

On the Non-Existence of Cartesian Linguistics

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This is a transcript of an article of mine published in a collection entitled *Cartesian Studies*, edited by R. J. Butler (Oxford: Basil Blackwell, 1972), pp. 137–145. That article was in turn based on a paper that I had presented, unfortunately *in absentia*, at the annual meeting of the Linguistic Society of America, held in New York City on 29 December 1968. The 1972 article is reproduced here with the kind permission of the publisher. Since it seems to have been largely ignored when it appeared I feel that it needs to be made more accessible to interested readers.

Note that in the article I used the following abbreviations: Charles Adam & Paul Tannery, *Oeuvres de Descartes* (Paris: L. Cerf, 1897–1913) is referred to by 'AT' followed by the volume and page number; and *The Philosophical Works of Descartes Rendered into English* by Elizabeth S. Haldane and G. R. T. Ross (Cambridge: Cambridge University Press, 1911) is referred to by 'HR' followed by the volume and page number. I have taken this opportunity to make minor corrections in the orthography and punctuation of the original article and to complete the bibliographical references where necessary. For the convenience of today's readers I have added volume and page references, enclosed in brackets, to the more recent English translation of the works of Descartes by John Cottingham, Robert Stoothoff, and Dugald Murdoch, which I abbreviate 'CSM.' This edition of Descartes's works is entitled *The Philosophical Writings of Descartes*, 2 vols. (Cambridge: Cambridge University Press, 1985–). When I quote from Descartes's letters, I also make cross-references to volume 3 (entitled *The Correspondence*) of *The Philosophical Writings of Descartes* (Cambridge: Cambridge University Press, 1992), translated by John Cottingham, Robert Stoothoff, Dugald Murdoch, and Anthony Kenny, which I abbreviate 'CSMK.' To the page references to the 1966 edition of Chomsky's *Cartesian Linguistics* I am also in the process of adding page references to the new third edition of that book, edited by James McGilvray and published by Cambridge University Press in 2009. Some of these references already appear in the present version of the article, and more will appear in later versions.

At the end of the present web edition I add a postscript in which I discuss some of the issues raised in the original article. I might mention that from 1969 to 1973 Chomsky and I had an extensive correspondence on my critique of his book *Cartesian Linguistics*. As might be expected, he found my approach unacceptable, but I think I can truthfully say that I tried to derive as much benefit from his arguments as I could.

THE TEXT OF THE 1972 ARTICLE

In a number of recent monographs Chomsky has attempted to demonstrate the existence of an intellectual movement for which he has suggested the name 'Cartesian linguistics.'¹

¹ See in particular *Cartesian Linguistics* (New York & London: Harper & Row, 1966) and *Language and Mind* (New York: Harcourt, Brace & World, 1968). The most recent edition of the former, a third edition, appeared in 2009, and the most recent edition of the latter, likewise a third edition, in 2006.

According to Chomsky, this movement is responsible for the universal grammars which appeared in France beginning with the famous Port Royal Grammar of 1660 and culminating in the work of du Marsais in the eighteenth century. It is also responsible for many of the linguistic notions basic to the writings of Herder, Wilhelm von Humboldt, and August Wilhelm Schlegel. Chomsky locates the major stimulus setting this movement going in certain remarks made by Descartes in the *Discourse on Method* and feels justified, therefore, in applying the epithet 'Cartesian' to the movement. However, in proposing this term Chomsky is careful to point out that he does not claim that all the representatives of the movement, from the Gentlemen of Port Royal to the German Romantics, felt themselves to be followers of Descartes in the philosophical sense.² With this reservation, then, Chomsky regards the term 'Cartesian linguistics' as appropriate.

I shall not argue here that the term is inappropriate, but rather that Chomsky has not demonstrated that an intellectual movement such as he has in mind really ever existed, call it whatever you will. For a number of crucial historical assumptions are involved here which can be seen to be highly questionable once they are brought out into the open. The first of these historical assumptions is that Descartes's statements about language represent a novel departure from the traditional position. The second is that Descartes's ideas about language influenced the writers of universal grammars in fundamental respects. The | [p. 138] third assumption, and one which I shall not have time to go into in this paper, is that the whole movement which Chomsky designates by the term 'Cartesian linguistics' forms a reasonably homogeneous whole.

The important facts to establish then are the following:

1. Was what Descartes said about language in some interesting sense different from, and let us say, more insightful than anything that had been said before?

2. Were the universal grammarians crucially influenced by Descartes?

Let us start with the first of these two questions and review what beliefs Chomsky ascribes to Descartes with respect to language. According to Chomsky, Descartes was the first to champion 'the creative aspect of language use.' By the expression 'the creative aspect of language use' Chomsky means the following three things. First, that the normal use of language is innovative. Second, that speech is free from the control of detectable stimuli, either external or internal. And third, that utterances are appropriate to the situations in which they are uttered.³

Let us now examine Descartes's own statements to discover whether he can be said to have believed in the creative aspect of language use in the sense that Chomsky has in mind. How did Descartes characterize human language, and what place did it occupy in his general scheme of things? Let me recall a few basic facts about Descartes's general philosophical position. He considered, first of all, that there are two and only two kinds of created substance, namely, spiritual and corporeal. Living bodies, he reasoned, are obviously not in the class of spiritual

²*Cartesian Linguistics*, pp. 75ff.

