

Noam
CHOMSKY



Cartesian Linguistics

A Chapter in the History of Rationalist Thought

THIRD EDITION

CAMBRIDGE

CAMBRIDGE

www.cambridge.org/9780521881760

Cartesian Linguistics

A Chapter in the History of Rationalist Thought

Noam Chomsky

*Professor of Linguistics
Massachusetts Institute of Technology*

Third Edition

edited with a new introduction by

James McGilvray



CAMBRIDGE
UNIVERSITY PRESS

CAMBRIDGE UNIVERSITY PRESS

Cambridge, New York, Melbourne, Madrid, Cape Town, Singapore, São Paulo

Cambridge University Press

The Edinburgh Building, Cambridge CB2 8RU, UK

Published in the United States of America by Cambridge University Press, New York

www.cambridge.org

Information on this title: www.cambridge.org/9780521881760

© James McGilvray 2009

This publication is in copyright. Subject to statutory exception and to the provision of relevant collective licensing agreements, no reproduction of any part may take place without the written permission of Cambridge University Press.

First published in print format 2009

ISBN-13 978-0-511-50685-7 eBook (EBL)

ISBN-13 978-0-521-88176-0 hardback

ISBN-13 978-0-521-70817-3 paperback

Cambridge University Press has no responsibility for the persistence or accuracy of urls for external or third-party internet websites referred to in this publication, and does not guarantee that any content on such websites is, or will remain, accurate or appropriate.

Contents

Introduction to the third edition JAMES MCGILVRAY	page 1
Cartesian Linguistics	53
<i>Acknowledgments</i>	55
Introduction	57
Creative aspect of language use	59
Deep and surface structure	78
Description and explanation in linguistics	93
Acquisition and use of language	98
Summary	107
<i>Notes</i>	109
<i>Bibliography</i>	147
<i>Index</i>	154

Creative aspect of language use

Although Descartes makes only scant reference to language in his writings, certain observations about the nature of language play a significant role in the formulation of his general point of view. In the course of his careful and intensive study of the limits of mechanical explanation, which carried him beyond physics to physiology and psychology, Descartes was able to convince himself that all aspects of animal behavior can be explained on the assumption that an animal is an automaton.⁵ In the course of this investigation, he developed an important and influential system of speculative physiology. But he arrived at the conclusion that man has unique abilities that cannot be accounted for on purely mechanistic grounds, although, to a very large extent, a mechanistic explanation can be provided for human bodily function and behavior. The essential difference between man and animal is exhibited most clearly by human language, in particular, by man's ability to form new statements which express new thoughts and which are appropriate to new situations. It is quite easy, in his view, to

conceive of a machine so constructed so that it utters words, and even words which correspond to bodily actions causing a change in its organs (for instance, if you touch it in one place it asks what you want of it; if you touch it in another place it cries out that you are hurting it, and so on). But it is not conceivable that such a machine should produce different arrangements of words so as to give an appropriately meaningful answer to whatever is said in its presence, as the dullest of men can do. (CSM I, 39)⁶

This ability to use language must not be confused with "natural movements which express passions and which can be imitated by machines as well as by animals." The crucial difference is that automata "could never use words or put together other signs as we do in order to declare our thoughts for others." This is a specific human ability, independent of intelligence. Thus,

it is quite remarkable that there are no men so dull-witted or stupid – and this includes even madmen – that they are incapable of arranging various words together and forming an utterance from them in order to make their thoughts understood; whereas there is no other animal, however perfect and well endowed it may be, that can do the same. (CSM I, 39–40)

Nor can this distinction between man and animal be based on peripheral physiological differences. Thus Descartes goes on to point out that

this does not happen because they lack the necessary organs, for we see that magpies and parrots can utter words as we do, and yet they cannot speak as we do: that is, they cannot show that they are thinking what they are saying. On the other hand, men born deaf and dumb, and thus deprived of speech-organs as much as the beasts, or even more so, normally invent their own signs to make themselves understood by those who, being regularly in their company, have the time to learn their language.

In short, then, man has a species-specific capacity, a unique type of intellectual organization which cannot be attributed to peripheral organs or related to general intelligence⁷ and which manifests itself in what we may refer to as the “creative aspect” of ordinary language use – its property being both unbounded in scope and stimulus-free. Thus Descartes maintains that language is available for the free expression of thought or for appropriate response in any new context and is undetermined by any fixed association of utterances to external stimuli or physiological states (identifiable in any noncircular fashion).⁸

Arguing from the presumed impossibility of a mechanistic explanation for the creative aspect of normal use of language, Descartes concludes that in addition to body it is necessary to attribute mind – a substance whose essence is thought – to other humans. From the arguments that he offers for the association of mind to bodies that “bear a resemblance” to his, it seems clear that the postulated substance plays the role of a “creative principle” alongside the “mechanical principle” that accounts for bodily function. Human reason, in fact, “is a universal instrument which can serve for all contingencies,” whereas the organs of an animal or machine “have need of some special adaptation for any particular action.”⁹

The crucial role of language in Descartes’s argument is brought out still more clearly in his subsequent correspondence. In his letter to the Marquis of Newcastle (1646), he asserts that “none of our external actions can show anyone who examines them that our body is not just a self-moving machine, but contains a soul with thoughts – with the exception of spoken words or other signs having reference to particular topics without expressing any passion.”¹⁰ The final condition is added to exclude “cries of joy or sadness and the like” as well as “whatever can be taught by training to animals.” (CSMK, 303)¹¹ He goes on, then, to repeat the arguments in the *Discourse on the Method*, emphasizing once again that there is no man so imperfect as not to use language for the expression of his thoughts and no “animal so perfect as to use a sign to make other animals understand something which bore no relation to its passions”; and, once again, pointing to the very perfection of animal instinct as an indication of lack of thought and as a proof that animals are mere automata. In a letter of 1649 to Henry More, he expresses himself in the following terms:

