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THE METAPHYSICS MARKET

3 SELLING LANGUAGE AS SOUL

by

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This is the third of a series of studies in which prototypical conceptions of language are subversively turned inside out. It has to be read together with the first two, *The Metaphysics Market: 1 Merchandizing Language as Matter (= SPIL 20, 1989)* and *The Metaphysics Market: 2 Billing Language as Behavioural (= SPIL 21, 1990)*. I would like to thank Walter Winckler for contributing generously to the present study too. And I am grateful to Sonje Ottermann for valuable editorial assistance.

R.P.B.

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3.0 Searching the Soul

You can't make sense of what you think you hear? A muffled mixture of intoning and droning, chanting and canting, praying and a weird kind of braying. Would I care to comment on why sacramental sounds are to be heard in, of all places, a market. Well, if I may remind you, Baffled Buyer, this is not your ordinary kind of market. Here, after all, metaphysics makes up the merchandise. What is more, as I have hoped you would observe for yourself, we have been travelling further up along its Abstractness Axis. Our ascent, then, has brought us to the sector in which language is offered for sale as part of a soul of sorts. And what you are hearing, improbable as it may sound, is an ontological liturgy variously given voice by Cardinal Conceptioneers in chapel-like kiosks. (In this town, steep(l)ed as it is in transcendental tradition, even markets are expected to sport spires.) Although they differ in many dimensions of their creeds --- which range from done-up dualism to matured monism --- the basic message common to these Fellows of the Frock rings out clearly: the Miracle of Mind is just the right medicine for allaying the Angst induced by the question 'What is language in essence?'

In the inner circle, sitting at the feet of the Makers of Mind, are the middle men, the Mentalist Missionaries, eager to go out and spread the word that there is money in Mind. That is, for those who are willing to join the flock by investing in intentionality, functionalism, emergentism, biologism, quantum gravity or some other up-market form of mentalism. Listening on the fringes, there are Lay Linguists and assorted other Secular Shoppers who, despite their agnostic ancestry, have not been able to bring themselves to fall for physicalism or to buy behaviourism. Having been driven up the Abstractness Axis too, they are ready to listen to the lessons of Liturgical Linguistics, to consider the message that language, in essence, is embodied in a state, structure or module of Mind.

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By all means, Dear Blue, do feel free to slip in your 'small question'. Why from the Critical Customer's point of view the idea that language is something mental should not be rejected out of hand as an Ontological Opiate ruinous to the user's rationality? The answer, of course, depends on what 'mental' is supposed to mean. As for its meanings, listed on The Market there are many, from A(vram's) to Z(arathustra's). We obviously have to restrict ourselves to a couple of the more sophisticated senses that seem to have a future beyond the confines of Folk Philosophy and Faculty Fiction.

To begin with, we will attend the exegetic exercises conducted by a Mentalist in the Mosaic Mould, the one who led his people to liberty out of Behaviourist Bondage and Empiricist Enslavement, into which they had been enticed by Philosophers of the Flesh(pots). In addition to being Leader and Liberator, he is Legislator too: in his teachings, you will come to see, he regularly refers to tables brought down from Mount Meta a couple of millenia ago. Having listened to the Mosaic Monologues, we will proceed to look at the roots of the religion, the sectarianism it has spawned, the updating of its dogma and the holy war it has unleashed.

The trick, of course, will be to see where the Mentalist Message is essentially empty, delicately deceptive, deeply divine or dangerously deluded. It is just possible, Unbelieving Blue, that you and other Disrespectful Detractors will be amazed to see what mentalism amounts to without its mask of mystery. So, I urge you to practise perseverance as you prepare yourself to receive the revelations that our Modern Moses is about to make.

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3.1 Generating the Gospel

Both language in general and individual languages are mental entities. This is the core of the conception of language that has been developed by Noam Chomsky. For nearly a quarter of a century this Chomskyan conception of language has been the topic of vigorous debate by all sorts of scholars interested in the question 'What is language in essence?'. In the eyes of some linguists, the Chomskyan conception of language has even achieved the status of "the current orthodoxy in linguistics".[1] Yet this conception of language has been understood less than well, even by leading scholars. It is therefore of considerable importance to go into some detail on questions such as the following: In what sense is (a) language a mental entity to Chomsky? Why does he portray (a) language as mental? What are the (alleged) shortcomings and merits of the Chomskyan conception of language? But before tackling these questions, we first need to consider two classes of conceptions of language that Chomsky has rejected.

3.1.1 Crusading Against Common-sensicality

Chomsky (1986:15 ff., 1988a:37) has recently drawn a distinction between 'the intuitive, pretheoretic common-sense notion of language' and various 'technical concepts that have been proposed with the intent of developing an eventual science of language'.[2] On Chomsky's account, the common-sense notion departs in several ways from the technical ones. First, the common-sense notion of language has 'a crucial sociopolitical dimension'. Thus, Chomsky observes, Chinese is spoken of as 'a language' despite the fact that the various 'Chinese dialects' are as diverse as the various Romance languages. The sociopolitical dimension of the common-sense notion of language is expressed by the well-known witticism that a language is a dialect with an army and a navy.[3] Chomsky, however, is

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doubtful that any coherent account of language can be given in such sociopolitical terms. Rather, he (1986:15) remarks:

> '... all scientific approaches have simply abandoned these elements of what is called "language" in common usage.'
> [Note 1 omitted]

Chomsky (1988a:37), thus, does not consider language a social phenomenon, if 'social' is to have the common-sense meaning of ordinary usage. He also considers it objectionable to say that language, as some kind of social phenomenon, is 'a shared property of a community'. This is so because, on his view, in ordinary usage there is no clear answer to the question 'What kind of community?'.

Second, Chomsky (1986:16) notes that the common-sense notion of language has 'a normative-teleological element' which has also been eliminated from 'scientific approaches'. This normative-teleological element is not to be identified with the judgements of prescriptive grammar. Rather, the 'normative-teleological' element is present in judgements of the progress made by a foreigner or child learning English. Chomsky (1986: 16) observes that

> 'We have no way of referring directly to what that person knows: It is not English, nor is it some other language that resembles English. We do not, for example, say that the person has a perfect knowledge of some language L, similar to English but still different from it. What we say is that the child or foreigner has a "partial knowledge of English," or is "on his or her way" toward acquiring knowledge of English, and if they reach the goal, they will then know English.'

Again, Chomsky doubts whether it is possible to give a coherent account of this aspect of the common-sense notion of language. He (1988a:37) stresses that serious inquiry into language requires conceptual precision. This entails that linguists have to refine or replace the concepts of ordinary usage, just as physicists assign a technical meaning to such terms as 'energy', 'force', and 'work' that departs from the imprecise and rather obscure meaning of ordinary usage.

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So, Dear Buyer, should you wish to progress from Lay Linguist to Ordained Ontologist, there are lessons in liturgical locution to be learned. Couching conceptions in mere common cant can, indeed, create confusion. You too, Ordinary-language Blue, would have to learn to speak in technical tongues. Otherwise, the Missionaries of the Mosaic Movement may not bother to bring you in from the Outer Ontological Darkness. And, unfortunately, Beseeching Buyer, it is strictly forbidden to keep your own common-sense conception of language, simply supplementing it with a technical one. Such Doctrinal Duplicity, the Linguist-Legislator will insist, is absolutely forbidden by the first of The n Commandments for Conceptioneers which I will now recite for the sake of all Sinful Shoppers:

> ***The First Commandment for Conceptioneers***
>
> *Thou shalt have no other conception(s)*
> *before me.*

So, you will have to curb the common-sensicality that you have so carefully cultivated, my Dear Blasé Blue. And come to grips with the Mosaic Moral that the conceptioneer's Path to Pandemonium is paved with homey heresies and folksy facts. Incidentally, the First Commandment outlaws Ecclesiastic Eclecticism too, as an -ism perversive of the Product --- a point to which we will return.

3.1.2 Exorcising Externality

Let us consider next a major class of "technical" conceptions of language that has been rejected as fundamentally flawed by Chomsky (1986:19-21). In terms of these conceptions, language is something external to the mind/brain. These conceptions portray language as what Chomsky (1986:20) calls 'externalized language' or 'E-language', a 'construct' that is 'understood independently of the properties of the mind/brain'.

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If (an) E-language is not associated with a speaker-listener's mind/brain, what is it then? It has been viewed in descriptive linguistics and behavioural psychology and so on, Chomsky (1986:19) says, as

> '... a collection of actions, or utterances, or linguistic forms (words, sentences) paired with meanings, or as a system of linguistic forms or events.'

Thus in Saussure's structuralism a language was taken to be a system of signs, specifically a system of sounds and an associated system of concepts. Bloomfield and his followers had a concept of E-language too, considering a language to be the totality of utterances that can be made in a speech community.[4] And, more recently, David Lewis (1975) defined a language as a pairing of sentences and meanings over an infinite range. To give one more example, under the E-language 'rubric', Chomsky (1986:20) includes the notion of a language as a collection (or system) of actions or behaviours of some sort.

From the point of view of E-language, Chomsky (1986:20) notes, a grammar is a collection of descriptive statements concerning an E-language. Technically, a grammar may be regarded as a function that enumerates the elements --- sentences, speech-events, and so on --- that jointly make up the E-language. And a linguist is free to select any such grammar as long as it correctly identifies the E-language, a point to which we will return below. Universal grammar (UG) is, in the E-language perspective, a theory that makes statements that are true of many or all human languages. As observed by Chomsky (1986:20), some linguists held these statements to express a set of conditions to be satisfied by the E-languages that count as human languages. Other linguists --- Chomsky mentions Martin Joos, William Dwight Whitney, and Edward Sapir as examples --- appeared to deny that an enterprise such as universal grammar was possible. Joos (1957), for example, maintained that 'languages could differ from each other without limit and in unpredictable ways'. This, in essence, is to

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say that there are no linguistic universals.

Chomsky has dealt in some detail with what he judges to be flaws in the concept of E-language.[5] At the basis of this judgement, lies Chomsky's contention that the technical concept of E-language is in a dual sense too far removed from reality.

As for the first, Chomsky (1986:26-28) argues that E-language is, too far removed from the psychological, ultimately biological, mechanisms involved in the acquisition and use of language. He (1986:26) maintains that

> '... languages in this [E-language --- R.P.B.] sense are not real-world objects but are artificial, somewhat arbitrary and perhaps not very interesting constructs.'

What is more, Chomsky (1986:30-31) claims, an E-language is not "given". What is given to the child is some finite array of data on the basis of which the child's mind constructs a mental grammar, or an I-language, as will become clear in par. 3.1.3 below. For reasons such as those mentioned above, Chomsky (1986:31) consequently considers E-language to be 'derivative', relatively 'remote from data and mechanisms'. Thus to him (1986:25)

> '... the object of study in most of traditional or structuralist grammar or behavioral psychology is ... an epiphenomenon at best.'

The 'artificial' or 'epiphenomenal' character of E-language(s) has various consequences that are unattractive to Chomsky. On the one hand, because an E-language is an artifact, it can be characterized in various ways. Hence, Chomsky (1986:26) contends that 'there is no issue of correctness with regard to E-languages'. Questions of truth and falsity, he (1986:20) maintains, do not arise. And Chomsky (1986:26) argues that ultimately

> 'We can define "E-language" in one way or another or not at all, since the concept appears to play no role in the theory of language.'

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On the other hand, Chomsky (1986:25) claims, in terms of the notion of E-language, languages are ill-defined in having no determinate boundaries. In a more superficial sense, it is unclear in the case of many expressions or sentences --- e.g. *Give it me* --- whether they are contained by a particular E-language or not. That is, it is not clear which objects do and which do not belong to the set making up a particular E-language. In a deeper sense too, E-languages are vague or indeterminate. Chomsky (1987a:33) argues this point by referring to so-called 'semi-grammatical sentences' such as *the child seems sleeping*. He asks whether this expression is in the language or outside it and contends that either answer is unacceptable. On his view, an English speaker interprets it instantaneously 'in a perfectly definite way' that is quite different from the way in which it would be interpreted by a monolingual speaker of Japanese. This leads Chomsky to conclude that the expression cannot simply be excluded from the set 'E-English', in spite of the fact that it is 'plainly not well-formed'. But, Chomsky claims, speakers of English and Japanese will also differ in how they interpret some sentence of Hindi. And, he (1987a: 33) proceeds:

> 'Therefore we conclude that all languages fall within English, a conclusion that makes no sense.'

All of this makes the status of E-language quite obscure to Chomsky (1986:25):

> '... the bounds of E-language can be set in one way or another, depending on some rather arbitrary decisions as to what it should include.'

This brings us to the second respect in which Chomsky (1986: 27) considers the concept of E-language too far removed from what is real: it is not sufficiently close to the common-sense notion of language.[6] In support of this claim, Chomsky (1986:27) observes that when people speak of a person knowing a language they do not mean that he or she knows an infinite set of sentences or sound-meaning pairs (taken in extension) or a set of behaviours or acts. Rather, they mean that the

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person knows 'what makes sound and meaning relate to one another in a specific way, what makes them "hang together"'.

In sum: Chomsky has two major criticisms of concepts of E-language[7]: their 'artificial' character and their deviation from the common-sense concept of language. He (1986:28) judges the consideration involved in the first to be 'the clearer and more important'. It is not to be expected that the concepts that are appropriate for the description and understanding of the physical world will include 'the sometimes similar concepts of normal discourse'.[8]

What the Mosaic Mentalist teaches, then, is that to get to the essence of language one has to follow a rigorous routine of renouncing things that are not real. One has to lead a linguistic life of not exalting externality, a life in line with

> ***The Second Commandment for Conceptioneers***
>
> *Thou shalt not make thyself a conceptual model of anything artificial.*
> *Thou shalt not bow thyself down to anything epiphenomenal.*
> *Thou shalt not serve sets or systems about which the truth cannot be told.*

I guess you are wondering where such an exacting exercise in abstinence will lead to. Bothered Blue. The Linguist-Leader's answer, as you will directly see, is: internal life.

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3.1.3 Invoking Internality

In terms of a second major class of 'technical' concepts, language, in essence, is 'internalized language' or 'I-language'. An I-language, Chomsky (1986:22) states, is

> '... some element of the mind of the person who knows the language, acquired by the learner, and used by the speaker-hearer.'

To study I-language is in Chomsky's (1986:24) view to study 'the system of knowledge of language attained and internally represented in the mind/brain'.[9] To portray language as I-language, rather than E-language, involves a conceptual shift. This shift is characterized by Chomsky (1986:24) as a

> '... shift in the focus of attention from actual or potential behavior and the products of behavior to the system of knowledge that underlies the use and understanding of language, and more deeply, to the innate endowment that makes it possible for humans to attain such knowledge.'

The question, then, is: What is the nature of the knowledge and endowment referred to in these remarks by Chomsky? To answer this question, Chomsky ascribes certain properties to a particular human mental faculty, the so-called language faculty. Specifically, as a 'mental organ' or 'module' of mind, the language faculty has two states that are of special significance.[10] So let us consider what Chomsky has to say on the ontology of each of these states.

The first significant state of the language faculty is the initial state, which is taken by Chomsky to be 'genetically determined'.[11] That is, the initial state of this faculty incorporates the so-called genetic language programme, or genetically encoded linguistic principles, representing the child's innate linguistic endowment. The language faculty is in its initial state in a child that has not had any linguistic experience in the sense of having been exposed to utterances of or data about his/her language.[12]

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The initial state of the language faculty is described by a U(niversal) G(rammar). This is a linguistic theory expressing a system of conditions that identify the I-languages that, on Chomsky's (1986:23) formulation, are accessible to humans, given their biological endowment. From this point of view, Chomsky (1980:29) takes the subfield of universal grammar to be 'a study of the biologically necessary properties of human language'. These are the genetically determined properties that are, in Chomsky's (1980:28) words, 'characteristic of the human species'.

The basic statements of the theory of UG, also called 'linguistic universals', express claims about biologically necessary properties of human language.[13] Chomskyan linguistic universals, by implication, do not express claims about so-called logically or conceptually necessary properties that 'language as such' must have. Properties of language are, on Chomsky's (1980:28-29) formulation, logically or conceptually necessary if they are properties 'such that if a system failed to have them we would simply not call it a language'.[14]

The second significant state of the language faculty is an attained, stable state.[15] This state develops or grows out of the initial state under the 'triggering' and 'shaping' influence of the child's linguistic experience.[16] This development or growth has conventionally been called 'language learning' or 'language acquisition'. It is the attained, stable state of the language faculty that incorporates what Chomsky has characterized as 'knowledge of a language.[17]

On Chomsky's (1980) analysis, knowledge of language has various defining properties. It is, for example, unconscious knowledge;[18] it is neither grounded (or justified) nor a priori knowledge but, rather, caused knowledge;[19] it is distinct from a speaker-hearer's ability or capacity to use his/her language.[20] In the present ontological context, however, to Chomsky the central property of knowledge of language

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is that it, allegedly, exists as a mental state: to know a language is to be in a mental state. The obvious question is 'What kind of mental state?'. Chomsky's early (1980:44 ff.) reply was:

> 'I assume .... that to be in such a mental state is to have a certain mental structure consisting of a system of rules and principles that generate and relate mental representations of various types.'[21]

A theory of the attained, stable state of the language faculty is called a '(particular) grammar'. Chomsky (1986:23) considers the statements expressed by a grammar to be

> '... statements of the theory of mind about the I-language, hence statements about the structures of the brain formulated at a certain level of abstraction from mechanisms.'

