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THE METAPHYSICS MARKET

1 MERCHANDIZING LANGUAGE AS MATTER

by

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This is the first of a series of studies in which prototypical conceptions of language are subversively turned inside out. Cecile le Roux and Walter Winckler generously allowed me once more to profit from their wisdom, wit and word power.

R.P.B.

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0 MAPPING OUT THE MARKET

To buy, or not to buy:
that is the question...

Suffering from Ontological Angst? For this malady, Dear Reader, The Metaphysics Market has just the medicine. That's where you are sure to find the stuff that will soothe your soul, that will dispel the distress induced by the classic question 'What is language in essence?'.

Being the very heart of a town in which the trade in ideas is a time-honoured tradition, The Market knows no match when it comes to merchandise of mind. And in a special section, in this commercial cavern on a corner of Carfax, there is on sale a singular selection of a commodity called 'conceptions of language'. This is what one can buy as a cure for the condition caused by wearisome worrying about the nature and essence of language. So, as a way of dealing with your despair, of exorcising your anxiety, why not try exploring The Market? You may find it much more amusing than getting into thing therapy for your Angst.

But once in The Market, let me warn you, you may find yourself subjected to strains and stresses of a different description, springing from the struggle with difficult decisions. For, packed as it is with Products and People pushing and purchasing these, you may find this Mecca of Metaphysicists too much of a muchness. There are countless conceptions of language on display --- disquieting in their diversity, mind-boggling in their multiformity. And the scores of scholars who shop and sell, the dozens of dons who deal and debate, make The Market a Bazaar of the brainy.

On The Market, you will find language on sale as something material, something behavioural, something mental, something

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biological, something social, something cultural, or something ideological --- to mention but a few of the impressive assortment of substances available. As for shapes, language is thrust down one's throat as a thing, pushed as a process, auctioned as action, flogged as form, sold as system, and marketed as means. Which brings us to diversity in design, conceptions of language being marketed in a multitude of modes: nominalist, conceptualist, realist, Platonist, obscurantist, eclecticist, and even Marxist. And each conception of language has its own special (sensory) finish. So you can purchase the Product with a folksy flavour, an ordinary (language) odour, a terminological tang, an a-theoretical aroma and a theoretical ring. Or perhaps you would prefer your conception of language to have a fictitious fragrance or to manifest a metaphorical mellowness.

If you are skeptical about sensory seductiveness as a standard of selection, there is of course origin to go on. Roots there are many: conceptions of language come with all kinds of credentials, tagged as Aristotelian, Arnauldian, Humboldtian, Saussurian, Bloomfieldian, Hjelmslevian, Wittgensteinian, and so on. Which brings us to the related dimension of make: structuralist, generativist, functionalist (from Mark 1 onward, right up to Mark 33), post-anything-ist to mention just a few relatively recent makes of conceptions of language available on The Market.

Those I have listed above represent but a small sample of the conceptions of language offered for sale on The Market. Some dimensions of diversity --- ontogeny, purpose, and so on --- I have not even mentioned. And about the quaintest conceptions of all --- the collector's items in the Curio Corner --- I have told you nothing yet at all. Which is also true of the Delicatessen Department, where customers with a cannibalistic kink can consume conserved conceptions of language, including Processed Plato, Dehydrated Descartes, Marinated Malinowski, and, a recent addition, Pickled Pike. And for (imbibing) buy-

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ers who cannot bear being dry, there is Baudouin's Bar where they can knock back Vintage Wundt, V.O. Vossler, and Fortified Firth (in flasks formed for a Hallidayan hip).