But in my opinion the main reason for holding that animals lack thought is the following. Within a single species some of them are more perfect than others, as humans are too. This can be seen in horses and dogs, some of which learn what they

are taught much better than others; and all animals easily communicate to us, by voice or bodily movement, their natural impulses of anger, fear, hunger and so on. Yet in spite of all these facts, it has never been observed that any brute animal has attained the perfection of using real speech, that is to say, of indicating by word or sign something relating to thought alone and not to natural impulse. Such speech is the only certain sign of thought hidden in a body. All human beings use it, however stupid and insane they may be, even though they may have no tongue and organs of voice; but no animals do. Consequently this can be taken as a real specific difference between humans and animals. (CSMK, 366)^{12,13}

In summary, it is the diversity of human behavior, its appropriateness to new situations, and man's capacity to innovate – the creative aspect of language use providing the principal indication of this – that leads Descartes to attribute possession of mind to other humans, since he regards this capacity as beyond the limitations of any imaginable mechanism. Thus a fully adequate psychology requires the postulation of a “creative principle” alongside of the “mechanical principle” that suffices to account for all other aspects of the inanimate and animate world and for a significant range of human actions and “passions” as well.

Descartes's observations on language in relation to the problem of mechanistic explanation were elaborated in an interesting study by Cordemoy.¹⁴ His problem in this study is to determine whether it is necessary to assume the existence of other minds.¹⁵ A great deal of the complexity of human behavior is irrelevant to demonstrating that other persons are not mere automata, since it can be explained on hypothetical physiological terms, in terms of reflex and tropism. Limitations of such explanations are suggested by the fact that “they confidently approach something that will destroy them, and abandon what could save them” (p. 7). This suggests that their actions are governed by a will, like his own. But the best evidence is provided by speech, by

the connection I find among the words I constantly hear them utter ...

For although I readily conceive that a mere machine could utter some words, I know at the same time that if there was a particular order among the springs that distribute the wind or open the pipes from which the sounds came then they could never change it; so that as soon as the first sound is heard, those which usually follow it will also necessarily be heard, provided that the machine does not lack wind – whereas the words I hear uttered by bodies constructed like mine almost never follow the same sequence.

I observe moreover that these words are the same as those I would use to explain my thoughts to other subjects capable of conceiving them. Finally, the more I attend to the effect produced by my words when I utter them before these bodies, the more it seems they are understood, and the words they utter correspond so perfectly to the sense of my words that there is no reason to doubt that a soul produces in them what my soul produces in me. (pp. 8–10)

In short, Cordemoy is arguing that there can be no mechanistic explanation for the novelty, coherence, and relevance of normal speech. He emphasizes,

however, that care must be exercised in using ability to speak as evidence for the inadequacy of mechanistic explanation. The fact that articulate sounds are produced or that utterances can be imitated in itself proves nothing, as this can be explained in mechanical terms. Nor is it of any relevance that “natural signs” may be produced that express internal states or that specific signs may be produced that are contingent on the presence of external stimuli. It is only the ability to innovate, and to do so in a way which is appropriate to novel situations and which yields coherent discourse, that provides crucial evidence. “To speak is not to repeat the same words that one has heard, but... to utter different words in response to those” (p. 19). To show that other persons are not automata, one must provide evidence that their speech manifests this creative aspect, that it is appropriate to whatever may be said by the “experimenter”; “... if I find, by all the observations I can make, that they use language [*La Parole*] as I do, then I will have an infallible reason to believe that they have a soul as I do” (p. 21). Possible types of experiment are then outlined. For example, one can construct new “conventional signs” [*signes d’institution*]:

I see that I can agree with others that what ordinarily signifies one thing will signify another, and that this has the result that only those with whom I make this agreement seem to understand what I am thinking. (pp. 22–23)

Similarly, evidence is provided

when I see that these bodies produce signs that bear no relation to their present state or to their preservation; when I see that these signs match those which I would produce to express my thoughts; when I see that they give me ideas which I did not have previously and which refer to things that I already had in mind; and finally when I see a close correlation between their signs and mine; (pp. 28–29)

or by behavior that indicates “that they intended to deceive me” (pp. 30–31). Under such circumstances, when many experiments of this sort have succeeded, “it will not be reasonable for me to believe that they are not like me” (p. 29).

Throughout, what is stressed is the innovative aspect of intelligent performance. Thus,

... the new thoughts that come through our conversations with other men are a sure sign to all of us that they have a mind like ours; (p. 185)

... our whole reason for believing that there are minds united with the bodies of men who speak to us is that they often give us new thoughts that we did not have, or they oblige us to change the thoughts that we did have... (p. 187)

Cordemoy consistently maintains that the “experiments” that reveal the limitations of mechanical explanation are those which involve the use of language – in particular, what we have called its creative aspect. In this, as in his discussion of the acoustic and articulatory basis for language use and the methods of conditioning, association, and reinforcement that may facilitate

acquisition of true language by humans and nonlinguistic functional communication systems by animals, Cordemoy is working completely within the framework of Cartesian assumptions.

For our purposes what is important in this is the emphasis on the creative aspect of language use and on the fundamental distinction between human language and the purely functional and stimulus-bound animal communication systems, rather than the Cartesian attempts to account for human abilities.