The mechanisms referred to in these remarks are physical mechanisms underlying the use and acquisition of the language. And the structures of the brain mentioned by Chomsky are 'specific things in the world, with their specific properties'.[22] Because Chomsky (1986:26-27) considers states and structures of the mind/brain to be 'real and definite', the statements made by a grammar about these are either true or false. This applies to the statements of both a particular and a universal grammar.

In sum: in terms of Chomsky's concept of I-language, an individual I-language is something in the speaker's mind/brain. On a more recent formulation of Chomsky's (1988:36), this something is a cognitive system represented in the mind/brain of a particular individual. Ontologically, therefore, Chomsky (1986:18) locates a language within the framework of individual psychology. He (1988a:36) uses the term 'language' to refer to an individual phenomenon. In terms of Chomsky's concept of I-language, what is universal in language is something in the biological make-up of the human species, specifically the genetically determined aspect of the human mind/brain.

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As for the shift in perspective from the technical concept E-language to the technical concept I-language, Chomsky (1986:28) sums it up as a shift towards realism in two respects:

> '... toward the study of a real object rather than an artificial construct, and toward the study of what we really mean by "a language" or "knowledge of language" in informal usage (again, abstracting from sociopolitical and normative-teleological factors).'

So: to reach the Conceptioneer's Canaan, where the essence of language is said to be crystal clear, one has to travel the Road of Realism. Or so the Linguist-Liberator teaches. And while pursuing the pillar of functionalist fire, Dear Buyer, one will be sustained by mentalistic manna and realist refreshments from a rock. As for the route from externality to internality, with its detours through stretches of desert dogma, our Moses of Mass is said to know it from personal experience. It has been alleged that he himself once proceeded from a concept of E-language:[23]

> *'From now on I will consider a language to be a set (finite or infinite) of sentences, each finite in length and constructed out of a finite set of elements.'*[24]

The following remarks too may be construed as evidencing a further case in which the Mosaic Mentalist was seemingly seduced by se(c)tarianism:

> *'For our own purpose we can think of a language as a set of structural descriptions of sentences, where a full structural description determines (in particular) the sound and meaning of a linguistic expression.'*[25]

(By the way, Dear Buyer, could you think of any worthy 'purpose' that would be served by thinking of language as an artifact, an epiphenomenon?) The Mosaic Mentalist, however, firmly rejected allegations that, even in moments of youthful

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abandon, he on occasion served the Conceptual Calf called 'externality', as we will come to see in par. 3.5.2 below.

You are wondering, Bemused Blue, why it is of such importance to deny all entanglement with externality, even liaisons of long ago. The answer, I suggest, may be quite simple. How could anyone making much (out) of Mind on The Market, let alone a mentalist in the Mosaic Mould, confess to having broken:

> ***The Seventh Commandment for Conceptioneers***
>
> *Thou shalt not, adulterously, deal*
> *in any dogma devoid of Mind.*

Incidentally, Dear Buyer, the shift from a concept of E-language to a concept of I-language is another example of what has been characterised elsewhere as a Conceptions Conversion. Given the fervour of the convert, this could explain the harshness of the Linguist-Legislator's judgement of Latter-day Platonists who, as a result of a Counter-Conversion, have been singing the praises of a conception of language that is essentially externalist. But more about this in an instalment that is to follow.

3.1.4 Anointing an Abstraction

Over the years Chomsky has taken considerable care to say clearly what he takes knowledge of (a) language to be. But in so doing, has he also said clearly what he takes language to be? More fundamentally, does Chomsky draw a distinction between a speaker-hearer's knowledge of (a) language and the language known by the speaker-hearer? Or is this a spurious distinction within Chomsky's thinking? It is to questions such as these that we next turn.

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In Chomsky's recent writings, various formulations may be found in which he seems to identify both (the) I-language and '(the) language' with (a system of) knowledge of language. Consider three typical cases:

> 'The system of knowledge attained --- **the I-language** [my emphasis --- R.P.B.] --- assigns a status to every relevant physical event, say every sound wave.' (Chomsky 1986:26)

> '.... **language seems to be best understood as a cognitive system, a system of knowledge** [my emphasis --- R.P.B.] represented in the mind ...' (Chomsky 1987a:17)

> 'The **language now constitutes one of the many systems of knowledge** [my emphasis --- R.P.B.] that the person has come to acquire, one of the person's cognitive systems.' (Chomsky 1988a:36)[26]

Other formulations, however, seem to suggest that Chomsky does draw a distinction between 'language' and knowledge of language or the mental representation of such knowledge. As a case in point, consider the following:

> 'During the past 5-6 years, these efforts have converged in a somewhat unexpected way, yielding a rather different conception of **the nature of language and its mental representation** [my emphasis --- R.P.B.] .... .' (Chomsky 1986:5)

The emphasized part of this quotation seems to indicate that Chomsky does not consider 'language' and its mental representation to be identical.[27]

So, if '(a) language' is distinct from knowledge about it, what then is '(a) language' to Chomsky? The answer, it seems, is this: an abstraction from a mental state or from I-language. Thus consider the following remarks by Chomsky:

> 'Suppose we analyze the notion "H knows language L" in relational terms, that is, as involving a relation R (knowing, having, or whatever) holding between H and **an abstract entity L** (my emphasis --- R.P.B.].' (Chomsky 1986:22)

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> 'Taking knowledge of language to be a cognitive state, we might construe the "language" as an **abstract object**, the "object of knowledge," an **abstract system** of rules and principles (or whatever turns out to be correct) that is an image of the generative procedure, the I-language, represented in the mind and ultimately in the brain in now-unknown "more elementary" mechanisms. Since the language in this sense is completely determined by the I-language, though **abstracted** from it, it is not entirely clear that this further step is motivated, but perhaps it is [my emphasis --- R.P.B.].' (Chomsky 1988b:21)

The mind, as conceived of by Chomsky, is of course itself abstracted from something else, namely the brain (a point that will be pursued further in par. 3.1.5 below. Moreover, (the) I-language is an abstraction as well:

> 'It is natural to take L to be I-language, Jespersen's notion of "structure", regarding this as **an entity abstracted from a state of the language faculty** [my emphasis --- R.P.B.], the latter being one component of the mind.' (Chomsky 1986:23)

> 'The **I-language is abstracted** [my emphasis --- R.P.B.] directly as a component of the state attained.' (Chomsky 1986:26)

This means that '(a) language' is an abstraction from an abstraction. But what is the nature of an entity that has been abstracted from an abstracted mental state or I-language? Of what kind of stuff is the second abstracted entity supposed to consist? Is it still a mental entity, perhaps 'more abstract' only? Note in this connection that, by abstracting mind from the brain, Chomsky moved from one ontological level/domain/system, the material, to another one, the mental. Does one also get such a qualitative shift when '(a) language' is abstracted from (a state of) the mind? And what aspects of the mental state from which '(a) language' is abstracted are 'suppressed' by means of such further abstraction? What is to be gained by doing this? Questions such as these are not dealt with explicitly by Chomsky, except when he (1988d: 21) remarks that 'Since the language in this sense is completely determined by the I-language, though abstracted from it, it is not entirely clear that this further step is motivated, but perhaps it is'. But this remark is hardly more than an expression of bafflement.

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Chomsky's answer to one question, though given obliquely only, seems clear, however. This question can be framed in various ways: Is it possible to say anything of substance about '(an) abstracted language' that cannot be said about the state of the mind from which it has been abstracted? Are there any facts about or principles of the former that do not hold of the latter? The indirect answer to these questions lies in the fact that Chomsky does not appear to say anything of substance, either at the level of facts or at the level of principles, that applies to '(an) abstracted language' but not to the mental state from which it has been abstracted. And Chomsky does not provide for a novel kind of theory --- new in addition to particular and universal grammars --- that would express claims about '(an) abstracted language' only.

Note, though, that by saying that '(a) language' is an abstraction, Chomsky does not mean that it is abstract in a Platonist sense. An object is abstract in a Platonist sense if it has no spatial, temporal or causal properties.[28] Chomsky (1986:33), in fact, has explicitly rejected the idea that '(a) language' could be 'an abstract "Platonic" entity that exists apart from any mental structures'. Thus, he (1986:33) has contended amongst other things that:

> 'There is no initial plausibility to the idea that apart from the truths of grammar concerning the I-language and the truths of UG concerning S_o there is an additional domain of fact about P[latonic --- R.P.B.]-language, independent of any psychological states of individuals.'

We will consider these views of Chomsky in more detail when examining the conception on which (a) language is a Platonic abstract object.[29] For now, it is sufficient to note that by calling '(a) language' an abstraction, Chomsky does not say that it is abstract in the sense of having no spatial, temporal or causal properties. As a matter of fact, Chomsky's calling '(a) language' an abstraction does not seem to contribute substantively to drawing an ontological distinction between '(a) language' and either knowledge of language or the mental state(s) in which such knowledge is embodied. So, abstracted from knowledge of language or from the mental

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state in which it is embodied, '(a) language' is something terminological, something undefined in regard to substance. It is against this background that I will further use the expression 'the Chomskyan conception of language'.

So what's happened to the Promised Land where the essence of (a) language is supposed to be truly transparent? Is it perhaps no more than a mirage machinated by a Prodigious Prophet? Would it not have been better to have stayed behind in the desert of defunct doctrine to dance around the Artifactual Calf? Would I not say that even artificiality and epiphenomenality are to be preferred to mere terminological technicality? In accordance with which of the Commandments for Conceptioneers would the serving of sets be more sinful than the anointing of abstractions of a second degree?

Getting hot under the collar --- or should I say 'cassock' --- Belligerent Blue? But could you keep your cool for one moment more before buying into the 'epi' rather than the empty. The final revelation by the Mosaic Mentalist is upon us.

3.1.5 Beatifying the Body

What we still have to do then is to take a closer look at Chomsky's notion of 'mind'. What does he take the mind to be? What, to him, is it that makes something 'mental'? How does he distinguish between the mind and the brain? The essence of Chomsky's (1987a:1) answer to these question is that

> 'Talk about mind is simply talk about the brain at some level of abstraction that we believe to be appropriate for understanding its essential properties.'[30]

At the level of abstraction referred to above, Chomsky and

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others seek to identify what he (1987a:2) calls 'cognitive systems': systems of knowledge, belief, understanding and interpretation. These systems are systems by virtue of functional and structural principles or, as Chomsky (1987a:2) puts it:

> '... by virtue of the specific function that the system plays in the life of the organism, and by virtue of its specific principles, concepts, and structural properties, and the integration of its elements.'

The above-mentioned cognitive systems, principles and so on must, however, be realized in physical mechanisms of the brain. But talk about the mind is not talk about these physical mechanisms. That is, the claims about the mind and its (cognitive) systems and states abstract away from their physical bases. And such abstract characterization is proper even at a stage when the physical mechanisms are unknown. For Chomsky (1988b:3) takes 'the abstract [i.e., mental --- R.P.B.] objects we construct [when characterizing the brain at the level of function and structure --- R.P.B.] to be real insofar as they enter into explanatory theories that provide insight and understanding'. He (1986:38) considers it the task of the brain sciences to discover the mechanisms of the brain that are the physical realization of the mind, its systems and their states.[31] It is important to note, though, that even if such physical mechanisms are discovered, Chomsky (1987a:5-6) is 'unlikely to abandon the mentalistic level of inquiry and discourse'. To act thus would be to act in the same way as chemists who have not ceased to discuss 'abstractly construed' molecules, elements, the periodic table, and so on.

To Chomsky, the mind is therefore something functional and structural. It has, on his view, no substance distinct from that of the brain. In this respect, Chomsky (1987:4) departs from the Cartesians, who posited a second substance, a *res cogitans*, which they called 'mind'. This second substance, or 'thinking substance', they took to be distinct from the

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body and separate from it. Chomsky (1980a:105) is careful to point out that there is no further ontological import to his references to mind, mental representations and so on. He (1987a:1) considers his 'mentalistic terminology [to bear] no dubious metaphysical burden'. He is not a dualist in the Cartesian or any other metaphysical sense.[32]

Chomsky (1987a:3-5), in fact, considers it misleading to think of the so-called mind-body problem --- the problem of relating the mind to the brain --- as a philosophical problem, one that lies 'outside of the physical sciences'. He is even doubtful as to whether there is such a problem. Thus, Chomsky (1987a:4) argues that this problem can be formulated coherently only to the extent that there is a fairly definite notion of body in the sense of 'physical entity'. Only if there were such a notion could one ask whether some phenomenon fell within its range. If there is no definite notion of 'body', then clearly no phenomenon can be claimed to be beyond the body's limits.

Chomsky (1987a:5, 1989:5) contends that there is no longer a definite concept of body. The Cartesians had one, a kind of contact mechanics 'restricted to the ways in which physical entities interact by pushing, pulling, colliding and so on'. But, Chomsky argues, their notion or theory of body collapsed when Newton appealed to the principle of 'action at a distance' in order to account for such phenomena as the fall of bodies and the motions of the planets. Such action was due to a force that exceeded the limits of Cartesian contact mechanics. Indeed, initially, it was considered an 'occult force' or 'mysterious principle'.

The abandonment of the Cartesian theory of body has had profound consequences, in Chomsky's (1987a:5) view:

> 'We no longer have a definite concept of body. Rather, the theory of body --- or physics --- now includes whatever concepts are necessary to account for events in the physical world: forces, massless particles, waves, strings in

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> 10-dimensional space, or whatever. We can therefore no longer coherently ask whether some phenomenon falls outside the range of "body". We can only ask whether our current concepts of "body" are adequate to account for this phenomenon; ...'

Given these views, the mind-body problem cannot even be formulated in classical terms. And no new terms in which to formulate this problem coherently have to date, in Chomsky's opinion, been proposed.

The problem that Chomsky (1987a:5) does see is rather different:

> '... it is the two-fold problem of investigating the phenomena of mind on the one hand, and seeking to relate them to the main body [sic] of the natural sciences on the other, by discovering the physical mechanisms that exhibit the properties and principles that we find in our inquiry into the mind. It may be that current physics suffices for this task, or it may be that it does not, as so often has been the case in the past.'

Suppose that physics turns out to be incapable of accounting for the properties and principles of mind --- that is, suppose that current concepts of 'body' are inadequate to account for mental phenomena. In this event, Chomsky (1987a:5) contends,

> '... we must extend and modify our basic physics, much as Newton extended Cartesian mechanics to account for the motion of the heavenly bodies...'[33]

The result would be a more adequate concept of body, not a new, metaphysical, concept of mind. Mind would remain something functional and structural without a distinct substance.

Suppose further that a given mental phenomenon stubbornly resisted explanation by means of subsumption under drastically extended notions of body. That is, suppose that scientists kept on failing to find a way to modify their 'basic physics' in order to account for this phenomenon. Even under such circumstances Chomsky would not be forced to introduce a new sort of mind, a mind of a substance distinct from that of the body. The reason for this is that Chomsky (1988c:13) provides

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for the possibility that some of the questions that scientists can pose might 'lie beyond the scope of human intelligence'. Such questions he (1980a:6) refers to as 'mysteries'.[34] Mysteries, on Chomsky's (1980a:6) view, are questions that

> 'simply lie beyond the reach of our minds structured and organized as they are, either absolutely beyond those limits or at so far a remove from anything that we can comprehend with requisite facility that they will never be incorporated within explanatory theories intelligible to humans.'

In support of the provision which he makes for the existence of mysteries, Chomsky (1988c:13) cites Karl Popper's (1969) observation that it is 'clearly mistaken' to suppose that 'our quest for knowledge must succeed'.[35]

Consider now again the recalcitrant mental phenomenon mentioned above. Given the notion of a 'mystery', Chomsky need not regard this phenomenon as pointing to the existence of a substantive kind of mind, i.e. a mind distinct in substance from the body. He could maintain that this phenomenon simply reflects the existence of yet another mystery about the body.[36] Given this line of reasoning, it is not clear what, if anything, would compel Chomsky to give up the view that (a) language is something abstracted from ultimately the body.

Having forsaken the fleshpots of physicalism to follow The Linguist-Liberator to the Land of Milk and Mind, you now feel a deep sense of ontological disillusionment. The trek along the Abstract Axis has brought you somewhere that you fear to be ontologically neither here nor there. I can understand, Balked Buyer, that Beefless Body, despite its being beatified, is not exactly the Meaty Mind of the metaphysical kind that you expected to find. And that a language faculty of Fleshless Function could not cure the distress induced by the question 'What is language in essence?'. All of which is rather ruinous to our ameliorative Mosaic Metaphor.

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But, then, a metaphysical mind of dualist design cannot provide the right kind of cure for your Ontological Angst either. For (psychophysical) dualism, our On-Duty Ontological Oracle will pronounce, should be considered a dodoesque doctrine. And for saying so, he (Bunge 1980:16-21) will rapidly recite ten reasons of which the first is that (psychophysical) dualism is fatally fuzzy in failing to give a precise characterization of the notion of a mind. Dualists, on his view, at best offer examples of mental states (e.g., a happy mood) or mental events (e.g., a perception). But they do not state what is in such states of and changes in the mind. Dualists, moreover, fail to elucidate the notion of 'correlation' that they use standardly in the expression 'mental states (or events) have neural correlates'. This brings our Master-at-Metaphysics to pronounce dualism a 'nonhypothesis'.

> *'Because dualism in either of its main versions --- parallelism and interactionism --- is imprecise, it can hardly be put to empirical tests. It tells us that whatever we introspect or retrospect is mental, and whatever is mental has some "neural correlate". So, dualism labels instead of explaining, and remains always on the safe side of vagueness.'*[37]

So, Dear Buyer, if you simply must take mentalistic medicine for relieving your pain, the most potent potion, I fear, is a Placebo plied in the Sacramental Section of The Market.