The Market, however, derives its mercantile magnificence only in part from the Products it has on offer. It is the People populating its passages who are the pulse proper of this purchasing paradise, the heartbeat of this humming hive of scholarly enterprise. The Manufacturing Masters, the Designing Deans, the Producing Professors, the Retailing Readers, the Leasing Lecturers and the Trading Tutors all come here to do business with conception consumers from all corners of the cognizing cosmos. In this hub of the humanities you will find Cambridge Captains of Conceptions Industry, Mercantile Metaphysicists from Manhattan, Chancers from Chicago and Cool Customers from California trading shoulder to shoulder with Matey Merchants from the Sunny South and Mounty Middlemen from a Temperate Territory. Particularly prominent are the Boston Bears, Brooklyn Bulls and Berkeley Brokers who rate boldness and bellicosity as the best means of making it on The Market. A sentiment shared by the Yale Yuppies, Harvard Hustlers, Penn Pushers and assorted other Producers of the Product.

But some of the most seasoned sellers and consummate consumers commute between the Continent and The Market: Vending Vikings, Trading Teutons, Gambling Gauls. And, of course, from behind the Conceptions Curtain, there are Slavic Sellers and Magyar Merchants who, in spite of Marr and Marx, are not to be outdone when it comes to practising private enterprise on The Metaphysics Market.

And then there are the ones I have kept for last: the Dealers of Druid Descent and Agents of Anglo-Saxon Ancestry. Hailing from the Fords and the Fields, the Bridges and Burghs, they are the managers of The Market. It is these local lads in their blazers with badges urging you to 'Buy British' who are trying to enforce faded formulas of fair trading and slightly

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sloppy standards of sportsmanly selling. Having no new line of their own to offer on The Market, they have cleverly created a quaint kind of college kid, a Buying Blue (whom you will soon come to know better).

But, yes, I agree: the paramount question is 'What to buy, and from whom?' The answer, Dear Reader, is anything but simple. But let me try. If you need a conception of language for no purpose other than to provoke people in the pub, to sound profound at a party, to discourse donnishly on and on at dinner or to name 'knowledgeably' in a note, there are dozens that will do. But if you are driven by deep distress, and have got to get to the bottom of the question 'What is language in essence?', not just any old (or new) conception will do. A conception of language carelessly concocted without coherence in content, planlessly put together for no particular purpose, will be of no avail in allaying your Angst.

What you need is consumer counselling on how to buy and behave so as to stay solvent and sane in The Metaphysics Market: on the range of Products, their qualities and malformities; on the strategies for selecting something superior from the shelf and the recipes for recognizing rubbish on the rack; on the merchants and their multifarious modes of making money; and on tricks and traps, snags and snares for buyers who fail to beware. This is exactly the kind of advice that I can administer. As for Products, I can suggest what to inspect, and why to reject. As for Producers and Promoters, I can indicate how to debate, who to deflate and who not to underrate.

There is one thing, however, Dear Reader, which quite expressly I will not deliver: complete coverage of the countless conceptions of language offered on The Market. Recycling being as rampant as it is on the faculty floor, you will come across many a reconditioned conception of language which is not worth a second look. So, to assist you in deve-

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loping your discriminatory abilities, I will be focussing on the Prototypical Products on The Market.

And, I must confess, since history is no great passion of mine, I will not delve too deeply into the past either. But in case you should discover that yours is an appetite for Products of the Past, I would suggest that you also visit some other areas of this trading town. There is The Market's Bodleian Branch where numerous conceptions of language from the distant past are buried in books, preserved in pages of print. Or, should you find the 'distant past' still too much part of the present, I would suggest a trip to The Market's Ashmolean Annexe. There, with a little luck, you might just find, captive in cases, curious conceptions of language in fossil form, Petrified Products of a prescientific past.

But, let us dwell on something special that I do have to offer: access to the acuity and acumen of an assortment of Ancient Advisers. When puzzled or perturbed by peculiarities of a Product, we can call on one of them to act as our Ontological Oracle. You will profit in particular from the direct line that I have to a Metaphysical Magus known as Mario of Montreal. On ontology, for example, he would pronounce in the following spirit:

> *Ontology is alive and kicking. Its business is to stake out the main traits of the real world as known through science. Only bigots still believe this business to be balderdash.*
> *(cf. Bunge 1977:5ff. and also Bhaskar 1978:36)*