It is noteworthy that subsequent discussion rarely attempts to meet the Cartesian arguments regarding the limitations of mechanical explanation. Descartes argued that a “thinking substance” must be postulated to account for the facts that he cites. This proposal is generally countered by the claim that a more complex organization of the body is sufficient to account for human abilities, but no serious attempt is made to show how this might be possible (as Descartes, Cordemoy, and others tried to show how animal behavior and human bodily functions of many kinds can be explained on the basis of assumptions about physical organization). La Mettrie, for example, holds that man is simply the most complex of machines. “He is to the ape and the cleverest of animals what the Huyghen’s planetary clock is to one of Julien Leroy’s watches” (p. 34; *MaM*, p. 140).¹⁶ There is, in his opinion, no difficulty in accounting for thought on mechanical principles. “I believe thought to be so little incompatible with organised matter, that it seems to be one of its properties, like electricity, motive power, impenetrability, extension, etc.” (p. 35; *MaM*, pp. 143–144). There should, furthermore, be no obstacle in principle to teaching an ape to speak. It is only “a defect in the speech organs” that stands in the way, and this can be overcome by proper training (p. 11; *MaM*, p. 100). “I hardly doubt at all that if this animal were perfectly trained, we would succeed in teaching him he might at last be taught to utter sounds and consequently to learn a language. Then he would no longer be a wild man, nor an imperfect man, but a perfect man, a little man of the town” (p. 12; *MaM*, p. 103). Similarly, a talking machine is not beyond imagination. “If it took Vaucanson more artistry to make his flautist than his duck, he would have needed even more to make a speaking machine, which can no longer be considered impossible ...” (p. 34; *MaM*, pp. 140–141).

Several years before the publication of *L’Homme Machine*, in a slight and presumably only semi-serious work, Bougeant produced one of the very few attempts to refute explicitly the Cartesian argument that human and animal language differ in a fundamental way,¹⁷ but his supposed counterargument merely reaffirms the Cartesian position regarding human and animal language. He bases his claim that “animals speak and understand each other just as well as we do, and sometimes better” (p. 4) on the grounds that they can be trained to respond to signals, that they exhibit their “various feelings” by external signs, that they can work in cooperation (for example, beavers, to whom he ascribes a

language that has much in common with those “language games” that Wittgenstein regards as “primitive forms” of human language). However, he recognizes that “the language of animals is entirely limited to expressing feelings of their passions, which may all be reduced to a small number” (p. 152). “It is necessary that they always repeat the same expression, and that this repetition last as long as the object occupies their attention” (p. 123). They have no “abstract or metaphysical ideas”:

They have only direct cognitions that are completely limited to the material objects that strike their senses. Man is infinitely superior in his language, as in his ideas, being incapable of expressing himself without composing his speech of proper names and relative terms, which determine its sense and application. (p. 154)

Animals, in effect, have only names for various “passions that they feel” (p. 155). They cannot produce “a phrase which is personalized and composite [*personifiée et composée*] as we do” (p. 156):

Why has nature given animals the faculty of speech? Solely so they can express to each other their desires and feelings, and thereby satisfy their needs and whatever may be necessary for their preservation. I know that language in general has quite a different objective, which is to express ideas, cognitions, reflections, reasonings. But whatever theory one holds regarding the knowledge of animals ... it is certain that nature has endowed them with knowledge only of what is useful to them or necessary for the survival of the species and of individuals – consequently, with no abstract ideas, no metaphysical reasoning, no enquiry or curiosity about the objects surrounding them, no knowledge except how to conduct themselves, keep well, avoid whatever may harm them, and acquire goods. Nor has one ever seen them engaged in public discussion, or argument about causes and effects. They know only the life of an animal. (pp. 99–100)

In short, animal “language” remains completely within the bounds of mechanical explanation as this was conceived by Descartes and Cordemoy.

Evidently, neither La Mettrie nor Bougeant comes to grips with the problem raised by Descartes – the problem posed by the creative aspect of language use, by the fact that human language, being free from control by identifiable external stimuli or internal physiological states, can serve as a general instrument of thought and self-expression rather than merely as a communicative device of report, request, or command.¹⁸ Modern attempts to deal with the problem of intelligent behavior are hardly more satisfactory. Ryle, for example, in his critique of “Descartes’s myth”¹⁹ simply avoids the issue entirely. He claims that the Cartesians should have been “asking by what criteria intelligent behavior is actually distinguished from non-intelligent behavior” (p. 21) rather than seeking an explanation for the former. Properly understood, these are not mutually exclusive alternatives. The criteria that Ryle discusses differ little, in principle, from Cordemoy’s proposed “experiments”; but whereas Ryle is content simply to cite the fact that “intelligent behavior” has certain

properties,²⁰ the Cartesians were concerned with the problem of accounting for such behavior in the face of their inability to provide an explanation in mechanical terms. It can hardly be claimed that we have advanced significantly beyond the seventeenth century in determining the characteristics of intelligent behavior, the means by which it is acquired, the principles that govern it, or the nature of the structures that underlie it. One may choose to ignore these problems, but no coherent argument has been offered that suggests that they are either unreal or beyond investigation.

Modern linguistics has also failed to deal with the Cartesian observations regarding human language in any serious way. Bloomfield, for example, observes that in a natural language “the possibilities of combination are practically infinite,” so that there is no hope of accounting for language use on the basis of repetition or listing, but he has nothing further to say about the problem beyond the remark that the speaker utters new forms “*on the analogy* of similar forms which he has heard.”²¹ Similarly, Hockett attributes innovation completely to “analogy.”²² Similar remarks can be found in Paul, Saussure, Jespersen, and many others. To attribute the creative aspect of language use to “analogy” or “grammatical patterns” is to use these terms in a completely metaphorical way, with no clear sense and with no relation to the technical usage of linguistic theory. It is no less empty than Ryle’s description of intelligent behavior as an exercise of “powers” and “dispositions” of some mysterious sort, or the attempt to account for the normal, creative use of language in terms of “generalization” or “habit” or “conditioning.” A description in these terms is incorrect if the terms have anything like their technical meanings, and highly misleading otherwise, in so far as it suggests that the capacities in question can somehow be accounted for as just a “more complicated case” of something reasonably well understood.