3.2 Founding the Faith

What has brought Chomsky to portray language as something mental? What are the roots of Chomskyan mentalism? These are the questions to which we turn next. Here we will examine two main roots of Chomskyan mentalism: the Cartesian belief that language is a 'mirror' of 'the essence of human nature', and Chomsky's faith in 'the standard practice of the natural sciences'. A number of the secondary roots of the Chomskyan conception of language will be identified en passant in par. 3.3 below.

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3.2.1 Hallowing Humanity

Chomsky (1987a:6-7) notes that the study of language is central to two kinds of inquiry. On the one hand it is central to traditional Western philosophy and psychology, 'which have been concerned with understanding the essential nature of human beings'. In the context of contemporary scientific inquiry, on the other hand, it is central to certain endeavours which attempt to understand human nature 'in the light of what we now know or may hope to learn about organisms and about the brain'.

Chomsky (1987a:7) furnishes various reasons why language has been and will continue to be of significance for the study of human nature. The first is that language appears to be a 'true species property'. That is, Chomsky considers language in its essentials to be unique to the human species and to be 'a common part of our shared biological endowment'. Second, Chomsky notes that language enters in a crucial way into thought, action and social relations. And, third, he considers language 'relatively accessible to study'; in this regard, language differs markedly from other essentially human attributes such as 'problem solving' and 'artistic creativity'. And so Chomsky (1987a:55, 1987b:8), following the Cartesians, has come to view the study of language as a means of understanding 'the essential nature of human beings', '... language [being] a kind of "mirror of mind", reflecting the essential properties of mind'.

From this perspective, Chomsky (1987c:11) considers the central problem of the theory of language to be that of explaining how people can speak and understand sentences that are new in their own experience or in the history of the language. Chomsky views this phenomenon not as exotic, but rather as the norm in the ordinary use of language. It represents to Chomsky (1987c:11) 'the creative aspect of language use':

> 'the commonplace but often neglected fact that the normal use of language is unbounded in scope, free

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> from identifiable stimulus control, coherent and appropriate to situations that evoke but do not cause it (a crucial distinction), arousing in listeners thoughts that they too might express in the same or similar ways.'

The question then is how the unbounded scope of the normal use of language, its freedom from stimulus control, and its coherence and appropriateness to situations can be accounted for. Not, Chomsky has argued, by considering language to be something external to the mind/brain: whether as something physical in a Bloomfieldian sense[38] or as something psychological in a behaviourist sense.[39] Over the years, Chomsky (1959:56, 1972:11-12, 72, 1987a:10, 1987b:2ff., 1988c:11) has argued forcefully that the 'creative aspect of language use' cannot be accounted for within any behaviourist framework. That is, the unbounded scope of the normal use of language, its freedom from stimulus control and its appropriateness to situations cannot be understood by considering language to be a system of stimulus-response connections, a network of associations, a repertoire of behavioural items, a habit hierarchy, a system of dispositions to respond in a particular way under specifiable stimulus conditions, an ability or a skill.[40] To account for the unbounded scope of the normal use of language and for its freedom from stimulus control, Chomsky (1959:56) has contended, one must attribute to a person something abstract that he/she has internalized. To understand these phenomena, Chomsky (1972:4) has argued, linguists

> '... must abstract for separate and independent study a cognitive system, a system of knowledge and belief, that develops in early childhood and that interacts with many other factors to determine the kinds of behavior that we observe; to introduce a technical term, we must isolate and study the system of *linguistic competence* that underlies behavior but that is not realized in any direct or simple way in behavior.'

Chomsky, in short, portrays language as something mental. If language is viewed in this way, its study can provide a means of understanding 'the essential nature of human beings'.[41] It

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is therefore from a concern with the latter pursuit that Chomsky's mentalist conception of language ultimately springs.

That language is 'a mirror of mind' and, as such, reflects the essential properties of mind is considered by Chomsky (1987a:55) to be 'a traditional idea'. Central to the thinking of the Cartesians in particular, it was 'enriched' in course of the 18th and 19th centuries. During the earlier half of the 20th century, however, linguists and psychologists on the whole were not seriously concerned with understanding 'the essential nature of human beings'. And, as noted by Chomsky (1987c:12), the phenomenon of 'the creative aspect of language use' was not seriously addressed by these scholars until the mid-1950s. Their lack of concern with these matters, Chomsky (1987c:12) contends, was due to the influence of the behaviourist conception of language as a system of habits, dispositions or abilities.

This state of affairs was changed by what Chomsky (1987a:50, 54-55, 1987b:2, 6-8, 1987c:14, 1988b:2) calls the 'cognitive revolution'. Getting underway in the mid-1950s, this revolution was concerned with the states of the mind/brain that entered into thought, planning, perception, learning and action. The mind/brain was considered an information processing system that formed abstract representations and that carried out computations in which they were used and modified. This approach, Chomsky (1987b:2) observes, stands in sharp contrast to the behaviourist study of the shaping and control of behaviour. The latter study systematically avoided consideration of the states of the mind/brain that entered into behaviour. Rather, it sought --- though unsuccessfully --- to establish direct relations between stimulus situations, contingencies of reinforcement, and behaviour. The barrenness of the behaviourist approach is caused, on Chomsky's (1987b:2) diagnosis, by its refusal to consider 'the major and essential component of all behavior, namely the states of the mind/brain'.

The rise of generative grammar is looked upon by Chomsky

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(1987a:55) as a major factor in the cognitive revolution. It 'resurrected' traditional ideas, particularly the Cartesian idea of language as a 'mirror of mind'. And it reaffirmed the importance of coming to grips with 'the creative aspect of language use' in attempting to understand the essence of language and mind. This led to an important conceptual shift: the shift from the conception of language as an externalized object to that of language as an internalized object.[42] Guided by the latter conception, the study of language has pursued three 'central questions':

1. What is/constitutes knowledge of language?
2. How is such knowledge acquired?
3. How is such knowledge used?[43]

To see what was involved in the cognitive revolution and in the first conceptual shift referred to above, it is instructive to compare the way in which behaviourists would have standardly answered these three questions and the way in which Chomskyan mentalists answered them prior to the second conceptual shift. Here are the respective answers as summarized by Chomsky (1987a:64, 67; 1987b:20, 24):

1. What is knowledge of language?

   Behaviourist answer: 'it is a system of habits, dispositions, abilities'.

   Mentalist answer: 'language is a computational system, a rule system of some sort. Knowledge of language is knowledge of this rule system.'

2. How is language acquired?

   Behaviourist answer: 'by conditioning, training, habit formation, and "general learning mechanisms" such as induction'.

   Mentalist answer: 'the initial state of the language faculty determines possible rules and modes of interaction. Language is acquired by a process

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of selection of a rule system of an appropriate sort on the basis of direct evidence. Experience yields an inventory of rules, through the language acquisition device of the language faculty'.

3. How is language used?

Behaviourist answer: 'language use is the exercise of an ability like any skill, say, bicycle-riding. New forms are produced or understood "by analogy" to old ones.'

Mentalist answer: 'the use of language is rule-governed behavior. Rules form mental representations, which enter into our speaking and understanding. A sentence is parsed and understood by a systematic search through the rule system of the language in question.'

As pointed out by Chomsky (1987a:67; 1987b:24), the first conceptual shift associated with generative grammar was a shift of focus away from behaviour and its products to the system of knowledge in the mind/brain that underlies behaviour. He considers this shift of focus 'extremely productive' in two senses: it not only led to a rapid increase in the range of empirical phenomena investigated; it also, on Chomsky's view, led to many new theoretical discoveries, including the construction of explanations for facts that had gone unnoticed before.[44]

Founding the Faith may seem, then, mainly a matter of digging up Descartes and dusting him down, Dear Buyer. In fact, however, this rooting ritual was carried out in a peculiarly post-hoccy way. In terms of Chomsky's (1987a:55) own account, modern mentalism was conceived in the 'cognitive revolution' of the 1950s. And only later was it (re)rooted in the Cartesian Creed that language is a 'mirror of mind' reflecting

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the essence of man's Hallowed Humanity. Since we are dealing here with an exercise in excavation, however, let us not bury ourselves in dry-as-dust details of 'before' and 'after', Dear Pit-Side Spectator. If you really savour the idea of man's embodying a soul, albeit but a soul of sorts, then let Chomsky command your respect as, with the assistance of the Resurrected René, he continues to spearhead the Creativity Crusade against those Forces of the Flesh that would gladly downgrade ours to a Soulless Species, on a paltry par with key-pecking pigeons and maze-running rats. Disdaining to bow down before the Behaviourist Baal, he has been the one to expose the emptiness of the Externalist Effigy, stripping from the Mindless Man Model all semblance of reason and intellectual respectability.

3.2.2 Sanctifying Science

The other main root of the Chomskyan conception of language as something mental is Chomsky's faith in 'normal scientific practice' or 'the standard practice of the natural sciences'. Properly pursued in the study of 'the creative aspect of language use', this practice may be relied upon to reveal the most adequate scientific conception of language.

Chomsky (1982:14; 1987b:1) believes that cognitive scientists should attempt 'to assimilate the study of language to the main body of the natural sciences'. Questions of mind/brain, including questions of language, he (1987b:12) contends, should be approached 'in the spirit of the natural sciences'. This means, he (1988b:3) maintains, that answers to the three fundamental questions --- 'What constitutes knowledge of language?', 'How is such knowledge acquired?', and 'How is such knowledge put to use?' --- should be integrated within the natural sciences. But adopting the ap-

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proach of the natural sciences in the study of language is, to Chomsky, tantamount to adopting a mentalistic approach. Thus he contends that:

> 'A mentalistic approach to the study of behavior in terms of the cognitive system that underlie it is not only in accord with normal scientific practice, but also a step towards assimilating the study of behavior into the main body of the natural sciences.' (1987a:6)
>
> '... Mentalism falls strictly within the standard practice of the natural sciences applied in this particular domain.' (1987b:1; cf. also 1987a:50)
>
> 'Mentalism, in short, is just normal scientific practice, and an essential step towards integrating the study of the phenomena that concern us into the more "fundamental" natural sciences.' (1987c:2)

What, then, on Chomsky's view is involved in following 'normal scientific practice' in the study of linguistic phenomena? Its goal, Chomsky (1987b:1) assumes, is to formulate principles 'that enter into successful and insightful explanation of linguistic (and other) phenomena that are provided by observation and experiment'. The pursuit of such explanatory principles has both a negative and a positive side. Let us consider them in turn.

The negative side consists, as Chomsky (1987b:1) puts it, in 'abandoning dogmas that are entirely foreign to the natural sciences and that have no place in rational inquiry'. To him, this means rejection of the dogmatic imposition of a priori limits on possible theory construction. Chomsky (1987b:1; 1982:14) singles out two such irrational limits, namely those of behaviourism and operationism. Loosely, the first of these limits outlaws theoretical concepts and principles whose empirical import cannot be specified with reference to behavioural data alone. The second limit disallows theoretical concepts and principles whose content cannot be linked to behavioural data by means of publicly observable operations or measuring procedures.[45]

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On the positive side, as Chomsky (1986:23; 1987b:1-2) understands it, the pursuit of explanatory principles means that it is proper to formulate abstract concepts or 'notions'. Chomsky (1987b:1-2) elucidates the nature of such 'abstract inquiry' with reference to 19th-century chemistry,

> '... which sought to explain phenomena in terms of such abstract notions as elements, the periodic table, valence, benzene rings, and so on --- that is, in terms of abstract properties of then-unknown, perhaps still unknown mechanisms.'

Such 'abstract inquiry' is viewed by Chomsky as 'an essential preliminary and guide for the subsequent inquiry into physical mechanisms'.

Chomsky (1987b:2) considers the mentalistic study of language to be quite similar in approach and character to the 'abstract inquiry' into chemical elements. The statements of a grammar Chomsky (1986:23) takes to be similar to the statements of a physical theory. Both the former and the latter characterize certain entities and their properties 'in abstraction from whatever may turn out to be the mechanisms that account for these properties...'. Statements about I-language, Chomsky (1986:23) moreover contends, are true or false much in the same way that statements about the chemical structure of benzene or about the valence of oxygen are true or false.

The epistemological stance adopted by Chomsky (1989:5) on truth and falsity is 'essentially the standpoint of the working scientist'. The latter standpoint, he notes, represents what Richard Popkin (1979) has called the 'constructive skepticism' of Gassendi and Mersenne in their reaction to the skeptical crisis of the 16th-17th century. On Popkin's account, constructive skepticism recognized that 'the secrets of nature, of things-in-themselves, are forever hidden from us'. And it accepted that 'absolutely certain grounds could not be given for our knowledge'. But, it maintained, we do 'possess standards for evaluating the reliability and applicability of what we have found out about the world'.[46]

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Proceeding from these assumptions, mentalists --- Chomsky (1989:5) explains ---

> '... will inquire into the cognitive faculties themselves, regarding them as just another part of the natural world that we hope to understand ....'

Chomsky does not see in the 'lack of indubitable foundations' a sufficient reason for rejecting the 'working assumption' that there is an 'objective reality to be discovered', though, admittedly, a reality that can at best be grasped in part only.

What the 'standard practice of the natural sciences' or 'normal scientific practice' means to Chomsky is, in a nutshell, the following: Its goal is to formulate explanatory theories --- theories whose principles give insight into phenomena. In pursuing such explanatory principles, one should not place a priori limits --- for example, of a behaviourist or operationist kind --- on theory construction; to do so would be mere dogmatism. Rather, one should feel free to postulate abstract properties --- properties which are abstract in that they characterize the function and the structure of mechanisms that are still unknown at a physical level. And one should take a constructively skeptical stance on the truth of the claims made by such 'abstract inquiry'.

The foregoing in effect means to Chomsky that, in studying the linguistic phenomena considered in par. 3.2.2, one cannot have an intellectually more respectable conception of language than that yielded by the pursuit of 'normal scientific practice'. That is, Chomsky's faith in this practice is a co-determinant of the mentalistic import of his conception of language.

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Dear Buyer, I have to make what could be considered a 'confession'. (To symbolize his solidarity with the sacramental scene, a Conceptions Counsellor every so often has to engage in a spiritual speech act when doing his thing. So here it comes.) Just conceivably, in presenting to you Chomsky's ontology and its roots, I may occasionally have used some expression that conjured up the picture of a man full of faith, brimming with belief. But --- and this is where perhaps I have misled you, unintentionally of course! --- he has faith in things after a fashion only, as a memorable exchange between him (1987d:48) and one James Peck reveals:

> *'JP : Do you have a deep faith in reason?*
> *NC : I don't have faith in that or anything else.'*

Even so, if you are hoping, Beliefless Blue, that NC will yet turn out to be a Fully Faithless Fellow like yourself, you hope in vain. To see why, consider the exchange immediately following the one just quoted:

> *'JP : Not even in reason?*
> *NC : I wouldn't say "faith". I think ... it's all we have. I don't have faith that the truth will prevail if it becomes known, but we have no alternative to proceeding on that assumption, whatever its credibility may be.'*

So, perhaps one should rather say that NC is a man whose faith was fixed by default. And come to think of it, if the Speaking Species can make do with a soul of sorts, what on earth (or in heaven) is full-blown faith needed for, Bemused Buyer?

3.3 Reforming the Religion

The mentalistic core of the Chomskyan conception of language, we have seen, is rooted in 'traditional ideas', specifically in certain 'enriched' Cartesian ideas. And as will be explained below, other, ontologically somewhat more peripheral, components of this conception have antecedents in beliefs held

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by Plato and Humboldt. But neither the former ideas nor the latter beliefs figure in an unmodified form as 'building blocks' of the Chomskyan conception of language. So let us briefly consider some of the major ways in which the core and ancillary components of this conception of language differ from the ideas and beliefs to which they go back.

In terms of the ontological core of the Chomskyan conception of language, language is something mental, a faculty of mind. In this respect, the Chomskyan conception of language is essentially Cartesian. And there are important similarities between the Cartesian and the Chomskyan concept of mind. Let us consider these as they are seen by Chomsky.[47]

The first similarity concerns the way the mind 'works'. Thus Chomsky (1987b:5) states that

> '... we must resort to a representational theory of mind of the Cartesian sort, including the concept of the mind as an information-processing system that computes, forms and modifies representations ... '[48]

The second similarity between the Cartesian and Chomskyan concept of mind concerns the doctrine of innate ideas. As phrased by Chomsky (1987b:5),

> '... we must adopt something like the Cartesian concept of innate ideas, biologically determined properties of the mind/brain that provide a framework for the construction of mental representations, a framework that enters into our perception and action.'[49]

As noted in par. 3.1.5 above, however, there is also a fundamental difference between the Cartesian and Chomskyan conceptions of mind. This concerns substance: on the Cartesian conception, mind and body represent different substances. As observed by Chomsky (1982:6), Descartes

> '... postulated two substances, body and mind, held them to be distinct, and raised various questions about the nature of their interaction.'

Chomsky (1982:6-7; 1987a:28; 1988b:12) considers this Cartesian

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distinction --- and the dualism associated with it --- to be 'rational' but 'untenable'. It was 'rational' in the sense that the Cartesians found phenomena --- thought, consciousness, the use of language --- that could not be accounted for in terms of the principles of their contact mechanics and sought to explain these phenomena in terms of extra-mechanical principles. Or, as Chomsky (1982:7) succinctly puts it:

> 'The *principle of mind* was introduced to account for the limitations of mechanism --- it was supposed to be a new creative principle standing alongside the mechanical principle --- and a new kind of substance, mind, was needed as a basis for it.'