³The clearest exposition of what Chomsky means by 'the creative aspect of language use' is to be found in *Language and Mind*, pp. 10ff. See also *Cartesian Linguistics*, pp. 3ff.

substances. On the other hand, the human soul is something which can hardly be ascribed to the class of corporeal substances. Human beings, then, are creatures which are in some sense both corporeal and spiritual, while inanimate nature is squarely in the corporeal sphere. But what of animate nature other than the human species? Here the decisive point is provided by Descartes's conception of the soul as a substance whose principal attribute is thinking, the capacity for thought. Human beings are the only living creatures capable of thought; hence, they are the only [p. 139] creatures which have immortal souls. Descartes's conclusion, therefore, is that the whole realm of animate nature apart from the human species must be relegated to the sphere of corporeal substance. Animals then are in essence no different from machines.

So, on the psychological level, the crucial difference between man and the rest of animate creation is that man is capable of thought and animals are not. But thought, the activity of the soul, is unobservable, as indeed is spiritual substance itself. Hence the absence of such an activity cannot be ascertained by the senses. But thought is expressed and conveyed from one human being to another by means of language. Where linguistic behavior takes place, therefore, the creatures exhibiting this kind of behavior betray themselves as endowed with immortal souls. That animals are not so endowed is clearly shown by the fact that they do not indulge in linguistic behavior.

Obviously, however, animals are not completely devoid of communicative skills, and some of them can even be trained to produce reasonable imitations of human speech. Hence in order to show convincingly that animals do not think, and are not endowed with immortal souls, it is necessary for Descartes to distinguish between animal communication and human language, or at least to define what he means by 'true discourse' (*vera loquela*), to use Descartes's own term. In a letter to the English Platonist, Henry More, dated February 5, 1649, Descartes faced the problem in the following way: 'No animal,' he says, 'has attained a degree of perfection such that it can use true discourse (*vera loquela*), that is to say, indicate something either by using its voice or by nodding, which could be ascribed to thought alone rather than to natural impulse.'⁴ True discourse, in other words, occurs when a communicative act takes place which must be ascribed to thought and nothing else.

Note the curious circularity of this argument. A creature has a soul only if it is capable of using true discourse; discourse is of the genuine variety only if it can be ascribed to thought alone, thought being an activity which can be carried out only by a creature with a soul! Clearly if this latter were the only characteristic of true discourse, Descartes's discussion would be completely uninformative. However, he does present a somewhat fuller picture [p. 140] of human language in the Fifth Part of the *Discourse on Method*.⁵ The following characteristics of speech are mentioned in that work:

1. Words reveal thoughts.⁶

⁴ AT V, 278. Note that Chomsky cites this same passage from Descartes's letter to Henry More in *Cartesian Linguistics*, p. 6.

⁵ See AT VI, 55–59, 571–73. For an English translation of this passage, see HR I, 116–117 [CSM 139–141].

⁶ Descartes uses the expression *déclarer nos pensées* (*cogitationes nostras aperire* in the Latin version of the *Discourse on Method*, which he himself authorized), AT VI, 56, line 22, and AT VI, 571.

2. True speech differs completely from natural cries in that it does not indicate corporeal impulses.⁷

3. Words used in true discourse are not merely sounds repeated by rote, but are directly expressive of thoughts.⁸

Let me pause here to point out that all the characteristics so far enumerated reduce to the proposition that words reveal thoughts *and nothing more*, as Descartes expressed it in his letter to More many years later. But let me add one final characteristic of human language mentioned by Descartes in the *Discourse on Method*.

4. In genuine human discourse, what a person says is appropriate to 'whatever is said in his presence,' or is 'relevant to the subjects at hand.'⁹

Note in this connection that we are not told anything about the range of possible 'subjects at hand,' nor do we know in what the relevance of utterances to subjects at hand consists. Let me pursue this point a little further since this fourth characteristic is the only one which removes Descartes's theory of language from the level of vicious circularity. It is tempting to speculate that what Descartes meant by 'relevance to subjects at hand' was 'logical connection.' Hence Descartes may be thought to be | [p. 141] claiming that what a person says is logically connected to the subject at hand.

This is quite a plausible interpretation in the light of some other remarks he makes in the same passage of the *Discourse on Method*. Here he contrasts human reason on the one hand, and the faculties animals are endowed with on the other, pointing out that, unlike animal capacities, reason is a 'universal instrument which can function in all kinds of situations.' However, he goes on to point out the fact that even the most stupid human being is fully capable of using genuine language, and that even the most gifted animal is incapable of the same, and infers from this that very little reason is required to be able to speak, and that animals have no reason whatever.

A similar argument is developed in a letter Descartes wrote to the Marquis of Newcastle, dated November 23, 1646. In this letter he asserts that none of the external actions offers more convincing evidence that 'there is a soul in us which has thoughts' than the fact that we use them

⁷ Descartes uses the expression *déclarer nos pensées* (*cogitationes nostras aperire* in the Latin version of the *Discourse on Method*, which he himself authorized), AT VI, 56, line 22, and AT VI, 571.