We have seen that the Cartesian view, as expressed by Descartes and Cordemoy as well as by such professed anti-Cartesians as Bougeant, is that in its normal use, human language is free from stimulus control and does not serve a merely communicative function, but is rather an instrument for the free expression of thought and for appropriate response to new situations.²³ These observations concerning what we have been calling the creative aspect of language use are elaborated in several ways in the eighteenth and early nineteenth centuries, as we shall see directly. At the same time, Descartes’s second test for determining whether automata are “real men” is also reinterpreted, within the context of the “great chain of being.” Descartes makes a sharp distinction between man and animal, arguing that animal behavior is a matter of instinct and that the perfection and specificity of animal instinct make it subject to mechanical explanation. A characteristic subsequent view is that there is a gradation of intelligence and that perfection of instinct varies inversely with intellectual ability. To La Mettrie, for example, it seems to be a universal

law of nature “that the more one gains in intelligence [*du côté de l'esprit*], the more one loses in instinct” (p. 99). (Cf. notes 7, 29.)

The two Cartesian tests (possession of language, diversity of action) are interrelated by Herder, in an original way, in his influential Prize Essay on the origin of language.²⁴ Like Descartes, Herder argues that human language is different in kind from exclamations of passion and that it cannot be attributed to superior organs of articulation, nor, obviously, can it have its origins in imitation of nature or in an “agreement” to form language.²⁵ Rather, language is a natural property of the human mind. But nature does not provide man with an instinctive language, or an instinctive faculty of language, or a faculty of reason of which language is a “reflection.” Man’s fundamental quality is, rather, weakness of instinct, and man is clearly far inferior to animals in strength and certainty of instinct. But instinct and refinement of sense and skill correlate with narrowness of the scope and sphere of life and experience, with the focusing of all sensitivity and all power of representation on a narrow fixed area (pp. 15–16). The following can be taken as a general principle: “the sensitivity, capability, and productive drive of animals increase in power and intensity in inverse proportion to the magnitude and diversity of their sphere of activity” (pp. 16–17). But man’s faculties are less acute, more varied and more diffuse. “Man does not have an unvaried and narrow sphere of activity, where only one task awaits him” (p. 17). He is not, in other words, under the control of external stimuli and internal drives and compelled to respond in a perfect and specific way. This freedom from instinct and from stimulus control is the basis for what we call “human reason”: “... if man had the drives of animals, he could not have in him what we now call reason, since such drives would unknowingly pull his forces towards a single point, so that he would have no free sphere of awareness” (p. 22). It is this very weakness of instinct that is man’s natural advantage, that makes him a rational being. “If man cannot be an instinctive animal, he must – enabled by the freely working positive power of his soul – become a reflective creature” (p. 22). In compensation for his weakness of instinct and sense, man receives the “advantage of freedom” (p. 20). “No longer inevitably a machine in the hands of nature, he himself becomes the purpose and the objective of his efforts” (p. 20).

Free to reflect and to contemplate, man is able to observe, compare, distinguish essential properties, identify, and name (pp. 23f.). It is in this sense that language (and the discovery of language) is natural to man (p. 23), that “the human being is formed to be a creature of language” (p. 43). On the one hand, Herder observes that man has no innate language – man does not speak by nature. On the other hand, language in his view is so specifically a product of man’s particular intellectual organization that he is able to claim: “If I were to gather up all the loose ends and display that fabric called human nature: definitely a linguistic weave!” The resolution of the apparent paradox lies in

his attempt to account for human language as a consequence of the weakness of human instinct.

Descartes had described human reason as “a universal instrument which can be used in all kinds of situations”²⁶ and which therefore provides for unbounded diversity of free thought and action.²⁷ Herder does not regard reason as a “faculty of the mind” at all but defines it rather as the freedom from stimulus control, and he attempts to show how this “natural advantage” makes it possible – in fact, necessary (p. 25) – for humans to develop language.

Somewhat before Herder, James Harris had given a characterization of “rationality” in terms rather similar to his, that is, as freedom from instinct rather than as a faculty with fixed properties. Harris distinguishes between the “*Human Principle*,” which he calls “reason,” and the “*Brutal Principle*,” which he calls “instinct,” in the following passage:

MARK then ... the Difference between *Human Powers* and *Brutal* – The Leading Principle of BRUTES appears to tend in each Species to *one single Purpose* – to this, in general, it *uniformly arrives*; and here, in general, it as *uniformly stops* – it needs no Precepts or Discipline to instruct it; nor will it easily be *changed*, or *admit a different Direction*. On the contrary, the Leading Principle of MAN is capable of *infinite Directions* – is convertible to *all sorts of Purposes* – equal to *all sorts of Subjects* – neglected, remains ignorant, and void of every Perfection – cultivated, becomes adorned with Sciences, and Arts – can raise us to excel, not only *Brutes*, but *our own Kind* – with respect to our *other Powers* and *Faculties*, can instruct us how to *use* them, as well as *those of the various Natures*, which we see existing around us. In a word, to oppose the two Principles to each other – The Leading Principle of *Man*, is *Multiform, Originally Uninstructed, Pliant and Docil* – The Leading Principle of *Brutes* is *Uniform, Originally Instructed*; but, in most Instances afterward, *Inflexible and Indocil*.²⁸

Thus we may say “that MAN is by Nature a RATIONAL ANIMAL,” meaning by this nothing more than that he is free from the domination of instinct.²⁹

A concern for the creative aspect of language use persists through the romantic period, in relation to the general problem of true creativity, in the full sense of this term.³⁰ A. W. Schlegel’s remarks on language in his *Kunstlehre*³¹ give a characteristic expression to these developments. In discussing the nature of language, he begins by observing that speech does not relate merely to external stimuli or goals. The words of language, for example, may arouse in the speaker and hearer ideas [*Vorstellungen*] of things that they have not directly perceived but know only by verbal description or that they “aren’t able to intuit sensuously at all because they exist in an intellectual [*geistigen*] world.” Words may also designate abstracted properties and relations of the speaker to the hearer and to the topic of discourse, and relations among the elements of the latter. In combining our “thoughts and ideas” we use “words with such subtle meanings that to clarify them would disconcert a philosopher.” Still, they are used freely by the uninstructed and the unintelligent:

We fit all these words together in ways that allow others to not merely understand our purpose but glimpse our innermost feelings; in this way we excite the most diverse passions, affirm or negate moral decisions, and incite a crowd to collective action. The greatest things as well as the least significant, the greatest marvel never before heard – indeed the most impossible and unthinkable things – slide off our tongues with equal ease.