But the Cartesian two-substance metaphysics has become 'untenable' because of the collapse of the concept of body that was construed in terms of a version of contact mechanics. As noted in par. 3.1.5 above, Chomsky argues that this concept of 'body' was made to 'disappear' by the Newtonian revolution. And, he (1982:9) goes on to contend,

> 'What replaced it [i.e., the Cartesian concept of "body"] was the concept of *the physical world* which simply incorporates *whatever we understand.*'

This means to Chomsky that whatever things physicists 'devise' form part of the physical world or the concept of 'body' 'as long they contribute to an intelligible picture of nature'. This is why he sees no need to postulate a distinct kind of substance for whatever is attributed to mind.

Let us next consider one of the ontologically ancillary components of the Chomskyan conception of language that also represents a modified version of a traditional idea, one with an antecedent in the thinking of Plato. As we saw in par. 3.2.1 above, one of the fundamental questions addressed by Chomskyans is the question of how language is acquired. Chomsky (1987b:11) considers this question to be a special case of 'Plato's problem': How do we come to have such rich and specific knowledge, or such intricate systems of belief and understanding, when the evidence available to us is so

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meagre?[50] This problem is discussed in the Platonic dialogues where Socrates sets out to show that a slave boy knows the truths of geometry despite the fact that he has had no instruction in geometry.

In similar vein, Chomsky (e.g. 1980a:166; 1986:6-8) has argued over the years that for many properties of the system representing a speaker's knowledge of his native language, there is no evidence in his childhood experience of the language.[51] Chomsky accordingly has framed the problem of language acquisition in a Platonic cast : How can children come to know their native language on the basis of severely limited experience or evidence about the language?[52]

But let us return to Plato's problem. Plato had an answer to it: anamnesis, that is the doctrine of reminiscence, recollection or remembrance. In terms of this doctrine, there are certain kinds of knowledge which are acquired neither on the basis of sensory experience nor by means of instruction. Rather, what happens is that these kinds of knowledge are recalled under certain circumstances as knowledge that we had in an earlier existence.[53]

Following Leibniz, Chomsky (1987b:12) considers Plato's answer to be 'on the right track' but agrees that it has to be 'purged of the error of preexistence', as Leibniz put it. Negatively, this purging entails a rejection of the belief that the 'immortal soul' is the mechanism by which knowledge is 'remembered' from an earlier existence. And positively, on Chomsky's (1987b:12) view, what this purging involves, in a modern idiom, is 'reconstructing Platonic "remembrance" in terms of the genetic endowment of human beings'.

Applied to the Chomskyan problem of language acquisition, this approach has led to the postulation of a language faculty that incorporates in its initial state a 'genetic language programme' or 'genetically encoded linguistic principles' which represent the child's innate linguistic endowment. Under

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the 'triggering' and 'shaping' influence of the child's linguistic experience, Chomsky contends, the initial state of the language 'grows' or 'matures' into a stable state which represents the mature speaker's knowledge of his language. In short, the genetic component of the Chomskyan conception of language represents a modernized version of the Platonic doctrine of anamnesis and of the Cartesian concept of innate ideas. In this context, a person 'remembers' something or 'knows' something 'innately' in the sense that he has inherited it genetically.

We turn, finally, to a component of the Chomskyan conception of language that represents, in a modified form, an idea attributed to Wilhelm von Humboldt. Chomsky (1988b:5) observes that, at an intuitive level, 'a language is a particular way of expressing thought and understanding the thought expressed'. If this intuition is rephrased within the theory of mind developed in the cognitive revolution of the fifties, Chomsky (1988b:5) contends,

> '... a language is a particular generative procedure that assigns to every possible expression a representation of its form and its meaning, insofar as these are determined by the language faculty...'.

But the view that language is a generative procedure, Chomsky (1988b:4) notes, has an antecedent in Wilhelm von Humboldt's idea that 'language is a system that makes infinite use of finite means'.[54] Chomsky points out, however, that Humboldt was unable to give a 'clear account' of this 'correct idea', leaving it 'vague' and 'unformed'. And, consequently, he was unable to use this idea as the basis for research into language. Recent developments in modern logic and mathematics, though, have yielded conceptual tools that enable the infinite use of finite means to be studied 'with considerable clarity and understanding'. That is to say, as Chomsky (1987a: 16-17; 1987c:13) explains, these developments have provided the formal means by which Humboldt's basic idea can be captured as a manifestation of 'properties of discrete infinity'.[55] Specifically, these developments have made it possible for

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Chomsky (1987b:7) to propose that

> 'A generative grammar of a language ... is a formal system that states explicitly what are these finite means available to the mind/brain, which can make infinite, unbounded use of these means.'[56]

From an ontological point of view, however, it is important to note that Humboldt did anticipate the distinction between E-language and I-language. Chomsky (1988b:4) accordingly remarks that

> 'Crucially, Humboldt regarded language not as a set of constructed objects, say utterances or speech acts, but rather as a process of generation; language is eine Erzeugung, not ein todtes Erzeugtes.'

Chomsky (1987b:4) cautions, though, that it was not possible in Humboldt's day to distinguish performance clearly from linguistic competence in the sense of possession of knowledge. In Humboldt's work, specifically, there is no clear distinction between, on the one hand, the abstract generative procedure that assigns structural descriptions to all expressions and, on the other hand, the actual 'Arbeit des Geistes' by means of which thought is expressed in linguistic performance. The development of the proper distinction had to await the early work on generative grammar.

The particulars we have been looking at, Dear Buyer, point to a deeper pattern: reform, revival, resurrection and the like are part and parcel of the life cycle of real religions. After all, to create a New (R)age Religion, the Mosaic Mentalist has practised certain

Rites of Reform

Biologize (what was buried long, long ago as) baseless belief.
Mathematize (what was misunderstood as) a murky message.
Scientize (what has sent many to sleep as) a stale sermon.

By using the rites of this recipe --- the first for souping

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up substance, the second for freshening up form and the third for pepping up preaching --- the Leading Liturgist has managed to come up with a make of mentalism fully in phase with functionalist market forces. Indeed, ideas interred as irredeemable, Dear Blue, he has ritefully reanimated within a contemporary conception of language for which even Militant Materialists seem content to clunk down hard cash on the counter.

3.4 Slumbering Sectarianism

Chomsky, of course, is not the only contemporary scholar to portray language as something mental. A variety of linguists, psychologists, philosophers and other sorts of 'cognitive scientists' have held similar beliefs. But few have attempted to develop these beliefs into a full-blown conception of language, one that is well enough articulated and motivated to stand up to serious comparison with the Chomskyan conception in regard to content and relative merits.[57] Among the few exceptions, the most notable has been Jerry Fodor, dubbed 'The Complete Cognitivist' by Howard Gardner (1985:81). Fodor, despite having been strongly influenced by the views of Chomsky, has a mentalistic conception of language that differs in a specific way from the Chomskyan one. So, not only is Fodor's conception of language interesting in its own right, it also provides a contrastive perspective on the Chomskyan conception. It will therefore be worth our while to take a look at Fodor's conception of language.

Like the Chomskyan conception of language, Fodor's has Cartesian roots. Thus, Fodor (1981:1) points out that his theory of mind 'looks a lot like ... Descartes', blending, as it does, elements of mentalism and nativism'. Specifically, as also noted by Gardner (1985:84), Fodor believes that mental states really exist, that they can interact with one another, and that they can be studied by means of the empirical methods of psychology, linguistics and other cognitive sciences. But,

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like Chomsky, Fodor does not believe that there are two substances, mind and matter. So Cartesian dualism forms part of the 'ontological baggage' that Fodor (1981:1, 2) has 'thrown overboard', to use one of his own evocative phrases.

Fodor, moreover, holds a position on 'what linguistics is about' that has been articulated by Chomsky and (the earlier) Katz (1974). Calling this position 'the Right View', Fodor (1985a:148-149) summarizes it as follows:

> '(a) Linguistic theories are descriptions of grammars. (b) It is nomologically necessary that learning one's native language involves learning its grammar, so a theory of how grammars are learned is *de facto* a (partial [?]) theory of how languages are learned. (c) It is nomologically necessary that the grammar of a language is internally represented by speaker/hearers of that language; up to dialectical variants, the grammar of a language is what its speaker/hearers have in common by virtue of which they are speaker/hearers of the *same* language. (d) It is nomologically necessary that the internal representation of the grammar (or, equivalently for these purposes, the internally represented grammar) is causally implicated in communication exchange between speakers and hearers in so far as these exchanges are mediated by their use of the language that they share; talking and understanding the language normally involve exploiting the internally represented grammar.' [Footnote 4 omitted]

Katz, incidentally, has come to reject 'the Right View' in favour of 'the Wrong View', as we will see below.

The basic tenets common to Chomsky's and Fodor's linguistic ontology instantiate, on Katz's analysis, the general ontological doctrine of conceptualism. According to conceptualism, universals are mental or mind-dependent. This means that, if there were no minds, there could be no universals, in the same way that there could be no thoughts, imagery or memories.[58] To be a conceptualist about language is, accordingly, to hold that there is no such thing as (a) language independent of speakers' psychological states.[59] Chomsky (1982:14) himself has pointed out that the past quarter of a century has seen 'a shift to the a representational theory of mind, and to a mentalist or **conceptualist** interpretation of the

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study of language' [my emphasis --- R.P.B.]. But to date he has not spelled out in general ontological terms what he takes conceptualism, as opposed to realism and nominalism, to be.[60]

Now, returning to the main issue, how does Fodor's mentalistic conception of language differ from the Chomskyan one? In essence, the difference ties in with Fodor's (1983:38ff.) functional taxonomy of cognitive mechanisms or systems (or psychological processes, as he also calls these). Within this taxonomy, Fodor draws a distinction between transducers, input systems and central processors (or systems). Informally, the function of transducers and input systems is to so represent the world as to make it accessible to thought. Transducers, Fodor (1983:42) contends, specify the distribution of stimulations at the 'surfaces' (as it were) of the organism. In traditional terms, transducers are sense organs that translate physical energy into neural firing patterns but that do so without changing the information content of the translated physical energy. In a more contemporary idiom, transducers may be said to input proximal stimulus configurations and to output modality-specific representations. As input to transducers, these configurations are not (yet) computationally patterned; as output from transducers, these representations are in a symbolic format.[61]

Input systems (input analyzers or interface systems) operate on the specifications that are the output from transducers. Specifically, input systems 'deliver representations that are most naturally interpreted as characterizing the arrangement of *things in the world*'. On the basis of this function, Fodor describes input systems as 'inference performing systems'. More technically, he (1983:42) contends,

> '... the inferences at issue have as their "premises" transduced representations of proximal stimulus configurations, and as their "conclusions" representations of the character and distribution of distal objects.'

Fodor (1983:44ff.) considers perceptual systems to be instances

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of input systems. In the case of vision, for example, he (1983:47) considers mechanisms for colour perception, for the analysis of shape, and for the analysis of three-dimensional spatial relations to be typical input systems.

The mental representations 'inferred' by input systems serve as input to central processors or systems. The function of these central processors or systems, as characterized by Fodor, is to fix beliefs about what the world is like. More specifically, Fodor (1983:104) assumes that

> '... the typical function of central systems is the fixation of belief (perceptual or otherwise) by non-demonstrative inference. Central systems look at what input systems deliver, and they look at what is in memory, and they use this information to constrain the computation of "best hypotheses" about what the world is like.'

Fodor (1983:103) assumes that when people talk pretheoretically about such mental processes as thinking and problem-solving, they have in mind the operation of such central systems. In addition, Carston (1988:43) mentions fantasizing, daydreaming, and mental rehearsals of forthcoming interactions as 'less utilitarian' activities possibly carried out by central systems.

Returning to input systems, Fodor (1983:47ff.) considers them to be modular. Mental modules, so goes Fodor's account, (more or less) share nine properties that are mutually relatively independent.

1. Input systems are domain-specific: each system specializes in processing input on a particular topic or in a particular domain.[62]

2. The operation of input systems is mandatory: a system automatically and involuntarily applies whenever it can apply.[63]

3. There is only limited central access to the mental representations that input systems compute: 'interlevels' of input representation are relatively inaccessible to consciousness.[64]

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4. Input systems are fast: the activities carried out by input systems are among the fastest of our psychological processes.[65]

5. Input systems are informationally encapsulated: they don't have access to all the information that the organism internally represents.[66]

6. Input analyzers have shallow outputs: the information encoded by these outputs are highly constrained and typically are phenomenologically salient.[67]

7. Input systems are associated with fixed neural architecture: they are neurally 'hardwired'.[68]

8. Input systems exhibit characteristic and specific breakdown patterns: the pathologies of input systems are caused by 'insult' to specialized, 'hardwired', circuits.[69]

9. The ontogeny of input systems exhibits a characteristic pace and sequencing: a great deal of the developmental course of input systems is endogenously determined.[70]

Central systems or processes, by contrast, are non-modular. Fodor (1983:101ff.) has argued that they are (relatively) global or domain-neutral, conscious, unencapsulated, slower, less automatic and lacking in fixed neural architecture.[71]

Where, then, does language fit into Fodor's taxonomy of cognitive systems? Language, on Fodor's (1983:44, 47) view, like the perceptual systems, has the functional and other properties of input systems. Switching from 'language' to 'language mechanisms' (p. 44) and later to 'language processing mechanisms' (p. 48), Fodor (p. 44) contends to begin with that these mechanisms typically have the function of an input system. This involves more than the obvious point that utterances are themselves objects that have to be perceptually identified. More interesting, Fodor (1983:44) maintains, is that

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> 'Understanding a token sentence presumably involves assigning it a structural description, this being part and parcel of computing a token-to-type relation; and that is precisely the sort of function that we would expect an input system to perform.'

Next Fodor (1983:47ff.) argues that 'language'/'language processing mechanisms' has/have (most of) the non-functional properties of input systems as well, properties not shared by central cognitive systems. These are the above-mentioned nine properties that make a system modular. Accordingly, Fodor contends that 'language'/'language processing' is domain-specific, fast and mandatory, encapsulated or impenetrable to extralinguistic beliefs, generally inaccessible to the central systems, innately specified, fixed in regard to neural architecture, relatively fixed in regard to growth pattern across individuals, patterned in regard to breakdown.

Fodor's portrayal of 'language'/'language (processing) mechanisms' as an input system has an antecedent in a view of psychological reality that he shares with Janet Fodor and Merrill Garrett. With respect to semantic representations, Fodor, Fodor and Garrett (1975:515) express this view within the framework of the following condition:

> Semantic representations are psychologically real in the sense that, given appropriate idealizations, understanding a sentence requires the recovery of its semantic representation.

As noted by Katz (1981:96-97), this means that semantic representations --- as well as other levels of representation in grammars --- have to figure in on-line computations in the comprehension of sentences.

Joan Bresnan (1978:3) and other 'cognitive scientists' who work within the framework of lexical-functional grammar have adopted a related position on psychological reality.[72] The essence of this position is that a grammar cannot be considered psychologically real if there is no evidence that it can be successfully

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'realized'. Thus, Bresnan states that

> '... we should be able to define for it [i.e., a realistic grammar] explicit realization mappings to psychological models of language use. These realizations should map distinct grammatical rules and units into distinct processing operations and informational units in such a way that different rule types of the grammar are associated with different processing functions.'

If the grammatical distinctions of a grammar were not 'realized' in this way in a psychological model, Bresnan would not be willing to say that the grammar 'represent[s] the knowledge of the language user in any psychologically interesting sense'. Plainly, whatever such a grammar described, it would not be a language.

The idea that grammars are not psychologically real unless they characterize (operations in) the process of speech processing is not held only by scholars who work within the framework of lexical-functional grammar. As noted by Alexander George (1989:99), this idea is shared by, amongst others, Kintsch (1974) and Soames (1985). The idea in question, moreover, has various other versions. Thus George (1989:99) distinguishes two use-oriented positions on the 'psychological significance' of grammars that are weaker than Bresnan's. The first

> '... demands only that grammars be explicitly represented in some internal system of mental representation that is causally effective during language use.'

The second

> '... does not require that the grammar be explicitly represented in order to be psychologically significant; it demands only that the information contained in the grammar be realized in a particular state that is causally influential in the operation of some processes responsible for the perception or production of speech.'

George does not furnish examples of scholars holding the former position; he considers Peacocke's (1986, 1989) view of psychological significance to instantiate the latter position.[73]

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This discussion of various positions on psychological reality/significance is more than a mere digression. Certain scholars take language to be whatever is described by psychologically real/significant grammars. Given the criteria for psychological reality/significance considered above, such scholars would maintain that language is something in(volved in) a 'parser' and/or a 'producer'. That is, these scholars would have a conception of language related to Fodor's.

But let us return to the main question, namely: How does Fodor's mentalistic conception of language differ from Chomsky's? Chomsky (1988b:15; 1989:2) seems to understand Fodor as contending that 'the language', 'the grammar' or 'the language faculty' is a parser:

> 'It is sometimes argued that the language (or "grammar") should be identified with the parser, taken as an input system in something like Jerry Fodor's sense.'

Chomsky, however, disagrees with such an identification. And he maintains that languages are not 'designed for parsability'. He (1988b:15) observes that

> 'With only a slight air of paradox, we may say that languages, as such, are not usable. If some expressions are not parsable, as is often the case, they are simply not used, and the language is no worse for that.'

Chomsky cites the well-known fact that so-called 'ungrammatical' or 'deviant' sentences are often 'quite readily parsable' and 'even perfectly intelligible'. In addition such sentences may be quite properly used in appropriate circumstances. Chomsky's example is 'the knife cut the meat with a sword', uttered as referring to Mack the Knife.