You appear ready, Dear Reader, to venture into The Market. But could you control your Angst for just one moment more? There is still the matter of money to be mentioned. Strange as it may sound, the long history of The Market has always produced the odd trader who would not accept cash in any currency for his conception of language. Rather, these have been the sellers who would insist on the client's surrender

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of his scholarly soul in payment for their Products. In the trading tradition of the Terrible Tempter, these Devilish Dealers have tried to possess purchasers by means of their Products --- extracting, on oath, the buyers' linguistics loyalty for life (and thereafter). I urge you, Dear Reader, always to remember that by mortgaging your mind to a Merchant in the Mephistophelean Mould, you become conception-blind, unable to tell the good from the bad. This is a debilitating disease. Indeed, in the long run it is far more distressing than Ontological Angst. So, now, let us enter The Market with a caveat cautioning:

*Buyer, beware of Satan's snare.**

* *This story, incidentally, carries a health warning: it is bound to bring on a foaming at the mouth in the case of Serious Scholars who cannot take their metaphysics laced with a modicum of mirth.*

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1 MERCHANDIZING MATTER

Let me guess what is on your mind, Beginner Buyer, as we get ready to enter The Market. You are hoping that language will turn out to be something reassuringly real, something soothingly solid. Or, at least, something of a stuff that can be sensed: touched or tasted, seen or smelled, heard or handled. No, Bewildered Buyer, I cannot really read your mind. It is simply that a craving for the concrete forms a predictable part of the metaphysical malady known as Ontological Angst. And it is only to be expected that you will be anxious to look first for a conception that pictures language as an essentially physical phenomenon.

But before inspecting one of the most 'concrete' conceptions of language on offer as a possible cure for your hankering after hardware, we first have to mull over a meta-matter: What would count as a conception of language in the milieu of The Metaphysics Market? Here a conception of something is a body of basic beliefs about the very nature of the thing. A conception is the product of serious thinking about the thing itself. And it is open to critical scrutiny of a systematic sort.

A conception of a thing is not a product of lowly lexicographical labour. It is not a dictionary definition that describes the meaning of the word(s) used to denote the thing in question.[1] *To see this, consider the following dictionary definition of the word* <u>language</u>*:*

> *'the system of human expression by means of words'*[2]

If accurate, this definition captures (part of) the meaning or 'use' of the word <u>language</u>*. It is an outcome of lexicographical investigation of a word; it is not a product of serious thinking about the thing denoted by the word. Consequently, this definition does not reflect one or more basic*

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beliefs about the nature of the thing called 'language'. And it cannot count as a conception of language.

Having gained a better grasp of what a conception of something is (and is not), we can now consider the idea that language is something concrete. The classic conception of language as something physical or material is on offer at the ontological outlet of the Empiricist Emporium, located on Leonard's Lane opposite a pub, the Pighead and the Positivist. For discussing the Products on The Market, we will adopt a type of two-track talk. I will outline core components of conceptions in the familiar, formal fashion, using a suitably straight --- some would say, 'stifled', --- style. The warts and wrinkles of conceptions and the wondrous ways The Market works, by contrast, we will reflect on in the more relaxed but robust register that I have been using so far. Incidentally, straight sections will be printed in reassuring roman; stretches containing stronger stuff will be in inciting italics.

1.1 Selling Sounds and Scratches

Language is something material that may be observed. This is the core of the classic materialist conception of language. On this conception, language is primarily something audible and secondarily something visible. Spoken language, also called speech, exists as sound waves in the air. And written language, a secondary manifestation of language, exists as marks on solid surfaces.

This conception of language is often called 'Bloomfieldian' after the American linguist, Leonard Bloomfield, who is credited with assembling its core components in the late twenties and early thirties. Since followers of Bloomfield's, notably Zellig Harris, have contributed to the fleshing out

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of this conception, it is more accurate to consider it a 'Bloomfieldian conception' rather than 'Bloomfield's conception'.