So characteristic of language is this freedom from external control or practical end, for Schlegel, that he elsewhere³² proposes that “anything by means of which the inner manifests itself outwardly is rightly called language.”

From this conception of language, it is only a short step to the association of the creative aspect of language use with true artistic creativity.³³ Echoing Rousseau and Herder, Schlegel describes language as “the most marvelous creation of the poetic faculty of the human being” (*Sprache und Poetik*, p. 145). Language is “an ever-becoming, self transforming, unending poem of the entire human race” (*Kunstlehre*, p. 226). This poetic quality is characteristic of the ordinary use of language, which “can never be so completely depoetized that it should find itself scattered into an abundance of poetical elements, even in the case of the most calculating and rational use of linguistic signs, all the more so in the case of everyday life – in impetuous, immediate, often passionate colloquial language” (*ibid.*, p. 228). There would have been little difficulty, he continues, in demonstrating to Molière’s M. Jourdain that he spoke poetry as well as prose.

The “poetical” quality of ordinary language derives from its independence of immediate stimulation (of “the physically perceivable universe”) and its freedom from practical ends. These characteristics, along with the boundlessness of language as an instrument of free self-expression, are essentially those emphasized by Descartes and his followers. But it is interesting to trace, in slightly greater detail, the argument by which Schlegel goes on to relate what we have called the creative aspect of language use to true creativity. Art, like language, is unbounded in its expressive potentiality.³⁴ But, Schlegel argues, poetry has a unique status among the arts in this respect; it, in a sense, underlies all the others and stands as the fundamental and typical art form. We recognize this unique status when we use the term “poetical” to refer to the quality of true imaginative creation in any of the arts. The explanation for the central position of poetry lies in its association with language. Poetry is unique in that its very medium is unbounded and free; that is, its medium, language, is a system with unbounded innovative potentialities for the formation and expression of ideas. The production of any work of art is preceded by a creative mental act for which the means are provided by language. Thus the creative use of language, which, under certain conditions of form and organization, constitutes poetry (cf. p. 231), accompanies and underlies any act of the creative imagination, no matter what the medium in which it is realized. In this way, poetry achieves its unique status

among the arts, and artistic creativity is related to the creative aspect of language use.³⁵ (Compare Huarte's third kind of wit – see note 9.)

Schlegel distinguishes human from animal language in the typical Cartesian manner. Thus he observes that one cannot attribute man's linguistic ability to the "natural disposition of his organs":

Various species share to a certain extent with human beings the ability, although totally mechanical, to learn language. By means of training and frequent repetition a stimulus towards certain reactions is brought about in their organs, but they never use the words they learned autonomously (even though it might seem so), in order to designate, and their speech is just as little an authentic language as the sounds produced by a speaking machine. (p. 236)

We cannot draw analogies between human and animal intellectual function. Animals live in a world of "states of affairs" [*Zustände*] not of "objects" [*Gegenstände*] in the human sense (the same is true, in part, of young children, which accounts for the confused and incoherent character of even the liveliest childhood memories). The "animal dependency" [*tierische Abhängigkeit*] is, for Schlegel, sharply opposed to the "spontaneous principle" [*selbsttätige Prinzip*] of "rational volition" [*verständige Willkür*] that characterizes human mental life. It is this principle that provides the basis for human language. It leads to a search for coherence and unity in experience, to comparison of sensible impressions (which requires mental signs, of some sort), and to the unique human capacity and need "through language to want to refer to even those things that cannot be given in any sensuous intuition." What results is a human language, which serves primarily "as the organ of thought, as a means of reflection" and only derivatively for the purposes of "social communication" (pp. 237–241).

The Cartesian emphasis on the creative aspect of language use, as the essential and defining characteristic of human language, finds its most forceful expression in Humboldt's attempt to develop a comprehensive theory of general linguistics.³⁶ Humboldt's characterization of language as *energeia* ("activity" [*Thätigkeit*]) rather than *ergon* ("product" [*Werk*]),³⁷ as "a generative activity [*eine Erzeugung*]" rather than "a lifeless product" [*ein todes Erzeugtes*] extends and elaborates – often, in almost the same words – the formulations typical of Cartesian linguistics and romantic philosophy of language and aesthetic theory. For Humboldt, the only true definition of language is "a productive activity" [*eine genetische*]: "It is the ever repeated *mental labour* [*Arbeit des Geistes*] of making *articulated sound* capable of expressing *thought* (p. 57)."³⁸ There is a constant and uniform factor underlying this "mental labour"; it is this which Humboldt calls the "Form" of language.³⁹ It is only the underlying laws of generation that are fixed, in language. The scope and manner in which the generative process may operate in the actual production of speech (or in speech perception, which Humboldt regards as a partially analogous performance – see pp. 105–106 below) are totally undetermined. (See note 38.)

The concept of Form includes the “rules of speech articulation” [*Redefügung*] as well as the rules of “word formation” [*Wortbildung*] and the rules of formation of concepts that determine the class of “root words” [*Grundwörter*] (p. 61). In contrast, the substance [*Stoff*] of language is unarticulated sound and “the totality of sense-impressions and spontaneous mental activities that precede the creation of the concept with the aid of language” (p. 61). The Form of language is a systematic structure. It contains no individual elements as isolated components but incorporates them only in so far as “a method of language formation” can be discovered in them (p. 62).

