languages is less useful than knowing one language with native proficiency. You may be reasonably fluent in French, for instance, without being quite sure whether the French equivalent of the unacceptable English sentence above is acceptable or not: "Jean parle couramment l'anglais." If you're not sure, your knowledge is of little more use than an unreliable balance. Even if I assure you that it is acceptable, and that this reflects a systematic

difference between the two languages, this is still just another fact until I can use it as evidence for some particular theoretical assumption, at which point it may acquire vital importance for deciding between conflicting theories.

Linguistics before Chomsky (and in many cases even now) was preoccupied, like Linnaean botany or Victorian entomology, with achieving complete coverage of the respective fields. Examples are legion, from Hjelmslev's *Prolegomena*, which begins with the claim that linguistic theory must permit descriptions which are "exhaustive," to current versions of Construction Grammar, which criticizes the generative paradigm because "it doesn't allow the grammarian to account for absolutely everything in its terms." It is essential to collect enough data to guarantee representative coverage – missing out marsupials in a taxonomy of mammals would be a serious omission – but trying to achieve exhaustive coverage is a wild-goose chase, and such criticisms are misconceived. The set of facts is potentially infinite, but facts which can be used as evidence for some particular hypothesis are much harder to come by. Consider word order.

Different languages have different word orders: in some, like English, sentences are typically of the form Subject Verb Object (SVO), so we say *Frogs eat flies*; in others, like Japanese, they are of the form Subject Object Verb (SOV), so the equivalent sentence would have the order *Frogs flies eat*; in yet others, like Arabic, they are of the form Verb Subject Object (VSO), with the order *Eat frogs flies*. Assuming that it makes sense to talk of different languages having different characteristic word orders, it was suggested some years ago that all the world's languages fell necessarily into one of these three types (SVO, SOV, and VSO). The suggestion was plausible because these are the three orders where the subject precedes the object which, given our own language background, feels logical. To test this claim it's no use just collecting more examples of languages like the ones mentioned: it's easy to find hundreds more languages that conform to the generalization. What is needed is a list of the world's languages sufficiently exhaustive to tell us whether there are any exceptions: languages with the word orders VOS, OVS, or OSV. As it happens, the suggestion was wrong: all these types do occur (although the last two in particular are extremely rare), so *all* the six logically possible orders are attested. It follows that, as far as this particular observation is concerned, there is nothing more to be said. Whatever language one looks at next, it will fall into one of the six types listed, because there are no other logical possibilities, so every language will exemplify one of the possibilities we already know about. Even the signed languages of the deaf manifest the same kind of word order differences as spoken languages. Accordingly, if