Chomsky, accordingly, is not agreeable to *identifying* 'the language (faculty)' with 'the parser'. His (1989:2) position is that there are input and output systems *associated with* the language faculty. He does not indicate, however, whether or not he takes these systems to have the properties assigned by Fodor to input systems. Nor does he indicate whether or

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not the language (faculty) is a central system in Fodor's terms. And, to my knowledge, Chomsky has not indicated in general terms whether or not Fodor's distinction between input systems and central systems provides a useful framework within which to clarify the nature of language as something mental.[74] But Chomsky has made it clear why he considers the conception of language as a parser to be flawed: this conception is incompatible with the existence of sentences that are grammatical but unparsable. This means that Chomsky judges this conception of language to be empirically inadequate.

The way in which Fodor seems to arrive at the idea that 'language' is an input system is problematic from a general conceptual point of view as well. Recall that in his list of putative input systems Fodor (1983:44, 47) includes one he calls 'language'. But when he (1983:44) begins to discuss the function of his putative input systems, he switches from 'language' to 'language mechanisms'. And when he comes to discuss the non-functional properties of these input systems, he (1983:44) executes yet a further switch, using 'language processing mechanisms' in place of 'language mechanisms'. Unfortunately, he has not found it necessary to consider the ontological consequences of the arbitrarily executed double switch from 'language' to 'language mechanisms' and from there to 'language processing mechanisms'. Through these switches (on-line) language processing has been assigned, in what seems to be an essentially nonreasoned way, the status of the empirical locus of a particular conception of language.[75] And, in the process, the status of the fundamental distinction between linguistic competence/knowledge of language and performance has been obscured. In portraying language as an input system, Fodor does not make clear what has happened to what he (1985a:149) has called elsewhere 'the internally represented grammar'.[76] This is particularly unfortunate, since both the idea that there is an internally represented grammar and the distinction between competence and performance form

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part of 'the Right View' of what linguistics is about. And, as we have seen above, Fodor has been a defender of this view.

Would I say that, by trafficking in the trinity of Transducer, Input System and Central Processor, Fodor turns himself into a False Functionalist Prophet? By no means, Dear Buyer. On my reading, such 'trafficking' amounts to little more than singing a slightly different spiritual song. Indeed, looked at from a dispassionate distance, the ontological differences between Fodor and Chomsky are seen to be of a slumbering sectarian sort, not representing any radical rift in the religion. And their conceptions of language have a great deal in common. Like the Chomskyan language faculty, Fodorian input systems are all in(side) the mind. In short, the conceptions of language of both Chomsky and Fodor are mentalistic to the core. Recall that, in more general ontological terms, Katz has contended that, moreover, both Chomsky and Fodor are sporting conceptualist caps. And, neither Chomsky nor Fodor holds a conception of language in terms of which language is a distinct entity: whereas Chomsky identifies language with knowledge of language, Fodor identifies it with mechanisms of language processing. And so Entrepreneurs in Exegesis, engaging in just a touch of exaggeration, have been able to claim that both Chomsky and Fodor hold a conception of language that is essentially empty.

Incidentally, while Chomsky and Fodor treat each other with tolerance in a spirit of believe and let believe, the way they deal with Rival Religionists is a different story. Consider, for instance, Fodor's (1983) chapter on 'Four Accounts of Mental Structure', on which Dennett (1984:286) comments as follows:

> *'The chapter is full of insights, but in the author's zeal to leave no view unbranded, it gives off the weird incense of religious war: The True Faith of the Neocartesian is enunciated at length, the Four-*

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> *Point Creed of the Associationist ("of either the classical mentalist or more recent learning-theoretic" persuasion) is formulated (on p. 27), and we are told, for instance, that "environmentalist biases provide a main motivation for the computational associationist's constructivism" (p. 35). Those who have little faith in refutation-by-classification ("But that's just a variety of ____ism!") will take this chapter's many lessons with a grain of salt.'*

And, of course, there are many examples of the meting out of Chomskyan Chastisement to those who have dared to break one of the n Commandments, as I will show you in a minute.

But let us first recall an incident involving a Bunch of Bad Boys and a batch of Biblical Bears. One day the Boys --- who were very bad indeed and, I suppose, a little bored into the bargain --- were overcome by a desire to poke fun at an elderly gentleman, none other than a famous prophet. And prophets, as everyone knows, have access to rather special systems of censure for dealing with abusive attention. So the Profaned Prophet faced the woods and summoned the Bears --- that were very Biblical indeed and, I suppose, a little bored into the bargain --- to set upon the flippant little devils and teach them a lesson or two. (No fewer than forty-two of them were that day torn to pieces.) Which goes to show that pulling a prophetic or patriarchal leg has always tended to be a high-risk business.

True enough, the bears that roam the Metaphysics Market are not feared for their jaws and claws. But the Market does harbour a species of Prophet Protectors who are no less deadly in the way they go for the joker's jugular. These are the Serious Scholars who take literally what was meant to be treated lightly, analyzing it in a way that is warranted to wipe the wit out. So, Dear Buyer, should you feel an inclination to believe that Chomskyan ontology is on a par with religion, let me urge you to study Neil Smith's (1989:198ff.) serious and censorious analysis of a humorous suggestion to similar effect.

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3.5 Waging War Over *The Word*

For nearly three decades, the Chomskyan approach to the study of language has been the target of vigorous and variegated criticisms.[77] Newmeyer (1986:8), in fact, has assigned Chomsky the status of 'the most attacked linguist in history'. Of the criticisms involved, a significant number have been directed at the beliefs making up the Chomskyan mentalistic conception of language.[78] These criticisms are meant to reveal various kinds of vitiating flaws in the Chomskyan view that language and languages are mental entities or, more technically, certain states of the module of mind called the 'language faculty'.

For expository purposes, these criticisms may be viewed as belonging to three types. Criticisms of the first type, in essence, say that language is not something mental but rather something else: something behavioural (e.g., a system of habits, a set of dispositions, an ability, etc.), something social (e.g., a practice, a set of conventions, etc.), something abstract (e.g., a Platonic entity), something cultural (e.g., a Popperian World Three object), and so on. These criticisms are essentially contrastive: their force depends on the merit of the alternatives with which the Chomskyan conception of language is being compared. This means that these criticisms have to be assessed in the context of a critical appraisal of the alternative conceptions of language involved in the comparison. And this is the way it is done in the present series of papers.[79] Expository considerations preclude the various alternative conceptions from being discussed in a section which is devoted to the alleged limitations of the Chomskyan conception of language. In the final paper of the series, however, I will attempt to compare systematically the respective merits of the Chomskyan conception of language and the major alternatives to it.

Criticisms of the second type are not intended to undermine

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the general idea that language is something mental. Rather, these criticisms question some specific ontological aspect of Chomskyan mentalism. For example, instances of this type of criticism question the existence of a separate language faculty or attack the way in which Chomsky characterizes the two significant states of this faculty. As a matter of fact, we considered an implicit criticism of this type above: Fodor's portrayal of language as a mental input system or parser. In par. 3.5.1 below we will look at various explicit instances of criticisms of this type.

Criticisms of the third type form very much of a mixed bag. Indeed, what they have in common is little more than a 'negative' property: their main thrust differs from that of both of the other types. A scholar could criticise the Chomskyan conception of language for being internally incoherent, for example, without necessarily thereby denying that language is something mental or necessarily thereby claiming that Chomsky has been mistaken in his characterization of a specific aspect of (one of the states) of the language faculty. In par. 3.5.2 below we will consider representative instances of the second type of criticisms of the Chomskyan conception of language.

Neither par. 3.5.1 nor par. 3.5.2 aims at giving an exhaustive survey of the types of criticisms being distinguished here. An attempt at exhaustive coverage would be misguided in any case: many criticisms of the Chomskyan conception of language are too obscure, uninformed, ill-directed or poorly argued to merit in-depth consideration.

3.5.1 Misprising The Module

Central to the Chomskyan conception of language, as we saw in par. 3.1.3 above, is the belief that people have a distinct language faculty, a mental "organ" with two states of special significance. The first or initial state is said to incorpo-

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rate the genetic language programme that represents the child's innate linguistic endowment. The second state, the attained or stable state, represents what Chomsky has characterized as '(unconscious) knowledge of a particular language'.

Let us then consider five of the classic criticisms of the language faculty or the specific states attributed to it by Chomsky. I first formulate these criticisms in a sort of 'archi'-form, and then show how they have been fleshed out by leading psychologists, philosophers or linguists.

1. The child's acquisition of his/her language can be accounted for by invoking general(ized) learning or ontogenetic mechanisms. Consequently, there is no need to assume the existence of a distinct language faculty that has an innate or genetically determined state.

This is the essence of a widely held objection to the Chomskyan conception of language. Let us consider three of the specific versions in which it has been put forward.

Putnam (1983:295) has contended that 'our cognitive repertoire ... *must* include *multipurpose* learning strategies, heuristics, and so forth'. And he (1983:296) has remarked, moreover, that

> 'Once it is granted that such multipurpose learning strategies exist, the claim that they *cannot* account for language becomes highly dubious ...'.

The existence of such multipurpose learning strategies would clearly make it unnecessary to postulate a distinct language faculty with a state that is genetically equipped for language acquisition.

Responding to Putnam, Chomsky (1983:320) has pointed out that Putnam has failed to give any hint of what 'the general mecha-

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nisms for learning' are. And Chomsky (1983:320) continues:

> 'To invoke an unspecified "general intelligence" or unspecified "multipurpose learning strategies" is no more illuminating than his reference, at one point, to divine intervention. We have no way of knowing what, if anything, Putnam has assumed. The point is worth stressing, since it illustrates a common fallacy in discussions of this sort. The use of words such as 'general intelligence' does not constitute an empirical assumption unless these notions are somehow clarified.'

This brings us to Piaget (1983:31), who has contended that Chomsky's 'hypothesis of innateness is not mandatory'. This is to say that

> '... the "innate fixed nucleus" would retain all its properties of a "fixed nucleus" if it were not innate but constituted the "necessary" result of the constructions of sensorimotor intelligence, which is prior to language and results from those joint organic and behavioral autoregulations that determine this epigenesis.'

That is, Piaget claims that what can be explained on the assumption of genetically encoded principles or fixed innate structures can be equally well explained as the 'necessary' result of constructions of sensorimotor intelligence.

Chomsky (1983:36) has rejected Piaget's criticism by pointing out that there are no substantive proposals involving 'constructions of sensorimotor intelligence' that offer any hope of accounting for the phenomena of language that demand explanation. And Chomsky does not see any initial plausibility to Piaget's suggestion either. That is, on Chomsky's (1980a: 207) reading

> '... the literature contains no evidence or argument to support this remarkable factual claim [about the relative explanatory power of constructivism], nor even any explanation of what sense it might have. Again, we see here an instance of the unfortunate but rather common insistence on dogmatic and unsupported factual doctrines in the human sciences.'

The 'phenomena of language' referred to by Chomsky above in-

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clude those associated with the so-called poverty of the stimulus. On his (1980b:42) view the stimulus (or evidence) for language acquisition is impoverished in the sense that it contains no evidence at all for certain properties and principles of (the grammars of) the languages acquired by children. An example, recently used by Chomsky (1986:7-8), may serve to clarify further the notion of 'poverty of the stimulus'. Consider the manner in which (1) and (2) are interpreted.

I wonder who [the men expected to see them]. (1)
[the men expected to see them] (2)

Although both (1) and (2) include the clause '[the men expected to see them]', the two instances of the pronoun them are interpreted quite differently. In (1), it may be interpreted as referring to the people denoted by the (antecedent) expression *the men*; in (2) it cannot be understood as referring to these people. (In (2) the referent of *them* is determined by what Chomsky calls 'the situational or discourse context'.) Chomsky claims that these facts about the interpretation of (1) and (2) 'are known without relevant experience to differentiate the cases' (1986:8). On Chomsky's view, that is, the stimulus is impoverished in the sense that it contains no evidence for the principle --- currently formulated within binding theory --- which the child has to 'acquire' in order to be able to interpret (1) and (2) correctly. What Chomsky would require, then, is for Piaget to give an explanation of how children would be able to acquire this principle in terms of 'constructions of sensorimotor intelligence'. In the absence of such an explanation Piaget's criticisms of the Chomskyan language faculty would lack the required power.[80]

Quine and many other scholars have expressed, in an empiricist spirit, the belief that language is acquired by means of one or more of such general mechanisms as conditioning, association, generalization, abstraction or induction. This empiricist approach holds, on Chomsky's (1965:58-59) interpretation, that

'... language is essentially an adventitious con-

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> struct, taught by "conditioning" (as would be maintained, for example, by Skinner or Quine) or by drill and explicit explanation (as was claimed by Wittgenstein), or built up by elementary "data-processing" procedures (as modern linguistics typically maintains), but, in any event, relatively independent in its structure of any innate mental faculties.'

The existence of general empiricist learning mechanisms such as those mentioned above would undermine Chomsky's grounds for postulating a distinct language faculty. Chomsky, however, has forcefully argued that empiricist approaches of language acquisition cannot account for the poverty of the stimulus. Like Putnam's 'multipurpose language strategies' approach and like Piaget's constructivist approach, that is, empiricist approaches cannot give an account of how children acquire abstract principles of language for which the stimulus contains no evidence at all.

2. The stimulus is not as poor as Chomskyans make it out to be. Consequently, there is no need to assume the existence of a language faculty with genetically encoded linguistic principles.

This criticism proceeds from the assumption that children acquire their language on the basis of the modified speech which mothers, fathers and caretakers use when talking to young children.[81] Referred to as 'motherese', 'caretaker speech' or 'baby talk', this speech is assumed, moreover, to be richer than the stimulus considered too impoverished by Chomskyans. If this were true --- as believed, for example, by Cromer (1980:16) --- the grounds for assuming a genetically based language faculty would be less than compelling. Chomsky (1980b:42), however, maintains that there is no evidence that the simplified data offered to children in the form of 'motherese' constitute the stimulus on the basis of which children actually acquire their language. And there is evidence, he claims, which shows that such simplified data or motherese could even make language harder for children to acquire and language acquisition more of a problem for linguists

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and psychologists to explain. By avoiding apparently complex constructions, motherese could impoverish the data-base for language acquisition even further. At the same time it would turn the acquisition of such constructions into a greater problem. In sum: the criticism under consideration is potentially powerful in regard to thrust, but it proceeds from factual assumptions that are too dubious.

3. Knowledge, by definition, cannot be innate. Consequently, the idea that there is a state of the language faculty that comprises innate knowledge of language has to be rejected. (Alternative formulation: So, the idea that some knowledge of language is innate has to be rejected.)

We have here the gist of a conceptual or philosophical criticism of Chomsky's epistemological characterization of the initial state of the language faculty. Chomsky (1980a:95) observes that it is standardly argued that, for a belief to qualify as knowledge, it must be justified. That is, a person holding this belief must have good reasons for being certain that what is believed is in fact the case. Innate knowledge, obviously, fails this condition, as has been contended by Edgley (1970:28ff.), for example.

Chomsky (1980a:96-99; 1980b:51), however, has rejected the idea that justification or grounding in reasons constitutes an appropriate basis for a condition for what have been considered paradigm cases of propositional knowledge. And he (1980b:51) argues that, if this condition is accepted, 'then central cases of what have been called "knowledge" will be excluded'. He maintains that

> 'Knowledge comes in many varieties, and for crucial elements of our knowledge the traditional empiricist paradigm [requiring grounding in good reasons] seems to me inadequate.'

Chomsky (1980a:95ff.) discusses in some detail two cases of knowledge that cast serious doubt on the above-mentioned

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empiricist condition. The first is a child's (unlearned) knowledge that an object in parabolic motion passing behind a screen will emerge at a specific point. The second is the child's (unlearned) knowledge that a linguistic expression has a certain property, for example the correct interpretation of the expressions presented as (1) and (2) above. Such cases of unlearned, unjustified knowledge diminish on Chomsky's view the force of the standard argument against innate knowledge.[82]

4. Knowledge of language must, by definition, be conscious knowledge. Consequently, the belief that there is a state of the language faculty that comprises unconscious/tacit/implicit knowledge must be rejected. (Alternative formulation: So, the belief that knowledge of language may be unconscious/tacit/implicit must be rejected.)

This is a standard objection to Chomsky's epistemologically phrased characterization of the attained, stable state of the language faculty. Recall that on Chomsky's view (1980a:69) the speaker also knows the rules of the mental grammar of his language, the principles governing the operation of the rules, and the 'innate schematism' of the language. But, he contends, the speaker cannot become aware by introspection of what he knows specifically of these rules, principles and 'innate schematism'. These are 'inaccessible to consciousness'. Conscious knowledge, by contrast, is accessible, non-implicit knowledge.

To avoid terminological confusion, Chomsky (1980a:70) introduced the term 'cognizing' to refer to tacit knowledge, reserving the term 'knowing' for conscious knowledge: 'Thus, "cognizing" is tacit or implicit knowledge ... [and] ... has the structure and character of knowledge, but may be and in the interesting cases is inaccessible to consciousness.' Cognizing, thus, appears to Chomsky (1986:269) 'to have all

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the properties of knowledge in the ordinary sense of the term, apart, perhaps, from accessibility to consciousness'. And he would like to say that 'cognization' is 'unconscious or tacit or implicit knowledge'.

Returning to the criticism stated as 4. above: it has been contended by various scholars that one cannot attribute knowledge --- specifically if it is to be embodied in a system of rules --- to a person unless this knowledge is accessible to consciousness. Searle (1976), for example, has claimed that

> 'It is a general characteristic of attributions of unconscious mental states that the attribution presupposes that the state can become conscious ...'

And Davis (1976:78) has stated in similar vein that

> '... a necessary condition for someone to know the rules which govern some activity is that he must be able to say or show us what the rules are ...'