⁸ AT VI, 57, line 25, and AT VI, 572 [CSM 140]. Here, Descartes points out that although magpies and parrots are capable of uttering the same words as we do, they are nevertheless unable to speak like us, that is to say, in such a way as to show that they understand what they are saying: "... videmus enim picas et psittacos easdem quas nos voces proferre, nec tamen sicut nos loqui posse, hoc est, ut ostendant se intelligere quid dicant."

⁹ AT VI, 56, line 30, and AT VI, 572 [CSM 139–140]. In this passage Descartes imagines a machine built to resemble a human being outwardly and so designed internally that it is able to produce a different utterance depending on how its various parts are manipulated from outside. Such a machine, Descartes believes, would still be distinguishable from a real human being in that it would be unable to put words together in response to whatever might be said in its presence.

appropriately to the matter at issue. He then goes on to say that he emphasizes the notion of appropriateness in order to make it clear that parrots are incapable of true speech, but that madmen are, since although what a madman says is devoid of reason it is nevertheless relevant to the subject at hand.¹⁰ Clearly then Descartes's notion of the appropriateness of utterances means no more than that what we say is always related to the subject matter which includes more than the meaning of the particular sentence being uttered.

At this point let us glance back at Chomsky's three defining attributes of the creative aspect of language use, namely (1) innovativeness, (2) freedom from the control of detectable stimuli, and (3) appropriateness to situations. Descartes obviously subscribed to the third of these notions. Concerning the second, 'freedom from the control of detectable stimuli,' we must be careful not to confuse Descartes's and Chomsky's notions of the mind. Recall that Chomsky attacked behavioristic approaches to such problems as verbal behavior *on empirical grounds*.¹¹ Descartes, I [p. 142] on the other hand, had no behaviorists to contend with, and refused to allow the soul to be subject to the laws of efficient causation not merely for empirical reasons, but more importantly, because of certain general philosophical positions he adopted, notably the decision to dichotomize nature into corporeal and spiritual substance. While the results of Descartes's and Chomsky's trains of thought may seem superficially similar, the differences between them are in reality profound.

Finally, the property of innovativeness which Chomsky ascribes to the use of natural language is difficult to identify in Descartes's explicit statements about human discourse. The nearest thing to this notion is perhaps to be found in the implication of the universal quantifier in the phrase 'appropriate to *whatever* is said in the speaker's presence' (from the *Discourse on Method*).¹² It is just conceivable that Descartes realized that since the number of possible questions is infinite, the number of possible answers to them is also infinite. At all events, even if this interpretation is forced on the text the notions of innovativeness and potential unboundedness which are basic to Chomsky's view of language play a negligible role in Descartes's discussion of the subject.

As for the novelty of Descartes's positions, his critics concentrated almost all their fire on his characterization of animals as machines, rather than on his statements about the nature of language.¹³ After all, what Descartes said about language boils down to two propositions: one, that language serves *no other function* than to convey thoughts; and the other, that when a person

¹⁰Je dis ... que ces signes soient à propos, pour exclure le parler des perroquets, sans exclure celui des foux, qui ne laisse pas d'être à propos des sujets qui se présentent.' AT IV, 574; [CSMK 303].

¹¹ See Noam Chomsky, 'Review of B. F. Skinner, *Verbal Behavior*,' *Language* 35 (1959), pp. 26–58, republished in J. A. Fodor and J. J. Katz (eds.), *The Structure of Language: Readings in the Philosophy of Language* (Englewood Cliffs, N. J.: Prentice Hall, 1964), pp. 547–578.

¹²AT VI, 57, line 1 [CSM 140] ('pour répondre au sens de *tout* ce qui se dira en sa présence'). Emphasis mine. [English translation: "To give an appropriately meaningful answer to *whatever* is said in its presence." Emphasis mine.]

¹³ See, for example, Henry More's letters to Descartes in the period 1648–49, AT V, 244ff; 311.

says something, there is some connection between what he says and the general topic being discussed. The first of these is novel only in the sense that at least some earlier theorists emphasized that speech also has functions other than the obvious one of conveying thought.¹⁴ Descartes's theory, if it is to be considered novel at all, [p. 143] represents rather a backward step from the teachings of previous centuries. The second of the two propositions, the one which concerned appropriateness, I have already pointed out, amounts to nothing more than a commonplace.

As regards the putative Cartesian origins of the Port Royal approach to universal grammar, a few brief critical remarks suggest themselves.

Chomsky claims, first of all, that in accordance with the Cartesian body-mind dichotomy the Port Royal grammarians assume that language has two aspects, sound and meaning.¹⁵ Now it is true of course that Descartes himself would have dealt with the phonetic aspects of language in terms of corporeal substance, and the semantic aspects in terms of spiritual substance, if he had ever thought about the matter. The difficulty is, however, that all previous grammarians had treated language as having these aspects ever since language began to exercise the curiosity of man. To claim that Descartes is responsible for the Port Royal grammarians' distinguishing between sound and meaning, one would have to produce specific documentary evidence of Cartesian influence, which Chomsky has so far failed to do.