The fixed mechanisms that, in their systematic and unified representation, constitute the form of the language must enable it to produce an indefinite range of speech events corresponding to the conditions imposed by thought processes. The domain of language is infinite and boundless, “the essence of all that can be thought” (p. 122). Consequently, the fundamental property of a language must be its capacity to use its finitely specifiable mechanisms for an unbounded and unpredictable set of contingencies. “It must therefore make infinite use of finite means, and is able to do so through the productive power that is the identity of language and thought” (p. 122).

Not even the lexicon of a language can, according to Humboldt, be regarded as an “inert completed mass.” Even apart from the formation of new words, the use of the lexicon by the speaker or the hearer involves “a continuous generation and regeneration of the word-making capacity” (pp. 125–126). This is true of the original formation of the language and its acquisition by children, and it is also true of the daily use of speech (cf. note 25). He thus regards the lexicon, not as a memorized list from which words are simply extracted as language is used (“No human memory would be equal to this, if the soul did not simultaneously carry by instinct within itself the key to the formation of the words themselves”), but rather as based on certain organizing generative principles that produce the appropriate items on given occasions. It is from such an assumption that he develops his well-known view that (in modern terms) concepts are organized in terms of certain “semantic fields” and that they receive their “value” in terms of their relation to the principles that determine this system.

Speech is an instrument of thought and self-expression. It plays an “immanent” and “constitutive” role in determining the nature of man’s cognitive processes, his “thinking and, through thought, creative power” [*denkende und im Denken schöpferische Kraft*] (p. 36), his “world view” and processes of “tying together thoughts” [*Gedankenverknüpfung*] (p. 50). More generally, a human language as an organized totality is interposed between man and “the nature that affects him, both inwardly and outwardly” (p. 74). Although languages have universal properties, attributable to human mentality as such, nevertheless each language provides a “thought world” and a point of view of a unique sort. In attributing such a role in the determination of mental processes

to individual languages, Humboldt departs radically from the framework of Cartesian linguistics, of course, and adopts a point of view that is more typically romantic.

Humboldt does remain within the Cartesian framework, however, in so far as he regards language primarily as a means of thought and self-expression rather than as an animal-like functional communication system – when he maintains, for example, that man “surrounds himself with a world of sounds, so as to take up and process within himself the world of objects” (p. 74). Thus even in its beginnings, “language ... is extended unthinkingly to all objects of casual sense perception and inner concern” (p. 75; Humboldt 1999: 60). He regards it as a mistake to attribute language primarily to the need for mutual assistance. “Man is not so needy – and inarticulate sounds would suffice for the rendering of assistance.” There are, to be sure, purely practical uses of language, as, for example, if a man orders a tree to be felled and “thinks of nothing by that term but the trunk that he designates” (p. 220). The same words might, however, have an “enhanced significance” if they were used in a description of nature or in a poem, for example, in which case the words are not used simply as instruments or with a purely referential function, are not used “in a *localized activity of the soul* for a limited *purpose*” but are rather referred to “the inner whole of thought-association and feeling” (p. 221; Humboldt 1999: 156). It is only in the latter case that the full resources of language are used in forming or interpreting speech, that all aspects of the lexical and grammatical structure of an utterance make their full contribution to its interpretation. The purely practical use of language is characteristic of no real human language, but only of invented parasitic systems.⁴⁰

In developing the notion of “form of language” as a generative principle, fixed and unchanging, determining the scope and providing the means for the unbounded set of individual “creative” acts that constitute normal language use, Humboldt makes an original and significant contribution to linguistic theory – a contribution that unfortunately remained unrecognized and unexploited until fairly recently.⁴¹ The nature of Humboldt’s contribution can be appreciated by comparing his notion of “form” to that developed in Harris’s *Hermes* (1751), for example. For Harris, a language is essentially a system of words. Their meanings (the ideas of which they are the symbols) constitute the form of language; their sound, its matter (substance). Harris’s notion of form is modeled on a classical pattern, the underlying conception being that of shape or orderly arrangement. But in his work on language, Harris does not suggest that a description of its form requires more than a specification of elements, categories, and the association of “content elements” to “expression elements.” He does not, in other words, give any indication of grasping Humboldt’s insight that language is far more than “patterned organization” of elements of various types and that any adequate description of it must refer these elements to the

finite system of generative principles which determine the individual linguistic elements and their interrelations and which underlie the infinite variety of linguistic acts that can be meaningfully performed.⁴²

The development of Humboldt's notion of "form of language" must be considered against the background of the intensive discussion during the romantic period of the distinction between "mechanical form" and "organic form." A. W. Schlegel makes the distinction in the following way:

Form is mechanical when, through external force, it is imparted to any material merely as an accidental addition without reference to its quality; as, for example, when we give a particular shape to a soft mass that it may retain the same after its induration. Organical form, again, is innate; it unfolds itself from within, acquires its determination contemporaneously with the perfect development of the germ.⁴³

In Coleridge's paraphrase:

The form is mechanic, when on any given material we impress a predetermined form, not necessarily arising out of the properties of the material; – as when to a mass of wet clay we give whatever shape we wish it to retain when hardened. The organic form, on the other hand, is innate; it shapes, as it develops, itself from within, and the fulness of its development is one and the same with the perfection of its outward form. Such as the life is, such is the form. Nature, the prime genial artist, inexhaustible in diverse powers, is equally inexhaustible in forms, – each exterior is the physiognomy of the being within, – its true image reflected and thrown out from the concave mirror...⁴⁴

The context, in both cases, is an investigation of how individual works of genius are constrained by rule and law. Humboldt's concept of the "organic form" of language, and its role in determining the individual creations of speech, is a natural by-product of the discussion of organic and mechanical form, particularly in the light of the connection that had already been drawn between artistic creativity and the creative aspect of language use (cf. pp. 61–62, above).⁴⁵

The parallel between Humboldt's notion of "organic form" in language and Goethe's much earlier theory of "Urform" in biology⁴⁶ is also quite striking. The concept of "Urform" was intended as a new dimension beyond the "static" concept of form of Linnaeus and Cuvier, for example (namely, the concept of form as structure and organization). But, at least at one stage of his thought, Goethe took this dimension to be one of logical rather than temporal order. In a letter to Herder, in 1787, Goethe writes:

The primordial plant is the most marvelous created thing in the world, and nature herself should envy me it. With this model and its key one is able thereby to invent other plants *ad infinitum*, which must be consistent with the model. That is, even if these invented plants do not exist, they *could* exist. They are not, for example, pictorial or poetic shadows and illusions; they rather have an inner truth and necessity. The same law applies to all other living beings.⁴⁷

Thus, the Urform is a kind of generative principle that determines the class of physically possible organisms; and, in elaborating this notion, Goethe tried to

formulate principles of coherence and unity which characterize this class and which can be identified as a constant and unvarying factor beneath all the superficial modifications determined by variation in environmental conditions. (Cf. Magnus, *op. cit.*, chap. 7, for some relevant material.) In a similar way, Humboldt's "linguistic form" constrains all individual acts of speech production or perception in a particular language, and, more generally, the universal aspects of grammatical form determine the class of possible languages.⁴⁸

Finally, we should note that Humboldt's conception of language must be considered against the background provided by his writings on social and political theory⁴⁹ and the concept of human nature that underlies them. Humboldt has been described as "the most prominent representative in Germany" of the doctrine of natural rights and of the opposition to the authoritarian state.⁵⁰ His denunciation of excessive state power (and of any sort of dogmatic faith) is based on his advocacy of the fundamental human right to develop a personal individuality through meaningful creative work and unconstrained thought:

Naturally, freedom is the necessary condition without which even the most soul-satisfying occupation cannot produce any wholesome effects of this sort. Whatever task is not chosen of man's free will, whatever constrains or even only guides him, does not become part of his nature. It remains forever alien to him; if he performs it, he does so not with true humane energy but with mere mechanical skill. (Cowan, *op. cit.*, pp. 46-47)

[Under the condition of freedom from external control] ... all peasants and craftsmen could be transformed into *artists*, i.e., people who love their craft for its own sake, who refine it with their self-guided energy and inventiveness, and who in so doing cultivate their own intellectual energies, ennoble their character, and increase their enjoyments. This way humanity would be ennobled by the very things which now, however beautiful they might be, degrade it. (*ibid.*, p. 45)

The urge for self-realization is man's basic human need (as distinct from his merely animal needs). One who fails to recognize this "ought justly to be suspected of failing to recognize human nature for what it is and of wishing to turn men into machines" (*ibid.*, p. 42). But state control is incompatible with this human need. It is fundamentally coercive, and therefore "it produces monotony and uniformity, and alienates people's actions from their own character" (*ibid.*, p. 41: "so bringt er Einformigkeit und eine fremde Handlungsweise."). This is why "true reason cannot desire for man any condition other than that in which ... every individual enjoys the most absolute, unbounded freedom to develop himself out of himself, in true individuality" (*ibid.*, p. 39). On the same grounds, he points to the "pernicious results of limitations upon freedom of thought" and "the harm done if the government takes a positive promoting hand in the business of religious worship" (*ibid.*, pp. 30-31), or if it interferes in higher education (*ibid.*, pp. 133f.), or if it regulates personal relations of any sort

(e.g., marriage; *ibid.*, p. 50), and so on. Furthermore, the rights in question are intrinsically human and are not to be limited to “the few in any nation”; “there is something utterly degrading to humanity in the very thought that some human being’s right to be human could be abrogated” (*ibid.*, p. 33). To determine whether the fundamental human rights are being honored, we must consider, not just what a person does, but the conditions under which he does it – whether it is done under external control or spontaneously, to fulfill an inner need. If a man acts in a purely mechanical way, “we may admire what he does, but we despise what he is” (*ibid.*, p. 37).⁵¹

It is clear, then, that Humboldt’s emphasis on the spontaneous and creative aspects of language use derives from a much more general concept of “human nature,” a concept which he did not originate but which he developed and elaborated in original and important ways.

As remarked above, Humboldt’s effort to reveal the organic form of language – the generative system of rules and principles that determines each of its isolated elements – had little impact on modern linguistics, with one significant exception. The structuralist emphasis on language as “a system where everything holds together” is conceptually, at least, a direct outgrowth of the concern for organic form in Humboldtian linguistics. For Humboldt, a language is not to be regarded as a mass of isolated phenomena – words, sounds, individual speech productions, etc. – but rather as an “organism” in which all parts are interconnected and the role of each element is determined by its relation to the generative processes that constitute the underlying form. In modern linguistics, with its almost exclusive restriction of attention to inventories of elements and fixed “patterns” the scope of “organic form” is far more narrow than in the Humboldtian conception. But within this more narrow frame, the notion of “organic interconnection” was developed and applied to linguistic materials in a way that goes far beyond anything suggested in Humboldt. For modern structuralism, the dominant assumption is that “a phonological system [in particular] is not the mechanical sum of isolated phonemes, but an organic whole of which the phonemes are the members and of which the structure is subject to laws.”⁵² These further developments are familiar, and I will say nothing more about them here.

As noted above, the form of language, for Humboldt, embraces the rules of syntax and word formation as well as the sound system and the rules that determine the system of concepts that constitute the lexicon. He introduces a further distinction between the form of a language and what he calls its “character.” It seems to me that, as he employs this term, the character of a language is determined by the manner in which it is used, in particular, in poetry and philosophy; and the “inner character” (p. 208) of a language must be distinguished from its syntactic and semantic structure, which are matters of form, not use. “Without changing the language in its sounds, and still less in its

forms and laws, *time*, through a growing evolution of ideas, a heightened power of thought, and a more deeply penetrating capacity for feeling, will often bring into a language what it did not formerly possess” (p. 116; Humboldt 1999: 86–7). Thus a great writer or thinker can modify the character of the language and enrich its means of expression without affecting its grammatical structure. The character of a language is closely related to other elements of the national character and is a highly individual creation. For Humboldt, as for his Cartesian and romantic precursors, the normal use of language typically involves creative mental acts; but it is the character of a language rather than its form that reflects true “creativity” in a higher sense – in the sense that implies value as well as novelty.