The gist of the criticism in question, then, is that the belief that knowledge of language (as embodied in a system of rules) is unconscious knowledge contains an internal contradiction.[83] If this criticism were correct, Chomsky's epistemologically phrased characterization of the attained state of the language faculty would indeed be seriously flawed.

Chomsky (1980a:241-244) has reacted to the criticism in question by attacking a general principle on which it is based: the principle of accessibility. On his (1980a:241) formulation, this principle expresses the belief that 'the contents of mind are in principle open to reflection and careful thought if only the barriers of dogma, superstition, or psychic disorder are removed'. Chomsky (1980a:244) argues, however, that there is no reason to suppose that we have any access to the principles that enter into our knowledge and use of language. In arguing this, he aligns himself with such scholars as Vico, Joseph Priestly, John Stuart Mill, and C.G. Jung, all of

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whom insisted that the basic principles of the psyche are inaccessible to introspection.

In keeping with his rejection of the principle of accessibility, Chomsky (1980a:131) observes that Searle offers no argument at all for the position that knowledge of language cannot be tacit. On Chomsky's view, Searle merely stipulates that mental states must be accessible to consciousness. And, Searle claims without argument that 'otherwise' attribution of mental states loses 'much of its explanatory power'. Chomsky argues that the latter statement is 'simply false'. He concludes, moreover, that Searle's condition that a person must be aware of the rules that enter into his behaviour 'remains sheer dogmatism, supported by no kind of argument'.

Observe that, within the Chomskyan framework, three claims must be clearly distinguished from one another: (a) the claim that knowledge of language is unconscious knowledge, (b) the claim that knowledge of language is embodied in a system of rules, and (c) the claim that the actual use of language constitutes a case of rule-following. From an ontological point of view, the first claim is fundamental: accordingly, there is no contradiction or inconsistency in doing what Chomsky did when he significantly changed his position in regard to the second and third claims but retained, unchanged, his position in regard to the first claim. As a result of the second conceptual shift in Chomskyan linguistics, rules no longer have a substantive status within the Chomskyan conception of language. Rather, rules are now taken by Chomsky (1988b:17-18) to be epiphenomena, principles and parameters being the basic structural components of language(s).

The claims represented as (b) and (c) above were also criticized on various counts, especially in the seventies and early eighties. Though some of the resulting criticisms were interesting, we won't consider them here: they do not apply in any straightforward way to the principles-and-parameters conception of language currently held by Chomsky.[84] It is not clear pre-

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cisely how Chomsky sees the 'mechanics' of language use in terms of this conception of language, a point that we will return to in par. 3.5.2 below.[85]

5. Linguistic intuition yields insufficiently firm evidence about (the knowledge of language that constitutes) the attained, final state of the language faculty. Consequently, there is no source yielding sufficiently reliable evidence about the form and contents of the attained, final state of this faculty.

The alleged shortcomings of linguistic intuition as a source of evidence for claims expressed by grammars about the linguistic competence of speaker-hearers formed a topic of prolonged and often heated debate in particularly the sixties and seventies.[86] Rephrased in the contemporary idiom, the gist of the criticism would be that, because of problems with assessing the relevance and reliability of individual linguistic intuitions, Chomskyan claims about the character and contents of the I-language cannot be properly tested and justified. If this were true, the status of the I-language would be in jeopardy. There would be little point in having a linguistic ontology that provided for entities the claims about which were, essentially, arbitrary. This would make the I-language an entity not amenable to normal scientific inquiry.

Before considering the merit of the criticism in question, let us get a little clearer about the nature of linguistic intuition and the judgements based on it. Native speakers of a language are claimed to arrive at linguistic judgements by means of two 'methods' or 'processes': intuition and introspection. Pateman (1987:135) has recently characterized intuition as a process that 'gives us causally related indexical or symptomatic evidence for the character of underlying psycholinguistic (or, more generally, psychological) processes'. Accordingly, he takes individual intuitions to be 'reports of appearances' that provide 'causal evidence' of a subjective sort about our minds. Introspection represents to Chomsky

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(1980a:140ff.) the 'reflection', 'analysis' or 'careful thought' to which 'accessible' elements of the contents of the mind may be subjected.

Pateman (1987:135), moreover, has made an interesting attempt to establish a link between the distinctions *intuition vs introspection* and *I-language vs E-language*:

> 'In Chomsky's terms (Chomsky 1986, ch. 2), intuition provides evidence for the character of I-languages (internalized languages), whereas introspective judgement --- exercised, for example, when a foreigner asks me whether you can say P in English --- provides evidence for the character of E-languages (externalized languages).'

Being products of the causal efficacy of the I-language, linguistic intuitions are thus taken to provide a 'window' on the I-language. The form of the argument is a familiar one: the inference of 'hidden' properties of a causal agent from evident properties of its results or products.

It has been argued, however, that given some linguistic judgement by a native speaker --- e.g. that *Colorless green ideas sleep furiously* constitutes a bizarre utterance --- there is no principled way to determine whether this judgement bears on the I-language English rather than on some other cognitive or perceptual mechanism. Nor, the argument proceeds, is there an adequate way of determining the correctness of such judgements.[87]

Suppose that this argument were sound.[88] It would then still not follow that there is no source of sufficiently firm evidence about the attained state of the Chomskyan language faculty. This would follow only if linguistic intuition were the sole source of evidence about this state of the language faculty. But, Chomsky (e.g., 1986:36-57) has argued, there in fact are a variety of sources of evidence about both states of the language faculty:

> 'In principle, evidence concerning the character of the I-language and initial state could come from many different sources apart from judgments concerning the form and meaning of expressions: perceptual experiments, the study of acquisition and

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> deficit or of partially invented languages such as creoles (n. 25), or of literary usage or language change, neurology, biochemistry, and so on.'

And, Chomsky contends, linguists cannot know in advance just how informative any one of such various kinds of evidence will be in regard to any one of the various significant states of the language faculty. Moreover, he expects that a broader range of evidence will enable linguists to identify in just what respects 'informant judgements' (as he calls them) are useful or unreliable and why this is so. A broader range of evidence, on his view, will also compensate for errors introduced under the working assumption that informant judgements give linguists 'direct evidence' about the structure of the I-language.

Given the above considerations, the contention that (the attained state of) the language faculty is ontologically an inadmissible entity in not being amenable to normal scientific investigation is a rather less than compelling criticism.

You now have a better idea what Dennett was talking about when he referred to 'religious war'? Indeed, Dear Buyer, our Moses is known as a man inclined to mete out rough retribution. Like Piaget and Searle, many others have been burnt by his Brimstone Brand of rhetoric. Take the case of Inhelder, Sinclair and Bovet (1974:10), the Piaget Parish Priests who had the impertinence to proclaim that Chomskyan nativism 'does not help to solve any problem; all it does is to transfer the question from the psychological to the biological level by formulating it in terms of biological development'.

The Mass Mentalist countered with a Searing Sermon, asserting for instance that no one would take such an argument seriously if Inhelder and her Partners in Pontification advanced it in the case of physical development, say that of the general structure of binocular vision. And he (1980a:209) concluded

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his condemnation with the following clincher:

> *'... the arguments they put forth are in no way empirical but rather purely a priori. All of this again simply constitutes another chapter in the history of dogmatism.'*

The pungency that pricks our nostrils here, Buyer and Blue, is no waft of the 'weird incense' detected by Dennett; it marks an altogether starker, more sulphuric, stuff.

3.5.2 Mocking Moses

We come, next, to those criticisms of the Chomskyan conception of language that are not intended primarily to undermine the idea that people have a distinct language faculty or "organ". From this mixed bag we select four typical instances for closer inspection.

1. The Chomskyan conception of language does not provide an adequate basis for accounting for certain logical relations between sentences. Consequently, this conception places 'crippling limitations on the scope of linguistics.'

This criticism, which has been offered by Katz and Postal (1989: 8ff.), may be illustrated with reference to pairs of sentences such as the following:

John killed Bill.	(3)
Bill is dead.	(4)

Like Chomsky (1988c:8), Katz and Postal (1989:4) consider (3) and (4) to be related in terms of entailment. That is, if (3) is true, then (4) is necessarily true 'in virtue of natural language'. In other words, (3) necessarily entails (4), the necessity being of a logical kind. And Katz and Postal (1989: 4, 22) consider this to be an 'actual fact', which 'uncontro-

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versially form[s] part of the domain of NLs' [natural languages] and, accordingly, falls within the (explanatory) 'scope of linguistics'.

But, Katz and Postal argue, this fact cannot be accounted for in terms of the Chomskyan mentalistic conception of language. Though the specifics of their argument are complex, its outlines are relatively simple. Katz and Postal (1989:9ff.) argue that, to make possible an account of the fact in question, the *logical* law of entailment must be enabled to 'apply' (or 'refer') to the senses of the sentences (3) and (4). But in terms of the Chomskyan conception of language, sentences, their structures and their senses are *psychological* objects. Katz and Postal, moreover, assume that the objects to which logical laws apply and those laws themselves can hardly belong to different ontological levels.

Against this background, Katz and Postal (1989:10) construe the following 'paradox':

> 'If senses are parts of the grammatical structure of NL sentences, and if linguistics both deals with the grammatical structure of sentences and is psychological, then senses are psychological. But if senses are psychological and the laws of logic refer to them, then these laws are also psychological. Consequently, logic is psychological, contradicting the accepted view in philosophy that logic is nonpsychological.'

Katz and Postal (1989:10) see three ways out of this 'paradox', only one of which they claim to be open to Chomskyans who wish to retain the view that language is something psychological: that of denying both that logic applies to natural language and that natural language sentences have any grammatical properties of significance for logic. On their view, this way out of the 'paradox' renders incomprehensible the fact that logical reasoning is defined on the meanings of natural language sentences. Moreover, they consider it to 'fly in the face' of such 'evident logically relevant' features of natural language semantics as quantifier scope, analytical entailment and contradiction. Giving up the assumption that there is an

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overlap between the senses of natural language sentences and logical objects would mean to them a retreat to the 1957 position that linguistic theory does not incorporate a semantic theory. And they (1989:10) consider

> 'This option [to be] unattractive and unmotivated because it sacrifices some of the subject matter of linguistics and all of its logical relevance simply to save an ideology [i.e., that language is something psychological].'

In short: Katz and Postal's criticism boils down to the claim that natural language has logical properties that cannot be accounted for on the basis of the belief that language is something psychological.[89]

How forceful, then, is this criticism by Katz and Postal of the Chomskyan conception of language? Though of an interesting sort, it is less than compelling, the problem being that it turns on too many controversial assumptions. These include the following:

1. that the necessity involved in the relation between (3) and (4) is indeed of a logical sort;
2. that, to account for logical properties of natural language sentences, the laws of logic must 'apply' directly to the senses or grammatical structures of such sentences;
3. that the 'subject matter' or 'scope' of a field can be delimited in an a priori way.

Let us consider the third assumption in some detail in order to see what it is that makes it controversial.[90]

The question is whether 'logical facts' of the sort in question do indeed 'uncontroversially form part of the domain of NLs' and, by definition, fall within the 'scope of linguistics', necessarily constituting part of its 'subject matter'.[91] There

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are various problems with Katz and Postal's affirmative answer to this question.

The first is of an exegetic sort. They (1989:19) contend that Chomsky agreed that the 'logical fact' in question belongs to 'a core of facts defining grammatical study'. In support of this contention they quote the following remark by Chomsky (1986:36):

> 'In actual practice, linguistics as a discipline is characterized by attention to certain kinds of evidence that are for the moment relatively accessible and informative: largely, the judgments of native speakers.'

This remark by Chomsky seems to me to be saying something about the practice of linguistic inquiry: it gives Chomsky's view of how linguistic inquiry is actually practised, not of how he would *define* grammatical study in principle in an a priori way. Moreover, in the context from which Katz and Postal have taken this remark, Chomsky does not specifically mention 'logical facts' of the kind in question as a kind of evidence to which linguistics gives attention.

There are similar problems of exegesis with Katz and Postal's treatment of a second remark by Chomsky (1986:37):

> 'If a theory of language failed to account for these judgments, it would plainly be a failure; **we might** [emphasis added by Katz and Postal], in fact, conclude that it is not a theory of language, but rather of something else.'

Katz and Postal (1989:20) express their 'basic accord' with this remark but add that 'the emphasized hedge should be replaced by "we would have to".' But the need for suggesting this replacement clearly shows that the remark quoted gives no support to the claim that Chomsky too considers 'logical facts' to form uncontroversially part of the core of facts that *define* grammatical study.

In the passage from which Katz and Postal quote the remarks represented above, Chomsky (1986:37) adopts a rather different

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position on the delimitation of the scope or 'realm' of a field of inquiry:

> 'As in the case of any inquiry into some aspect of the physical world, there is no way of delimiting the kinds of evidence that might, in principle, prove relevant.'

And:

> 'But we cannot know in advance just how informative various kinds of evidence will prove to be with regard to the language faculty and its manifestations, and we should anticipate that a broader range of evidence and deeper understanding will enable us to identify in just what respects informant judgments are useful or unreliable and why, and to compensate for the errors introduced under the tentative working assumption, which is indispensable, for today, and does provide us with rich and significant information.'

The latter remark by Chomsky, interestingly, follows immediately on the second one quoted by Katz and Postal.

It seems clear then that Chomsky would not agree with Katz and Postal's (1989:2) claim that it is possible to specify in an a priori way 'a collection of facts which uncontroversially form part of the domain of NLs'. Nor, it seems, would he agree with the claim that the inability of a conception of language to provide a basis for accounting for an arbitrary subset of such a collection of facts necessarily constitutes a serious flaw.

This means that Chomsky would resist what Fodor (1985b:147-148) has called 'the Wrong View' of linguistics. On Fodor's characterization the Wrong View maintains

> '(a) that there is a specifiable data base for linguistic theories; (b) that this data base can be specified antecedently to theory construction; (c) that the empirical content of linguistic theories consists of what they have to say about the data base; and (d) that the data base for linguistics consists of the corpora of utterances that informants produce (or, in some versions, would produce given specified forms of prompting).'

Fodor suggests that if (d) were modified so as to read 'the

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data base for linguistics consists of the intuitions (about grammaticality, ambiguity and so on) that informants produce or would produce', then one gets the view of linguistic inquiry common to Stich (1985) and the later Katz (1977).

Fodor (1985b:150-151) proceeds to argue that the view that the scientist can stipulate what data are to count as relevant to the (dis)confirmation of his theories is simply not plausible, given the way that real science is conducted. He takes this to be a point of utmost methodological seriousness since it implies that 'either the Wrong View misdescribes linguistics or what linguists do is somehow an exception to the methodological principles that other sciences endorse'. And Fodor (1985b:151) goes on to make the stronger point that:

> 'Any science is under the obligation to explain why *what it takes to be data* relevant to the confirmation of its theories *are* data relevant to the confirmation of its theories.'

This condition, Fodor (1985b:152) points out, can be met on the view that language is something psychological: intuitions can be used to confirm grammars because grammars are internally represented and actually contribute to the etiology of the speaker/hearer's intuitive judgements. The Wrong View, Fodor (1985:152) notes, can say only 'We do it because we have always done it', or, 'We do it by stipulation'.[92]

It seems to me, therefore, that Katz and Postal have not shown that 'logical facts' such as the ones in question 'uncontroversially' constitute part of the subject matter of linguistics. And even if we accepted for argument's sake that they have, this would still not necessarily reflect negatively on the Chomskyan conception of language. To see why not, note that Chomsky has drawn a distinction between *linguistic theory* and *(the field of) linguistics*. Thus, he (1965:3) introduced the idealizations of 'an ideal speaker-listener' and 'a completely homogeneous speech community' by stating that 'Linguistic theory' is concerned primarily with an ideal speaker-listener, in a completely homogeneous speech community ...'. 'Linguistic theory', in this statement, refers to theories of grammar, i.e. to theories of competence or theories of knowl-

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edge of grammar. 'Linguistic theory' in this statement is not being used as a synonym for 'the field of linguistics'. Thus, Newmeyer (1983:75) observes that

> 'the opening words of the paragraph are "Linguistic theory is concerned", not "The field of linguistics is concerned". Chomsky has consistently used the term "linguistic theory" to refer to theories of grammar (i.e., theories of competence) rather than to refer to *any* work (theoretical or nontheoretical) involving language study.'

Invoking the distinction in question, Chomsky (1980a:25) has argued, for example, that certain kinds of data about linguistic variation in real speech communities are irrelevant to the concerns of linguistic theory as a theory about the language faculty.[93] In similar vein, Chomsky would be able to argue that, even if the 'logical facts' in question did fall within the scope of linguistics, they were nevertheless irrelevant to a theory about the nature and states of the language faculty.

In its present form, then, Katz and Postal's criticism of 1. cannot be taken to reveal a real flaw in the Chomskyan conception of language.

2. The Chomskyan conception of language is 'plagued by' several distinct 'contradictions'. Consequently, it is internally inconsistent.

This is the core of a second criticism levelled by Katz and Postal (1989:57) at the Chomskyan conception of language. They (1989:44ff.) diagnose four such 'contradictions', which I will briefly outline below. Katz and Postal base their diagnosis of these 'contradictions' on what they consider to be conflicting statements in relatively recent writings of Chomsky's.

First 'Contradiction': Being psycho-biological, all grammatical and grammatically-determined properties are contingent, but some are necessary. Katz and Postal (1989:44-45) cite various formulations of Chomsky's indicating to them that he 'claims

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that NL [i.e., natural language] is a feature of *contingent* mind/brains'.[94] They (1989:45-46) subsequently quote a number of statements by Chomsky to the effect that there exist some (natural language) sentences that are analytic, i.e. sentences which, purely by virtue of the meanings they express, determine truths which are necessary.[95] Being necessarily true, Katz and Postal argue, is not a contingent property of sentences. The 'paradox' that they construe in this regard accordingly has the same basis as the criticism represented as 1. above.