The second claim that Chomsky makes is that a distinction similar to that between deep and surface structure in his own grammatical theory was already drawn by the Port Royal grammarians, and he attributes this again to their Cartesian approach. Whether in fact the Gentlemen of Port Royal can be said to have drawn such a distinction is a moot point which I cannot go into here,¹⁶ but that such a notion could be the result of assimilating Descartes's ideas about language I find difficult to believe. Indeed, research by Gunvor Sahlin,¹⁷ Robin Lakoff,¹⁸

¹⁴ See, for example, the discussion of Aquinas's views of language and its various functions in Franz Manthey, *Die Sprachphilosophie des heiligen Thomas von Aquin, und ihre Anwendung auf Probleme der Theologie*, Paderborn: F. Schöningh, 1937, especially pp. 59–61. It may be recalled that Aristotle characterized speech as something which is accompanied by an act of the imagination and is produced by a creature that has soul in it (*De anima* II, 8). Like Descartes he too insisted that speech does not exist merely to reveal pleasure and pain (*Politics* I, 2).

¹⁵ Chomsky, *Cartesian Linguistics*, p. 32.

¹⁶ Briefly, Chomsky makes the mistake, in my view, of equating his notion of deep structure with the set of basic propositions, which, the Port Royal grammarians claimed, underlie complex sentences. I assume that for Chomsky a deep structure merely *determines* the semantic interpretation of a sentence. The Port Royal grammarians believed, on the other hand, that the set of underlying propositions was the same thing as the semantic interpretation of the sentence. For an interesting discussion of the difference between Chomsky's position and that of the Port Royal grammarians, see Karl E. Zimmer, "Review of *Cartesian Linguistics*," *International Journal of American Linguistics*, 34 (1968), pp. 290–303, especially 295ff.

¹⁷ Gunvor Sahlin, *César Cheneau du Marsais et son rôle dans l'évolution de la Grammaire générale*, Paris: Presses Universitaires de France, 1928.

¹⁸ Robin Lakoff, 'Review of Herbert H. Brekle (ed.), *Grammaire générale et Raisonnée*,' *Language* 45 (1969), pp. 343–364. In this review Lakoff shows in what specific ways the writers of the Port Royal grammar were indebted to Sanctius. Her analysis, however, suffers from the same historical naïveté as Chomsky betrays in *Cartesian*

and Vivian Salmon¹⁹ [p. 144] has produced abundant evidence that the Port Royal theory of syntax rests on a tradition going back a good hundred years before the publication of the *Grammaire Générale*, namely the grammatical tradition represented by such works as the Elder Scaliger's *De Causis Linguae Latinae* of 1540 and Sanctius' *Minerva* of 1587. A component of this tradition which still awaits investigation is a type of pedagogically oriented universal grammar which began appearing in Germany about 1615, twenty years before Descartes published his first book.²⁰ That universal grammar began with Port Royal and had Cartesian origins is a hypothesis which sounds less and less plausible the more we learn about the development of linguistic theory since the Renaissance.

Finally, let me formulate my general conclusion in the following way: Chomsky has so far failed to show convincing proof that Descartes had any influence on the French universal grammarians of the late seventeenth century. Hence, the term 'Cartesian linguistics' would appear to be thoroughly misleading. It should be emphasized, however, that my arguments have not shown that Descartes had no impact whatever on grammatical theory. At present I lean toward the view that, unlike most of the other major philosophers of the seventeenth century, Descartes was relatively uninterested in language. It seems more likely therefore that the upsurge of interest in grammatical theory sprang from sources other than Descartes's philosophy. While I would be the last person to discourage attempts to demonstrate historical connections between philosophical and linguistic theorizing, the persistence of a long established grammatical tradition independent of the intellectual climate of each period has to be reckoned with. It goes without saying that this grammatical tradition itself has philosophical bases, though obviously of much greater antiquity than the ideas we have been concerned with in this paper.

[p. 145] This conclusion should not, it seems to me, daunt the investigator, and it is greatly to Chomsky's credit that he has boldly advanced historical hypotheses which more pedestrian scholars would not have had the courage to publish. For in committing what might seem like an academic indiscretion, Chomsky has revealed the true extent of our present ignorance in this whole area.

POSTSCRIPT (2007–2009)

It is so long since my article attacking the notion 'Cartesian linguistics' appeared that one could almost be forgiven if one were to suggest that what we need now is an obituary for *Cartesian Linguistics*! Let me first summarize the main argument of my original article. I shall

Linguistics. Like him, she believes that current transformational linguistics has a historical origin separate from that of non-transformational linguistics. She differs from him in that she portrays Sanctius rather than Descartes or Lancelot as the founding father of transformational linguistics in the early modern period.

¹⁹ See Vivian Salmon, 'Review of Noam Chomsky, *Cartesian Linguistics*,' *Journal of Linguistics*, 5, No. 1 (1969), pp. 165–187.