For all his concern with the creative aspect of language use and with form as generative process, Humboldt does not go on to face the substantive question: what is the precise character of “organic form” in language. He does not, so far as I can see, attempt to construct particular generative grammars or to determine the general character of any such system, the universal schema to which any particular grammar conforms. In this respect, his work in general linguistics does not reach the levels achieved by some of his predecessors, as we shall see directly. His work is also marred by unclarity regarding several fundamental questions, in particular, regarding the distinction between the rule-governed creativity which constitutes the normal use of language and which does not modify the form of the language at all and the kind of innovation that leads to a modification in the grammatical structure of the language. These defects have been recognized and, to some extent, overcome in more recent work. Furthermore, in his discussion of generative processes in language it is often unclear whether what he has in mind is underlying competence or performance – Aristotle’s first or second grade of actuality of form (*De Anima*, book II, chap. 1). This classical distinction has been reemphasized in modern work. See note 2, and references given there. The concept of generative grammar, in the modern sense, is a development of the Humboldtian notion of “form of language” only if the latter is understood as form in the sense of “possession of knowledge” rather than “actual exercise of knowledge,” in Aristotelian terms. (See note 39.)

It should, incidentally, be noted that the failure to formulate rules of sentence construction in a precise way was not simply an oversight of Cartesian linguistics. To some extent it was a consequence of the express assumption that the sequence of words in a sentence corresponds directly to the flow of thought, at least in a “well-designed” language,⁵³ and is therefore not properly studied as part of grammar. In the *Grammaire générale et raisonnée* it is maintained that, except for the figurative use of language, there is little to be said in grammar regarding rules of sentence construction (p. 145). In Lamy’s rhetoric, shortly after, omission of any discussion of “the order of words and the rules that must be observed in the composition of speech” is justified on the grounds that “the

natural light shows so vividly what must be done” that no further specification is necessary (p. 25).⁵⁴ At about the same time, Bishop Wilkins⁵⁵ distinguishes those constructions that are merely “customary” (*take one’s heels and fly away, hedge a debt, be brought to heel*, etc.) from those which follow the “natural sense and order of the words” and therefore need no special discussion (p. 354); for example, the arrangement of Subject, Verb, and Object, or Subject, Copula, and Adjective, or the ordering of “grammatical” and “transcendental” particles relative to the items they govern, etc. (p. 354).

At the opposite pole from the belief in “natural order” is the view that each language contains an arbitrary collection of “patterns” learned through constant repetition (and “generalization”) and forming a set of “verbal habits” or “dispositions.” The belief that language structure and language use can somehow be described in these terms underlies much of the modern study of language and verbal behavior, often coupled with a denial of the possibility of useful cross-linguistic generalizations in syntax (see pp. 57–58, above). Like the reliance on a presumed natural order, it has helped foster a neglect of the problem of specifying the “grammatical form” of particular languages or the general abstract schema to which each language must conform.⁵⁶

In summary, one fundamental contribution of what we have been calling “Cartesian linguistics” is the observation that human language, in its normal use, is free from the control of independently identifiable external stimuli or internal states and is not restricted to any practical communicative function, in contrast, for example, to the pseudo language of animals. It is thus free to serve as an instrument of free thought and self-expression. The limitless possibilities of thought and imagination are reflected in the creative aspect of language use. Language provides finite means but infinite possibilities of expression constrained only by rules of concept formation and sentence formation, these being in part particular and idiosyncratic but in part universal, a common human endowment. The finitely specifiable form of each language – in modern terms, its generative grammar (cf. note 39) – provides an “organic unity” interrelating its basic elements and underlying each of its individual manifestations, which are potentially infinite in number.

The dominant view throughout this period is that “languages are the best mirror of the human mind.”⁵⁷ This virtual identification of linguistic and mental processes is what motivates the Cartesian test for the existence of other minds, discussed above. It finds expression throughout the romantic period. For Friedrich Schlegel, “Mind and language are so inseparable, thought and word are so essentially one, that, just as certainly as thoughts are considered to be the characteristic privilege of humankind, we can call the word, in accordance with its inner meaning and dignity, the original essence of man.”⁵⁸ We have already made reference to Humboldt’s conclusion that the force that generates language is indistinguishable from that which generates thought. Echoes of this

conclusion persist for some time,⁵⁹ but they become less frequent as we enter the modern period.

The association of language and mind, it should be noted, is regarded rather differently in the earlier and later phases of the period under review. The earlier view is that the structure of language reflects the nature of thought so closely that “the science of language differs hardly at all from that of thought” (Beauzée, p. x)⁶⁰; the creative aspect of language use is accounted for on the basis of this assumption.⁶¹ On the other hand, the observation that language serves as a medium of thought begins to be rephrased as the view that language has a constitutive function with respect to thought. La Mettrie, for example, in discussing how the brain compares and relates the images that it discerns, concludes that its structure is such that, once the signs of objects and their differences “have been traced or imprinted on the brain, the soul necessarily examines their relations⁶² – an examination that would have been impossible without the discovery of signs or the invention of language” (op. cit., p. 105); prior to the discovery of language, things could only be perceived in a vague or superficial way. We have already referred to Humboldt’s view that “Man lives primarily with objects, indeed, since feeling and acting in him depend on his presentations [*Vorstellungen*], he actually does so exclusively, as language presents them to him” (op. cit., p. 74; Humboldt 1999: 60). Under the impact of the new relativism of the romantics, the conception of language as a constitutive medium for thought undergoes a significant modification, and the notion that language difference can lead to differences, even incomparability in mental processes, is explored.⁶³ This development, however, is not part of our main theme; its modern elaboration is familiar, and I will discuss it no further here.