Second 'Contradiction': Grammars (in the sense of I-languages) are physical objects, and hence have spatial location, but are also sets (in the sense of generative grammars), and hence lack spatial location. Katz and Postal (1989:44-45) again present various quotations from Chomsky's writings to show that he takes an I-language to be a 'definite real-world object, situated in space and time' and that this space-time location is in the mind.[96] To construe the 'paradox' under consideration, they claim that Chomsky takes a generative grammar to be by definition a set of strings of symbols. Moreover they quote a passage from Chomsky (1986:34) in which he says that 'sets are not in the mind/brain'. This indicates to Katz and Postal (1989:49) 'a contradiction' in Chomsky's position, which consists in equivocating over whether I-languages are abstract, mathematical objects or whether they are physical objects. In the former case I-languages would be analogs to computer programs; in the latter case I-languages would be analogs of physical states of computers which instantiate programs.[97]

Third 'Contradiction': Sentential objects exist in minds/brains, hence are finite in number, but are also infinite in number. Katz and Postal (1989:53-54) contend that certain remarks of Chomsky's indicate that on his view there are infinitely many I-(language) sentences.[98] But his (1980a:221) belief that 'the grammar itself is finite, represented in a

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finite brain' limits the I-sentences to a finite number. This is so because on Katz and Postal's (1989:53) construal 'an infinite number of I-sentences includes sentences too large to be "represented in the brain".'

Fourth 'Contradiction': Sentences are internal (mental) objects but also are external (acoustic) objects. Katz and Postal (1989:48) quote remarks by Chomsky which, they hold, indicate that he operates with a notion of 'sentences' in terms of which sentences exist in mental representations.[99] To construe the 'paradox' in questions, they subsequently quote a remark by Chomsky that portrays sentences as physical entities.[100] Whereas entities that form part of mental representations are internal, entities portrayed as physical events are external.

Chomsky's remarkable skill in dissolving what seem like contradictions in his work and his amazing ability to deflate what seem like crippling criticisms have been commented on by many.[101] So it would not be prudent to consider the four 'contradictions' outlined above to be real contradictions before having seen Chomsky's reaction to them. And it would be most unwise to accept at this stage Katz and Postal's (1989:55) claim that

> 'These contradictions can be eliminated but at a cost almost as damaging as the contradictions themselves.'

What Katz and Postal (1989:57) have done, however, is to furnish substantial evidence for the contention that there are tensions within the Chomskyan conception of language. These tensions, it has been claimed, are caused by the fact that Chomsky's mentalistic conception of language retains elements of a 'formalistic' E-language conception of language that he held in an earlier phase of his thinking.[102] Many years ago, Steinberg (1975:220-221) put the point as follows:

> 'His original conception regarding the nature of the relationship between a theoretical grammar and a speaker was actually a formalistic, not a mentalistic one. During this formalistic phase, Chomsky did

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> not regard the rules of his theoretical grammar as representing knowledge held by speakers. Only certain aspects of the output of the theoretical grammar were regarded as psychologically significant. This formalistic type of theory was held by Chomsky until about 1959, at which time his views began to change.'

In Katz and Postal's (1989:21) phraseology, the tensions under consideration have been created by 'two separate agendas' in Chomsky's thinking. The first, nonmentalistic, 'agenda' they take to underlie Chomsky's (1986:36) remark that linguistics is characterized in actual practice by attention to certain kinds of evidence: largely the judgements of native speakers. The second, mentalistic, 'agenda' underlies Chomsky's (1986:3) position that generative grammar is concerned with those aspects of form and meaning that are determined by the language faculty, taken to be a particular component of the human mind. Chomsky (1986:28-29), however, has emphatically rejected the allegation that he ever held a nonmentalistic, E-language, conception of language. The evidence adduced by Chomsky in support of this response includes historical considerations of an accidental sort that are hard for relative outsiders to appraise thirty years later.[103]

3. It is not clear how I-language figures in language production and perception. Consequently, the Chomskyan conception of language is incomplete from an ontological point of view.

Prior to the second conceptual shift, as we have seen, the notion of 'rules' was central to Chomsky's thinking about language: coming to know a language (or, rather, a grammar) was seen as the acquisition of a rule system, and using a language was viewed as the following of rules. Subsequent to the second conceptual shift, however, knowledge of language is taken to be knowledge of a system of principles with parameters fixed. And acquisition of language is insightfully characterized as the fixing of these parameters. But Chomsky has not yet provided a clear account of what the use of language would entail

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if it were no longer considered to be a matter of rule-following. To put it in positive terms: Chomsky has still to spell out how language production and perception can be conceived of in terms of principles and parameters. He (1986:151, 243) has noted that the second conceptual shift suggests that questions of the use of language merit 'substantial rethinking'. And he has speculated in general terms on the possibility that parsers could be based on lexical properties and principles of universal grammar that 'determine structures from them'. But, as for specifics, Chomsky has to date left unclear what language use would entail if it had to be characterized in terms of his principles-and-parameters conception of language.

4. In terms of the Chomskyan conception of language, there is no difference of substance between language and knowledge of language. Consequently, this conception of language is either empty or provides for a spurious distinction.

As we noted in par. 3.1.4 above, Chomsky seems to draw a distinction between 'language' and 'knowledge of language'. But it is not al all clear that this is more than a terminological distinction. That is, from certain remarks made by Chomsky the inference may be drawn that he does not conceive of language as something that is substantively distinct from knowledge of language. And from other remarks, indicating that this distinction may involve more than terminology, it is not clear what substance it has. These and other unclear aspects of the Chomskyan distinction between language and knowledge of language were discussed in some detail in par. 3.1.4 above.

Katz and Postal (1989:11-13) have a more negative view of this aspect of the Chomskyan conception of language. They do give Chomsky credit for diagnosing a fatal flaw in American structuralism: the failure to distinguish between knowledge of a natural language (i.e., competence) and the exercise of that knowledge (i.e., performance). But they (1989:11-12) proceed

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to contend that

> 'Conceptualism's mistake [where conceptualism includes the Chomskyan conception of language] is the parallel failure to draw the further distinction between knowledge of an NL [i.e., natural language] and the object it is knowledge of, the NL itself.'

Without this distinction, they argue, everything about a natural language becomes a contingent matter of human psychology. This, they believe, leaves no place for 'necessary connection in grammatical structure', for example. A conception of language that fails to distinguish between knowledge of natural language and the natural language which is known makes it impossible to specify the grammatical structures of sentences in a way that enables these to play a role in logic. Consequently, the laws of logic cannot apply to these structures to account for 'logical facts' such as those about the logical necessity of the relationship holding between *John killed Bill* and *Bill is dead*.

As we saw above, it cannot be stipulated antecedently that the Chomskyan conception of language has to provide the kind of account of 'logical facts' that Katz and Postal have in mind. If there were no other kinds of facts to be captured by drawing the distinction between language and knowledge of language, the factual basis for criticizing Chomsky for not drawing this distinction is rather shaky. What is the point, it may be asked, of drawing distinctions that have no factual import? On the other hand, there must be something conceptually amiss with a theoretical conception that implicitly provides for a spurious distinction.

Given that religion is to bring one happiness, how happy should one be about the Chomskyan (non)distinction between language and knowledge of language? Could we possibly approach a Practising Prophet for a pronouncement on how to feel or not to feel about the matter? Well, Dear Buyer, we can always turn to

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the Complete Cognitivist and Charismatic Conceptualist --- the man who is so much more than a mere missionary marketing modularity. Indeed, while doing sterling stunt work as a stand-in for Overworked Oracles, he has established himself as a constant source of quips about the quintessence of the human condition.

Thus one day, in the style of his famous forebear Jerra Truth-Star, spake the Substitute Sage --- with wonted wisdom, nor wanting in wit --- on the relations which obtain between happiness and, mirabile dictu, the drawing of distinctions:

> *'If only we made all the distinctions that there are, then we should all be as happy as kings. (Kings are notoriously very happy.)' (Fodor 1985b:1)*

From this jewel of Jerra's, how are we to derive the answer we are after? Well, Dear Buyer, this is where Nonsequiturian Nomology comes into play. Applied to the precious profundity displayed above, the Law of Excluding the Excessive enables us to make the impeccable inference that, if kings made even one distinction too many, they would be less than very happy. Assuming further as axiomatic that everybody would like to share in the notoriety of kings, the Second Law of Liturgical Licence sanctions the inference that nobody (in pursuit of blue-blooded bliss) should want to draw the Chomskyan nondistinction between language and knowledge of language.

The latter inference, I agree, Dear Buyer, won't do much to alleviate Ontological Angst induced by the question 'What is language --- as opposed to knowledge of language --- in essence?'. And maybe you are justified in wondering whether, with the kind of gems he generates, our oracle is such a Merry Magus after all. Perhaps his philosophizing is, au fond, in the fashion made famous by another forebear, Jerra Miah the Melancholy, just a few thousand years ago.

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3.6 Saying 'Selah'

Tired of being treated to a Moses-Managed Metaphysics, Weary-seeming Window-Shopper? And well you may be! But before we say 'Selah' and take a break, the story that language is part of a soul of sorts may fittingly be sealed with seven sayings. Each of these is meant to capture a general lesson that you and our Fast-fading Blue and, indeed, I myself may learn from the goings-on in the Sacramental Section of The Market.

1. *On the essence of language: it remains a jealously guarded secret.*
2. *On knowledge of language: it has to be based in the body.*
3. *On constructing a conception of language: breathe new life into buried beliefs.*
4. *On appraising a conception of language: test it for internal tensions.*
5. *On deconstructing 'language': it does not pay to treat it all the way like an ontological onion.*
6. *On the scope of a conception of language: beware of the omnipotent octopus.*
7. *On crusading against conceptualism: 'all they that take the sword shall perish with the sword'.*

The first four lessons have been properly preached, you would agree, Dear Buyer. It could be useful, however, to look a little closer at ontological onions, omnipotent octopuses and sticky ends.

Lesson number five, then, is about the Chomskyan procedure for penetrating to the essence of language. Here are its steps. Start by peeling away the outermost layer comprising such 'common-sensical' crudities as sociopolitical beliefs: it is conceptually so coarse as to be good for next to nothing. Next remove the E-language layer of externalist assumptions as unfit

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for conceptual consumption too. In this way, you get to the deeper, more delicate layer of I-language/knowledge of language which is tastily internalist, an intrinsic ingredient of a conceptualist linguistic ontology. But having committed yourself to peeling as the proper procedure for penetrating to the core of language, you are left with no option but to carry on. So, finally, remove the innermost layer of I-language/knowledge of language. To your dismay, where you expected to find language, there is nothing. Language, like an ordinary onion, is to be found in what one cuts away to get to its contentless core. So, perpetual peeling away at 'language' won't purchase the conceptualist the happiness he is after.

In defence of ontological onions, however, I must say that they are not nearly as dangerous as the octopuses of lesson number six. Professionals in the business of constructing conceptions can't stand a reality that is chaotically cut up into a diversity of disconnected domains, each of which is reigned over by a distinct conception in splendid isolation. Understanding reality ultimately requires conceptual unification, or so it is believed. So a conception of language is standardly required to embrace in its explanatory scope a wide range of phenomena or 'facts' that all seem to manifest aspects of language. But, pushed to its limits, the observance of this requirement could turn a conception of language into an ontological octopus with arms enveloping too many of the phenomena that are common-sensically (or antecedently) considered 'linguistic'. The price for ontological omnipotence is explanatory emptiness, as the recent history of linguistics has shown.[104] *And being obsessed with this brand of omnipotence may, alas, be conducive to the cobbling together of a conception in terms of which language is a metaphysical monster imitating in regard to internal incongruity a particular Biblical Beast: the one which, though it had seven heads, ten horns, the feet of a bear and the mouth of a lion, still contrived to look like a leopard.*

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Which brings me to the topic of lesson number seven, the fate of Militant Metaphysicists who have challenged Chomsky at conceptual combat. It truly is a tale in the Old Testament tradition of death and doom, gore and gloom. That is, as far as the fortunes of Chomsky's Ontological Opponents are concerned. Not wanting to upset your emotional equilibrium with particulars of punctured personalities and ruptured reputations, I will simply ask Howard Gardner (1985:214) to sum it all up in the driest of manners:

> *'Chomsky has rarely been defeated in argument on his own ground ....'*[105]

So what have I really been saying, then? That the Chomskyan conception of language is best left unbought on the shelf? No, not at all, Dear Buyer. For one thing, The Book of Good and Bad Buys is simply not yet ready for final balancing. Before we are going to be able to attempt any Act of Apocalyptic Appraisal, we will have to inspect several more conceptions of language which are for sale on The Market. So, rather than consign the Chomskyan conception to the flames right now, let us put it on ice. It will keep while we complete the preparations for our Eschatological Exercise, which will call for us to deal with the last things and with the things that last. Selah.

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NOTES

1. Cf. Katz and Postal 1989:5. Note that as it is used in the expression 'a/the conception of language', the term ' language ' standardly means both 'a language' or 'languages' and 'language in general'.

2. Cf. also Chomsky 1987a:29ff., 1987b:37-38, 1987c:1, 1989: 10 for this distinction. Chomsky does not distinguish explicitly between 'a notion of language', 'a concept of language' and 'a conception of language'. When referring to the Chomskyan conception of language, I will occasionally use the terms 'concept' and 'notion' as loose synonyms for 'conception'. Nothing of substance hinges on this terminological variation. A further point of terminology: I use the expression '*Chomskyan* conception' rather than '*Chomsky's* conception' in order to indicate that this conception of language does not represent an idiosyncratic set of beliefs held by Chomsky alone. For further discussion of the distinction *Chomskyan vs Chomsky's* cf. Botha 1989a:5-6.

3. Chomsky notes that this formulation has been attributed to Max Weinreich.

4. Cf. Botha 1989b for a discussion of the Bloomfieldian conception of language.

5. Cf., e.g., Chomsky 1982:18-19, 1986:25ff., 1987a:33-37, 1987b:38-47, 1987c:2-4, 1988b:5-7, 1990:143.

6. Chomsky (1986:28) has in mind here a common-sense notion of language in terms of which language is not construed in terms of the sociopolitical and normative factors considered in par. 3.1.1 above.

7. Chomsky (1987a:35) has problems with the formal properties

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of sets too. He appears, however, to assign less weight to these problems than to those that underlie his two major criticisms of concepts of E-language.

8. Thus, Chomsky notes, the physicists' concepts of 'energy' and 'mass' are not those of 'ordinary usage'.

9. Chomsky (1987a:36, 1987b:48ff., 1987c:5-6, 1988d:21, 1989:12) standardly characterizes 'I-language' in such 'epistemological' terms. Note that he alterates between the expressions 'mind' and 'mind/brain'. We will return to this point in par. 3.1.5 below.

10. Chomsky (1981:34-35) also provides for 'intermediate states', about which he does not say much.

11. Cf. also Chomsky 1980a:65, 187, 1981:34-35, 1986:25-6 for a characterization of the initial state of the language faculty.

12. Chomsky (1981:34-35) has also called the initial state of the language faculty 'universal grammar (UG)' or 'the language acquisition device'. For further discussion of this state cf. Botha 1989a:25ff..

13. The principle of Subjacency is an example of a linguistic universal that attempts to capture a biologically necessary property of human language. This principle may be roughly formulated as follows: Nothing can be removed from more than a single binding category.

14. The statement 'A language must have sentences and words' expresses what might, according to Chomsky, be a logically or conceptually necessary property of language. Chomskyan linguistic universals are not so-called cross-linguistic generalizations either. The latter express statistical tendencies of a typological sort. Thus, Greenbergian cross-linguistic generalizations such as the

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following do not constitute linguistic universals in the Chomskyan sense: 'In declarative sentences with nominal subject and object, the dominant order is almost always one in which the subject precedes the object; In languages with prepositions, the genitive almost always follows the governor noun, while in languages with postpositions it almost always precedes.' For a more detailed discussion of the nature of Chomskyan linguistic universals cf. Botha 1989a:130ff.

15. For Chomsky's general characterization of this state cf. e.g., Chomsky 1986:24-26. Cf. Botha 1989a:25-27, 57ff. for a discussion of important distinctions that have to be drawn in regard to this stable (or steady) state of the language faculty.

16. For a discussion of the nature of such 'triggering' and 'shaping' cf. Chomsky 1980a:33,34, 45, 142 and Botha 1989a: 16-17.

17. Chomsky (1980a) has variously referred to this state as 'knowledge of grammar', 'grammatical competence', 'mental grammar', and 'internalized grammar'. Cf. Botha 1989a: 74-75 for this point of terminology.

18. Cf. Botha 1989a:55-57 for Chomsky's explication of this point.

19. Cf. Botha 1989a:58-61 for this tripartite distinction of Chomsky's.

20. Cf. Botha 1989a:47-49 for this distinction and see Chomsky 1988a:9-12 for a more detailed discussion of it.

21. For further discussion of this point cf. Botha 1989a:52-55. For a characterization of the nature of the rules mentioned above cf. Botha 1989a:137ff. As a result of the second

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conceptual shift, Chomsky (1986:146, 150-151) has recently changed his characterization of knowledge of language (or, rather, grammar). He does not think of knowledge of language as a rule system anymore, but rather as a system of principles with fixed parameters. This change, however, is immaterial to the concerns of the present discussion. For some specifics about it cf. Botha 1989a: 88-91.

22. Chomsky (1986:23) further clarifies the nature of the statements of a grammar by saying that they are similar to the statements of a physical theory '... that characterize certain entities and their properties in abstraction from whatever may turn out to be the mechanisms that account for these properties'. As an illustrative example, he mentions a nineteenth-century theory of valence about properties expressed in the periodic table.