²⁰ Max Jellinek provides some interesting information about these pedagogical general grammars in his monumental *Geschichte der neuhochdeutschen Grammatik von den Anfängen bis auf Adelung* (Heidelberg: Carl Winter, 1913–14), vol. 1, pp. 88–94.

then add a few afterthoughts. As regards the argument of the original article, let me focus on two historical queries:

1. Did Descartes's pronouncements about human language represent a significant advance over what had been said before on the subject?

2. Did Descartes's philosophy and more specifically his pronouncements on human language set going a movement, tradition, or constellation of ideas that included the general and universal grammars of the Enlightenment period?

To allay healthy misgivings regarding the first issue I contend we need to examine carefully all Descartes's references to human language. To clear up my second query we need to scrutinize the general and philosophical grammars of the seventeenth and eighteenth centuries and the possible impact of Descartes's statements about language on them.

I maintain that Chomsky rose to the challenge on neither score. As regards the first query, it is surely significant that although he is a master at logical analysis and ideological confrontation he never actually answered the specific arguments that I marshalled in my 1972 essay. On the other hand, he did once attempt to defend himself with regard to the second issue, in general terms at least.

During his television debate with Michel Foucault in November 1971 he made the following statement:²¹

"So one might say that I'm looking at history not as an antiquarian, who is interested in finding out and giving a precisely accurate account of what the thinking of the seventeenth century was (I don't mean to demean that activity, it's just not mine) but rather from the point of view of, let's say, an art lover, who wants to look at the seventeenth century to find in it things that are of particular value, and that obtain part of their value in part because of the perspective with which he approaches them.

"And I think that, without objecting to the other approach, my approach is legitimate; that is, I think it is perfectly possible to go back to earlier stages of scientific thinking on the basis of our present understanding, and to perceive how great thinkers were, within the limitations of their time, groping towards concepts and ideas and insights that they themselves could not be clearly aware of. [...]

"Similarly, I think it's possible to look at the past, without distorting your view, and it is in these terms that I want to look at the seventeenth century. Now, when I look back at the seventeenth and eighteenth century, what strikes me particularly is the way in which, for example, Descartes and his followers were led to postulate mind as a thinking substance independent of the body."

²¹ This remark of Chomsky's occurs on pp. 112–113 of Arnold I. Davidson, ed., *Foucault and His Interlocutors* (Chicago: University of Chicago Press, 1997). More recently it may also be found on pp. 10–11 in John Rajchman, ed., *The Chomsky-Foucault Debate on Human Nature* (New York: The New Press, 2006).

First of all, I would argue that Chomsky's general attitude to the history of ideas was not so peculiar as he imagines it to have been. In fact, a similar approach has characterized much of the historiography of philosophy, with which Chomsky, as a long-time student of that field, was no doubt familiar. Take, for example, the standard histories of formal logic, such as Joseph M. Bocheński's *A History of Formal Logic*, translated and edited by Ivo Thomas (Notre Dame, Indiana: University of Notre Dame Press, 1961), and *The Development of Logic* by William and Martha Kneale (Oxford: Clarendon Press, 1960). Both these works were well regarded in the mid-1960s when Chomsky gave his lectures on Descartes and the Port-Royal *Grammar* at the Massachusetts Institute of Technology, which incidentally I witnessed. Moreover, histories of such disciplines as mathematics and cosmology have often been written retrospectively from the perspective of present-day theories, and their authors have at times admitted as much.

At the same time, in his interview with Foucault in November 1971 Chomsky claimed something quite remarkable, namely that the approach to history that he had in mind need not involve any distortion of the facts. As he put it, "it's possible to look at the past, without distorting your view." Needless to say, the issue of distortion was crucial, and in fact the question had been specifically brought up by Vivian Salmon in her review of *Cartesian Linguistics*, published in *Journal of Linguistics*, vol. 5 (1969), pp. 165–187, at p. 167. Whether Chomsky was aware of Vivian Salmon's remarks when he made this startling statement one cannot know. However, I would argue that the value of a good historian resides precisely in an ability to challenge traditional historical myths, and that inevitably tends to be interpreted by contemporaries as willful distortion. Friedrich Nietzsche once expressed this idea with his usual pungent clarity: "Doesn't almost any accurate history aimed at the way in which something came into existence feel paradoxical and sacrilegious? Fundamentally, doesn't the good historian constantly *contradict*?"²²

What makes Chomsky's case really interesting is that in *Cartesian Linguistics* he did indeed "contradict," by challenging hallowed myths about the history of the study of language. But the validity of such an act of contradiction surely rests on the validity of the historical arguments adduced in its support. Otherwise, the attempt misfires and does not constitute a contradiction, i.e. an attack on a cherished myth. If Chomsky's putative "chapter in the history of rationalist thought," as he subtitled his book, is in reality not a contribution to history at all and if the author even admits as much, then his act of contradiction misses its target.

I recall that as a professional linguist sympathetic to Chomsky's attempt to revolutionize linguistic theory I welcomed his critique of traditional linguistic historiography, as exemplified in Holger Pedersen's widely read *Linguistic Science in the Nineteenth Century* (Harvard University Press, 1931), which starts out with the following sweeping statement: "Until the close of the eighteenth century, European linguistic science had advanced but little beyond the

²² The original reads: "Klingt nicht fast jede genaue Geschichte einer Entstehung für das Gefühl paradox und frevelhaft? Widerspricht der gute Historiker im Grunde nicht fortwährend?" Friedrich Nietzsche, *Morgenröthe: Gedanken über die moralischen Vorurtheile* (1881), Book I, §1. I am citing here from Friedrich Nietzsche, *Sämtliche Werke, Kritische Studienausgabe*, ed. Giorgio Colli & Mazzino Montinari (Munich & Berlin: Deutscher Taschenbuchverlag, 1967–1977), vol. 3, p. 19.

knowledge of linguistics achieved by the Greeks and Romans." What was thought-provoking about *Cartesian Linguistics* at the time was precisely that it took a sympathetic look at various works dating from seventeenth and eighteenth centuries, such as the philosophical writings of René Descartes and the *Grammaire générale et raisonnée*, both of which linguists had previously paid virtually no attention to. Chomsky had a completely new answer to the question as to when a truly scientific study of language can be said to have started. He invited his readers to focus on the seventeen rather than the close of the eighteenth century, as had been customary hitherto. At the same time, however, I remember feeling reluctant to replace Pedersen's old periodization with Chomsky's new one. It seemed to me that before embracing his interpretation of Descartes's philosophy of language and the alleged grammatical analysis proposed by the Port-Royal gentlemen, I would first like to re-examine the original texts that he had singled out. In my view, this was historiography, not mere pedantic antiquarianism.

On the other hand, I recognize that among the issues raised by Chomsky in his remarks for his television debate with Michel Foucault in November 1971, the warning against pedantry and antiquarianism was one of the more challenging. However, *pure* antiquarianism is difficult to define: one can never know in advance what particular features of the past will ultimately turn out to be relevant to a new perspective. But in addition to the question of relevance, there is the even more slippery issue of the shifting nature of the documentary evidence. The analogue in historiography to the continuous testability of hypotheses in scientific practice is a willingness not only to re-examine the familiar documentary evidence but also to change one's mind as one grapples with new evidence that might come to light. This admittedly poses difficult problems for intellectual historians, but it poses an especially difficult problem for someone who typically makes up his mind with lightning speed and is able to win all arguments. However, Chomsky's redoubtable mastery of the rhetoric of debate is something of a disadvantage here. In historiography, it is easy to win arguments but nevertheless be judged wrong retrospectively. There are in fact no easy victories in such a field. Worse than that, there are no lasting victories at all. In this respect, historiography is perhaps more like science than it is like philosophy, where the question of factual evidence plays a subordinate role.

In practice, a conscientious historian of ideas steers clear, *as far as possible*, from making untrue claims about the ideas of the people presented or making unsubstantiated historical claims in general. In my view, Chomsky's interpretation of Descartes's ideas about language in his 1966 book *Cartesian Linguistics* was eminently contestable. As I argued in my 1972 essay, Descartes did not in fact adhere to the same theoretical positions as Chomsky on the nature of human speech. Specifically, Descartes's notion of what human creativity involved was fundamentally different from Chomsky's. Likewise, Descartes's reason for positing the existence of mind was different from Chomsky's reason for postulating an internalized linguistic competence in native speakers of a language. Most important of all, Chomsky's entire theory lacks the metaphysical and theological dimensions that were all-important for Descartes and his contemporaries. On this complex issue, see for example John Cottingham, 'Cartesian Dualism: Theology, Metaphysics, and Science,' in John Cottingham, ed., *The Cambridge Companion to Descartes* (Cambridge University Press, 1992), pp. 236–257.

Furthermore, as regards the influence of Descartes on the linguistic philosophy of the Enlightenment and in particular on the universal grammar writers of the seventeenth and

eighteenth centuries, Chomsky made two major mistakes. First, he posited a close historical connection between Descartes's ideas and those of the Gentlemen of Port-Royal which he could not document. Second, he ignored the pervasive influence exerted throughout the eighteenth century by John Locke's *Essay on Human Understanding* (1689). Important writers such as Leibniz and Condillac, for instance, cannot be regarded as conforming to the Cartesian line. Rather, in this matter of the philosophy of language they used as their springboard Locke's ideas, not Descartes's. (On these complicated issues, see Hans Aarsleff, *From Locke to Saussure: Essays on the Study of Language and Intellectual History* (Minneapolis: University of Minnesota Press, 1982.) In the 1960s, Chomsky was still unfamiliar with this important strand of ideas. Of course, there is nothing reprehensible in ignorance per se (none of us is omniscient), but most of us try to learn something from experience and even at times admit our mistakes, even though as typical intellectuals we do so rather reluctantly.