23. By, for example, Steinberg 1975:220-221 and, more recently, Katz and Postal 1989.

24. Cf. Chomsky 1957:13.

25. Cf. Chomsky 1977:81 for these remarks and Langendoen and Postal (1984:113) for an exegesis of them.

26. The claim that knowledge of language constitutes a cognitive system forms a standard part of Chomsky's characterization of such knowledge. Thus consider the following remarks of his:

> "I will assume further that human language is one of these cognitive systems, one identifiable component of the human mind/brain with its specific properties and principles (Chomsky 1987a:6).
>
> "Keeping to the concept of language as a cognitive system, a particular manifestation of the human language faculty ...." (Chomsky 1987a:7).

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27. There are also earlier formulations suggesting that Chomsky draws the distinction in question: 'The aim of this series of studies, of which the present work is the first, is to deepen our understanding of **the nature of language and the mental processes and structures** [my emphasis --- R.P.B.] that underlie its use and acquisition'. (Preface by Chomsky and Halle to Chomsky 1966, p. ix).

28. Cf. Katz and Postal 1989:5-6 for this characterization.

29. Cf. Botha to appear. The Platonist conception of language in question has been defended by Katz, Postal, Bever, Langendoen and others.

30. For this view see also Chomsky 1980a:5, 1982:34, 1986:23, 38, 1988a:7, 1988b:2-3, and Botha 1989a:105-106.

31. For Chomsky's distinction between the cognitive sciences, including linguistics, and the brain sciences cf. Botha 1989a:200-211.

32. For a concise characterization of various forms of dualism (and monism) cf. Bunge 1980:2-9.

33. Cf. Chomsky 1988b:3 for some elaboration of this point.

34. Cf. Botha 1989a:146 for Chomsky's distinction between mysteries and problems.

35. Chomsky (1988c:13), accordingly, is unwilling to predict that the natural sciences will someday 'annex', in Nagel's (1980:211) sense, (all) mental phenomena.

36. This means that, within Chomsky's framework, known forms of dualism are rejected on a priori grounds. For a survey of the most influential forms of dualism and their flaws cf. Bunge 1980:2-9, 16-21. Cf. also Jackendoff 1987:7ff. for a neat summary of what he takes to be the major objections to the main 'dualist theories'.

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37. For the nine other reasons cf. Bunge 1980:16-21. Bunge (1980:10-16), in addition, demolishes ten of the main arguments offered in support of dualism.

38. Cf. Botha 1989b:20.

39. Cf. Botha 1990:19-22.

40. For these arguments cf. also Botha 1990.

41. Chomsky (1972:12) has stressed it, though, that the third phenomenon mentioned above, namely the coherence and appropriateness of language to situations, has remained a mystery, a phenomenon exceeding the bounds of mechanical explanation, whether behaviourist or otherwise.

42. This shift is called by Chomsky (1986:6, 24) the 'first conceptual shift' (associated with the birth of generative grammar). What he (1986:146, 150-151) calls 'the second conceptual shift' entails the portrayal of a language as a system of principles and parameters rather than a system of rules. For more information on the two conceptual shifts associated with generative grammar cf. also Botha 1989a:70, 88-90, 102-103, 120.

43. For these formulations see, for example, Chomsky 1987c:14, 1988b:3. We have seen above that Chomsky does not consistently distinguish between 'language' and 'knowledge of language'. This is reflected by the fact that he (1987a:64, 1987b:20) formulates questions 2. and 3. in terms of 'language' as well:

    2'. How is language acquired?
    3'. How is language used?

44. For a discussion of typical examples of such discoveries and explanations cf. Chomsky 1987a:64-67, 1987b:20-23. Also the second conceptual shift has led in Chomsky's

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view to 'A great increase in the range of empirical materials discovered and subjected to serious inquiry within generative grammar'. For examples furnished in support of this claim cf. Chomsky 1987a:70-73, 1987b:28-31.

45. There are different variants of these 'limits' of behaviourism and operationism. For a detailed discussion of these cf. Zuriff 1985:55ff.

46. In documenting these views, Chomsky (1989:5, 24) refers to Nelson Goodman (1984) too.

47. For further discussion of the similarities (and differences) between the ideas of Chomsky and those of Descartes cf., e.g., Chomsky 1966, Gardner 1985:49ff., and Fodor 1983:3-10.

48. On Chomsky's (1987b:4) view the major 'scientific' contribution by Descartes is his rejection of the neoscholastic idea that perception is a process in which the form of an object imprints itself somehow on the brain. In place of this conception, Descartes proposed that the mind uses its own resources and structural principles to construct a mental representation of an object.

49. Chomsky (1987b:5) notes that both the Cartesian idea of how the mind works and the Cartesian concept of innate ideas have been 'revived' in the context of the cognitive revolution mentioned above.

50. This problem, Chomsky (1986:xxv) notes, was also raised by Russell in the form of the question: How comes it that human beings, whose contacts with the world are brief and personal and limited, are nevertheless able to know as much as they do know?

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51. Cf. also Botha 1989a:3-4, 13-14, 18-19 for a discussion of this issue.

52. For a discussion of the respects in which Chomsky considers this evidence or experience to be impoverished cf. Botha 1989a:19-20.

53. For some discussion of the doctrine of anamnesis cf. Hamlyn 1967:10 and Ryle 1967:325.

54. For an early discussion by Chomsky of Humboldt's conception of language cf. Chomsky 1964:17ff.

55. As far as Chomsky is aware, there is only one other known behavioural phenomenon that shares the properties of discrete infinity exhibited by language: the human number faculty. The language faculty and the number faculty, moreover, involve on Chomsky's view 'similar principles of digital computation'.

56. For particulars of the nature of the formal system in question cf., e.g., Chomsky 1957, 1975:chap. 4, and Bach 1974:chaps. 2 and 8.

57. For instance, one looks in vain in Patricia Churchland's (1986) *Neurophilosophy* --- a work of more than 500 pages whose aim is to present 'the outlines of a very general framework suited to the development of a unified theory of the mind-brain' (p. 3) --- for an explicitly articulated conception of language.

58. Cf. Woozley 1967:194-195. In addition to conceptualism there are two other leading theories of universals. Nominalism --- which was considered in Botha 1989b:13-15 --- claims in its extreme form that only names or words are universal, the world being composed solely of particulars. Realism --- to which we will return in Botha to appear --- holds that 'universals exist in themselves

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and would exist even if there were no minds to be aware of them' (Woozley 1967:194).

59. Cf. Cummins and Harnish 1980:18.

60. Langendoen and Postal (1985:125ff.) have argued that Chomsky's conceptualism has changed 'over the last few years'. On their analysis, Chomsky's newer view of linguistic reality represents 'radical conceptualism', which 'differs sharply from his earlier, standard conceptualist position'. On the latter position, Langendoen and Postal contend, sentences continue to be 'real things'; on the former position, sentences have lost this status. That is: in terms of standard conceptualism, grammars as mental entities still generate sentences but, in terms of radical conceptualism, grammars generate mental representations of sentences.

61. For further discussion of the function and properties of transducers cf. Pylyshyn 1984:chap. 6, Marshall 1984:217, Cam 1989:167, Carston 1988:41-42.

62. Cf. Fodor 1983:47ff., Dennett 1984:286.

63. Cf. Fodor 1983:52ff.

64. Cf. Fodor 1983:55-60.

65. Cf. Fodor 1983:61-64.

66. Cf. Fodor 1983:64ff.

67. Cf. Fodor 1983:86-97.

68. Cf. Fodor 1983:98-99.

69. Cf. Fodor 1983:99-100.

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70. Cf. Fodor 1983:100-101.

71. As noted by Fodor (1983:14ff., 1985b:4), Marshall (1984: 216), Gross (1985:16-17) and others, the existence of modular systems or 'vertical faculties' was anticipated in the 'mental organs' provided for by Franz Joseph Gall, the founding father of phrenology. Gall maintained that attention, perception, memory and imagination are not primitive faculties of mind, but only modes of activity of all or any intellectual faculties. The so-called 'horizontal mental faculties' he accordingly considered largely a fiction. Rather, individuating them in terms of specific content domains, Gall postulated a variety of specific propensities, dispositions, qualities, aptitudes and so on. Each of the fundamental faculties --- for instance, the aptitude for music --- would engage in 'horizontal modes of activity' or would partake in 'horizontal attributes' such as imagination, reason, memory, attention and so on.

72. Cf. also Bresnan and Kaplan 1982:xx-xxiv and Pinker 1982: 665-666.

73. In Peacocke's (1989:114) own phraseology: 'The proposal I wish to advance is, intuitively, that for a rule of grammar to be psychologically real for a given subject is for it to specify the information drawn upon by the relevant mechanisms or algorithms in that subject'. For some discussion of the respects in which this criterion is alleged to be superior to its 'rivals' cf. Peacocke 1989:120-122.

74. In regard both to its general assumptions and to its specific claims, Fodor's 'functional taxonomy of psychological processes' has provoked extensive criticism. For specimen criticisms cf., e.g., Dennett 1984, Marshall 1984, Shallice 1984, Putnam 1984, Jackendoff 1987:260ff., Cam 1989, Arbib 1989, Ross 1990 and the various contributions to the Open Peer Commentary in

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The Behavioral and Brain Sciences (Vol. 8, 1985:6-33). Cf. also Fodor's (1985b) reply to this commentary.

75. Katz (1981:96) has objected along parallel lines to Fodor, Fodor and Garrett's singling out speech recognition as the touchstone of psychological reality.

76. Other scholars have noted this problem too. Thus, Carston (1988:47) has asked: 'What is the relation between the grammar (competence) and the language input system (a performance system)?' And she has observed: 'Exactly how it [linguistic knowledge --- R.P.B.] is employed, what its relation is to the parsing procedures involved in language perception and whether either has any bearing on the development, ontogenetic or phylogenetic, of the other, are open questions'. Note, incidentally, that even within a Fodorian approach 'language' cannot be solely an input system; to be able to account for speech production, it has to be an output system as well. Which gives rise to the question how something could be both an input and an output system within Fodor's framework.

77. For numerous instances illustrating this point cf. Botha 1989a.

78. Various other components of the Chomskyan approach to the study of language have been the subject of hostile criticism as well, including the various theories of linguistic structure, the methodological principles and practices associated with this approach and so on.

79. For critical appraisals of the (Bloomfieldian) materialist, the behaviourist, and the Platonist conceptions of language cf., respectively Botha 1989b, 1990 and to appear.

80. As will be shown below, Piagetians such as Inhelder, Sinclair and Bovet (1974) criticized the Chomskyan language

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faculty on grounds essentially similar to Piaget's. And Chomsky (1980a:207-208) rejected their criticisms for essentially the same reasons as Piaget's.

81. 'Motherese', alternatively referred to as 'caretaker speech' or 'baby talk', is defined by Richards, Platt and Weber (1985:34) as 'the simple speech used by mothers, fathers, babysitters, etc. when they talk to young children who are learning to talk. Caretaker speech usually has: (a) shorter utterances than speech to other adults, (b) grammatically simple utterances, (c) few abstract or difficult words, with a lot of repetition, (d) clearer pronunciation, sometimes with exaggerated INTONATION patterns'. For further discussion of the properties of motherese and its alleged role in language acquisition cf., for example, Ferguson and DeBose 1977 and Snow and Ferguson 1977. For critical appraisals of the role of such so-called simplified data in language acquisition cf., for example, Bickerton 1981:139ff., Gleitman and Wanner 1982:39ff., Newmeyer 1983:22, and Romaine 1985: 261.

82. There are arguments against innate knowledge (of language) based on weaker versions of the empiricist condition of grounding in reasons. For a critical discussion of Goldman's (1975) weaker version of this condition cf. Chomsky 1980a:99-100. For other discussions of controversial aspects of the Chomskyan notion of 'innate knowledge of language' cf., e.g., Chomsky 1969, Quine 1969, Wells 1969, Danto 1969, Hook 1969, Stern 1969, Cooper 1972, 1975:1-26, Stich 1978, D'Agostino 1986:92ff.

83. Cf. also McGinn 1981:290 for a version of this criticism.

84. For some discussion of these criticisms cf., e.g., Chomsky 1980a, 1986, Cooper 1975, D'Agostino 1986 and Pateman 1987.

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85. Cf., however, Chomsky 1986:151 for a number of suggestive remarks on the matter.

86. For typical contributions to this debate cf., e.g., Botha 1968:69ff., 1973:174ff., 1981:302ff., Labov 1972, Itkonen 1976, Linell 1976, Dretske 1974, Ringen 1975, Sampson 1975:ch. 4, Newmeyer 1983:48ff., Cooper 1975:ch.5, D'Agostino 1986:74-77.

87. For some discussion of this argument cf. Botha 1973:155.

88. This supposition has been rejected out of hand by Chomsky (1980a:197ff., 1986:36-37). See also Newmeyer 1983:ch. 2 for a detailed attempt to rebut certain versions of this argument.

89. The other two ways out of the 'paradox' seen by Katz and Postal are even more disastrous for mentalists. One entails defending a psychological view of logic, a position made impossible even to contemplate by Frege. The other entails giving up the belief that language is psychological, adopting in its place a 'realist' conception of language. The latter conception will be examined in Botha to appear.

90. As for the first assumption, Chomsky (1987c:22-23, 1988c:8, 1988d:14) has indicated recently that he judges the question of the nature and basis of the distinction between truths of meaning and truths of empirical fact to be a matter that 'requires extensive rethinking, and that much of what has been generally assumed for the past several decades about these questions appears to be dubious at best' (1987c:23). As for the second assumption by Katz and Postal: Suppose, as they claim, that language is not essentially something psychological. But whatever language is, it has to be acquired, known, produced, perceived, mentally stored and so on. This will be reflected in certain properties of language, properties that may be

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called 'psychological'. To account for the latter properties, they would have to be subsumed under certain 'psychological laws'. Being psychological, these laws would not, however, belong to the same ontological realm as the 'abstract' sentences of natural language. But the objects to which laws apply and those laws themselves can hardly belong to different ontological realms .... This is to say that the second assumption of Katz and Postal's could cause problems for their own conception of language as well.

91. Another example of such a 'logical fact' cited by Katz and Postal (1989:4) is Chomsky's (1988a:33-34) observation that the proposition expressed in *Whoever is persuaded to sing intends/decides to sing* is a truth independent of empirical fact.

92. As we have seen in par. 3.4 above, Fodor --- like Chomsky and the earlier Katz (of Chomsky and Katz 1974) --- subscribes to what he calls 'the Right View'.

93. For some discussion of this point of Newmeyer 1983:75, Botha 1989a:129-130.

94. Chomsky (1983:156-157), for example, says: '... mentally represented grammar and UG are real objects, part of the physical world, where we understand mental states and representations to be physically encoded in some manner. Statements about particular grammars or about UG are true or false statements about steady states attained or the initial state (assumed fixed for the species), **each of which is a definite real-world object, situated in space-time and entering into causal relations'.** [emphasis added by Katz and Postal]

95. Chomsky (1988a:33), for example, states: 'The statement that to persuade John to do something is to cause him to intend or decide to do that thing is **necessarily true.**

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It is true by virtue of the meaning of its terms, independently of any facts; it is an "analytic truth" in technical jargon' [emphasis added by Katz and Postal].

96. Cf. for example the quotation given in note 94 above.

97. Katz and Postal (1989:50) draw attention to the fact that George (1987) has pointed out a contradiction that is 'essentially the same' as the one construed by them. Thus George (1987) has observed: 'As such, an I-language is of course "an abstract entity", as Chomsky asserts (C 22). The confusion arises because Chomsky also declares that an I-language "is some element of the mind of the person who knows the language" (C 22) and consequently that statements about I-language are really "about actual states of the mind/brain and their components" (C 26/7). Now whatever they are, abstract objects are **not** constituents of the minds or brains of speakers and so I-languages are not states of human brains.' 'I-languages are not in the physical world, although the particular brain states that can be abstractly characterized as knowledge of them are.'

98. Chomsky (1988a:169), for example, says that '... there is no limit in principle to how many words the sentence may contain' and 'Human language has the extremely unusual, possibly unique, property of discrete infinity ...'

99. Chomsky (1987a:44), for example, says: 'But as distinct from sentences, which exist in mental representations and are realized in behavior ....'

100. Chomsky (1986:26) states that: 'The system of knowledge attained --- the I-language --- assigns a status to every relevant physical event, say, every sound wave. Some are sentences with a definite meaning ... Some are intelligible with, perhaps a definite meaning, but are ill-formed in one way or another ...'

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101. Cf., e.g., Gardner 1985:14, Smith 1989:206, and Botha 1989a.

102. Cf. Botha 1989b:72-73.

103. Chomsky (1986:28-29), for example, states that: 'The conceptual shift from E-language to I-language, from behavior and its products to the system of knowledge that enters into behavior, was in part obscured by accidents of publishing history, and expository passages taken out of context have given rise to occasional misunderstanding (n. 17). Some questionable terminological decisions also contributed to misunderstanding. In the literature of generative grammar, the term "language" has regularly been used for E-language in the sense of a set of well-formed sentences, more or less along the lines of Bloomfield's definition of "language" as a "totality of utterances". The term "grammar" was then used with systematic ambiguity, to refer to what we have here called "I-language" and also to the linguist's theory of the I-language; the same was true of the term UG, introduced later with the same systematic ambiguity, referring to S_o and the theory of S_o.'

104. For an excellent discussion of this point cf. Katz and Bever 1977.

105. For details of the often ferocious fighting euphemised in this statement, cf., e.g., Botha 1989a.

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