I have seen no evidence that Chomsky has even begun to reconsider his peculiar notion that there occurred "a coherent and fruitful development of a body of ideas and conclusions regarding the nature of language" that "can be regarded as an outgrowth of the Cartesian revolution" (*Cartesian Linguistics*, pp. 2–3; 3rd edition p. 58). The use of an expression like "the Cartesian revolution" makes it clear that for Chomsky this complex of ideas had a definite historical dimension. Likewise, and this is an even clearer indication of his fundamentally historical perspective, he stated that in the Port-Royal *Grammar* "a Cartesian approach to language is developed, *for the first time*, with considerable insight and subtlety" (*Cartesian Linguistics*, p. 33; 3rd ed., p. 79; my italics). In an endnote he even spoke openly of the Cartesian "origins" of the Port-Royal theory of language (note 67, in *Cartesian Linguistics*, p. 97; 3rd ed., p. 134, and see also James McGilvray's interesting commentary on pp. 109f. in the 3rd edition of *Cartesian Linguistics*). Evidently, Chomsky pictured this Cartesian "period" in the history of linguistics as extending all the way from Descartes's own lifetime in the first half of the seventeenth century to Wilhelm von Humboldt, who lived well into the first half of the nineteenth century. As regards Humboldt, I might point out in passing that the fact that he was dependent on late eighteenth century French Enlightenment thinking, specifically on the ideas of the so-called *Idéologues*, seems sufficiently well established by now. In any case Humboldt's overall approach to the philosophy of language can hardly be called Cartesian in any reasonable sense of the word.

The fundamental question, as I view it, is the validity of Chomsky's historical account, and I contend that as someone who betrayed an undeniably historical perspective he cannot legitimately dodge that issue. What I argued in my 1972 paper was that Descartes himself did not adhere to "Cartesian linguistics," and that this putative Cartesian "period" completely lacks coherence. Hence Chomsky's term "Cartesian linguistics" does not refer to anything that ever actually existed.

Finally, to return to Descartes himself, what is truly remarkable about his view of human speech is his claim that little rationality is involved in its production by human beings. He once expressed this idea as follows: "For it patently requires very little reason to be able to speak" (AT VI 58, CSM 140). In their preface to *Cartesian Linguistics*, however, Chomsky and Halle state categorically the very opposite: "It has always been clear," they say, "that the normal, everyday use of language involves intellectual abilities of the highest order" (*Cartesian Linguistics*, 1st

edition, p. ix; preface not reprinted in the third edition). If that is true, Descartes's statement is surely a most disappointing assertion coming from a spokesman for Cartesian linguistics. Viewed from this perspective, Descartes stepped completely out of line and cannot be celebrated as a precursor of Chomsky's view of these matters. Descartes was evidently no cognitive scientist in our modern sense of that term.

Surely a fundamental conviction of Descartes in this whole area was his controversial notion, which almost amounted to an *idée fixe*, that animals are automata and do not have immortal souls, as Henry More's letters to him attest; see AT V 244–245.²³ So the theological underpinnings of Descartes's philosophy of language would certainly be rejected by Noam Chomsky. Moreover, Descartes's crucial piece of factual evidence supporting his position, namely the creativity of language use, is guaranteed by the creativity of thought and is not a consequence of some special kind of creativity guaranteed by the grammatical structure of human language, as Chomsky has famously argued.²⁴

Furthermore, Chomsky's conception of the creativity of language use amounts to the claim that we can now characterize creativity in purely algorithmic terms.²⁵ But Chomsky's attempt to account exhaustively for the structure of a single human language algorithmically has turned out to be largely unsuccessful, and it is difficult to imagine Descartes ever hazarding a similar hypothesis. In other words, Descartes himself was not a Cartesian linguist. But if Descartes was not a Cartesian linguist, then who was, other than Chomsky himself? Perhaps

²³ This may seem implausible, even preposterous, to a modern reader, but see the letter of 29 November 1646 to the Marquis of Newcastle, in which Descartes makes the following firm statement with regard to animals: "... si elles pensoient ainsi que nous, elles auroient vne ame immortelle aussi bien que nous; ce qui n'est pas vray-semblable, à cause qu'il n'y a point de raison pour le croire de quelques animaux, sans le croire de tous, & qu'il y en a plusieurs trop imparfaits pour pouuoir croire cela d'eux, comme sont les huîtres, les éponges, &c" AT IV 576. My rough translation: "... if they were as capable of thought as we are they would have immortal souls like ours, which is improbable since there is no reason to believe it of certain animals and not of them all, and there are some, like the oysters and sponges, which are too imperfect for one to believe it of them." This may be an appeal to the age-old continuous chain of being, but if it is one must admit that nowadays it would not be considered particularly convincing scientifically.

²⁴ For this argument I am indebted to Jürgen Trabant, who expresses it trenchantly as follows: "Was Chomsky, bei seiner Descartes-Interpretation aber nicht in aller Deutlichkeit gesehen hat, ist, daß es bei Descartes eigentlich nicht die Sprache ist, die kreativ ist, sondern das *Denken*" (*Mithridates im Paradies: Kleine Geschichte des Sprachdenkens* [Munich: C. H. Beck, 2003], p. 137). My rough English translation: "What Chomsky did not clearly realize in his Descartes interpretation is that for Descartes it is actually not language that is creative, but *thought*."

²⁵ On the practical unfeasibility of generating all the sentences of a natural language using Chomsky's theory of generative grammar, see Maurice Gross, "On the Failure of Generative Grammar," *Language*, 55 (1979), pp. 859–885. To exemplify the creativity of language use generative grammarians were fond of citing the well-known children's rhyme *This is the House that Jack Built*, which exemplifies a sentence pattern that can be repeated an infinite number of times. But as a quantitative concept infinity has little to do with creativity, which is a qualitative, i.e. not a mathematical, concept. To cite an even more trivial example, my father, for instance, was fond of telling a woman whom he wished to flatter: "It's women like you who make men like me like women like you." This pattern can also be replicated ad infinitum: "It's women like you who make men like me make women like you make men like me like women like you," and so on. But I suspect nobody would claim that this jocular saying was an example of creativity in any interesting sense of the term. To the extent that creativity is a linguistic concept, it is exemplified in such everyday processes as lexical innovation, which generative grammar has, alas, never been powerful enough to describe, let alone explain.

Leibniz, about whom Chomsky had little to say, or perhaps Pascal, whom he completely ignored.²⁶ It is difficult to avoid concluding that the subtitle "A Chapter in the History of Rationalist Thought" was poorly chosen. The book *Cartesian Linguistics* was not even one entire chapter in the history of rationalist thought in that it touched on only a limited number of themes, and while these particular themes had certainly been neglected by previous scholarship (especially by professional linguists) and hence needed to be seriously re-examined, they did not add up to a complete picture of the rationalist approach to the philosophy of language, if such a thing ever existed, which Chomsky failed to establish. Above all, these themes failed to account for crucial dimensions of Descartes's own philosophy of language. It is time to do fuller justice to Descartes himself, as well as to the other so-called rationalist philosophers. Thus, in spite of Chomsky's efforts, we are still largely in the dark concerning the philosophical underpinnings and immediate affiliations of the Port-Royal grammarians. For instance, where did their notion of "general" grammar come from? This is an important question for historians of linguistics since the notion of general grammar was destined to play an important role in linguistic theorizing for over two centuries.²⁷

The basic question as to whether a rationalist approach to language ever existed awaits examination. Recall that the term "rationalism" in the familiar present-day philosophical sense, was not current in the seventeenth century. I might add that the term "empiricism" was equally unknown in that period. Moreover, the notion that Descartes's philosophy was fundamentally focused on epistemology is likewise questionable. "Epistemology" is another quintessentially nineteenth-century term (ultimately of Kantian origin).²⁸

²⁶ On the relevance of Pascal here, see Jan Miel, "Pascal, Port-Royal, and Cartesian Linguistics," *Journal of the History of Ideas*, 30 (1969), pp. 261–271. On Pascal's ideas, see in particular pp. 267–270 of this article. The author proceeds (on p. 270 of his article) to make the helpful suggestion that Chomsky's term "Cartesian linguistics" might perhaps be replaced by the twin terms "rationalist linguistics" and "Port-Royal linguistics," given the unfortunate fact that there is no demonstrable link between Descartes and the Port-Royal grammarians."

²⁷ It seems reasonably clear that the concept of general grammar antedates Cartesian rationalism and the *Grammaire générale et raisonnée*. I can attest to the fact that *grammatica generalis* is already discussed at some length in the encyclopedia of Johann Heinrich Alsted of Herborn (1558–1638). Alsted's work, entitled *Scientiarum omnium encyclopaedia* dates from 1629, hence over thirty years before the Port-Royal *Grammar* first appeared. Alsted defines general grammar as follows: "Grammatica generalis tradit ea quae omnibus linguis sunt communia. Dicitur etiam universalis" ("General grammar teaches what is common to all languages; it is also termed universal grammar.") I am quoting here from the following edition: *Ioan. Henrici Alstedii Scientiarum omnium encyclopaediae tomus primus* (Lugduni, 1649), Book VI, Section 1, f. Z1r. Note that Vivian Salmon touches on Alsted's use of the term "general grammar" in her review of Chomsky's *Cartesian Linguistics*; see *Journal of Linguistics*, vol. 5 (1969), pp. 165–187, at p. 170. The expression "philosophical grammar" also antedates Descartes's writings, on which see likewise Salmon's review of *Cartesian Linguistics*, p. 170. These several notions (general grammar, universal grammar, philosophical grammar) appear to have been in the air by the middle of the seventeenth century, and quite independently of Descartes.

²⁸ The notion *epistemology* 'theory of knowledge' as well as its opposite *agnoiology* 'theory of ignorance' were expounded by James Frederick Ferrier (1808–1864) in his book *Institutes of Metaphysics: The Theory of Knowing the Mind* (Edinburgh & London: W. Blackwood & Sons, 1854). As far as I am aware, the term "epistemology" had not been used previously in English. It was doubtless coined to convey German *Erkenntislehre*. My impression is that it paralleled French *épistémologie*. Whether the French term predated the English one I do not know.

Doubtless, Chomsky imagines that these questions border on antiquarianism, but depending on how they are answered they may seriously undermine his philosophical enterprise. I use the word "may" here advisedly. There is no unbridgeable chasm separating historical from non-historical questions, alas. When a particular historical account is unmasked as fundamentally spurious this can have repercussions on the solution of many other issues.