An individual language, on this Bloomfieldian conception, is a collection or corpus of utterances. On this conception, 'utterances are the reality of a language', as Jerrold Katz (1981:25) has aptly put it.[3] Spoken utterances are considered to be stretches of sound, sound waves, or disturbances in the air. Sound waves were characterized by Bloomfield (1931:219-221) as 'slight displacements of matter'. This makes spoken utterances physical events. Written utterances, by contrast, are inscriptions, scratches or ink marks on surfaces. This makes written utterances products of (writing) events.

On the materialist conception of language, then, language and languages have no aspect that is not ultimately physical. Every aspect of language(s) either is evidently physical or can be reduced to something that is physical. Specifically, this conception deliberately refrains from attributing to language(s) any property that is mental, as is clear from the following remarks by Bloomfield (1936:93):

> 'Non-linguists (unless they happen to be physicalists) constantly forget that a speaker is making noise, and credit him, instead, with the possession of impalpable "ideas". It remains for linguists to show, in detail, that the speaker has no "ideas" and that the noise is sufficient --- for the speaker's words act with a trigger-effect upon the nervous system of his speech-fellows.'

This quotation also indicates what, on the Bloomfieldian conception, language is *not*. It is not part of speakers' nervous system. Viewed from a 'biosocial' point of view, language merely triggers nervous systems. Viewed from a 'biophysical' point of view, language merely forms a 'bridge' between nervous systems. Thus, Bloomfield (1931:219-221) remarked:

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> 'By virtue of this common attunement the members of a speech-community cooperate; the space between their nervous systems is bridged, from moment to moment, by the sound-waves which they utter and hear.'

And the 'bridge' is a physical one. This follows from Bloomfield's (1931:219-221) view that speech-sounds are nothing but 'slight displacements of matter'.

In sum: on the Bloomfieldian conception, language is noise. And the 'objective' study of languages is the study of 'a set of events --- sound waves or ink marks' in the words of Harris (1970:438). The grammars written in terms of the Bloomfieldian conception of language are, as Katz (1981:25) puts it, 'theories of disturbances in the air or deposits of substances on surfaces'.

You are more than moderately impressed with the 'sensible solidity' of this No Nonsense Nothing-but-Noise Notion of language? You even hope, Brightened-up Buyer, that it could be the cure for your worries about the way words work?

But hang on, we have barely scratched the surface of this materialist conception of language. We still have to inspect it and reflect on it before we can decide whether to accept or reject it. For there is a Market Maxim that matter-of-factly says:

Blind buying brings bankruptcy.

So we will have to dig deeper, as we are joined by our Buying Blue, a wordly-wise window-shopper (not yet fully weaned of Wittgenstein College).

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1.2 Ripping Up the Roots

Let us proceed by considering the matter of motive: Why would a scholar such as Bloomfield wish to think of language as something material? What drove him to conceive of language as an essentially physical phenomenon? What are the roots of the sounds and scratches conception of language?

Two things lie at the basis of the Bloomfieldian conception of language as something material: a rejection of animistic mentalism and an adoption of an empiricist view of science. The first will be considered in par. 1.2, the second in par. 1.3 below.

1.2.1 Spurning the Spirit

Bloomfield rejected nineteenth-century mentalism because it appealed to mentalistic entities --- for example, mind, spirit, soul and will --- of a specific sort. These are mentalistic entities that were taken to lack a material basis. Moreover, these immaterial mentalistic entities were of an animistic kind in that they were held to 'animate' the body.[4] Bloomfield believed that to appeal to such 'pre-scientific' entities --- entities described by Katz (1964) as 'occult' or 'theologized' --- makes it impossible to explain or predict linguistic behaviour with reference to causal laws. On Bloomfield's view such mentalistic entities, because they are nonmaterial, simply do not exist. And entities that do not exist cannot cause anything that does (materially) exist. Thus, Bloomfield (1933:32) contended that

> 'The *mentalistic* theory ... supposes that the variability of human conduct is due to the interference of some nonphysical fact, a *spirit* or *will* or *mind* ... that is present in every human being. This spirit, according to the mentalistic view, is entirely different from material things and accordingly follows some other kind of causation or perhaps none at all.'

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So Bloomfield (1931:172-173) rejected terms such as 'mind', 'consciousness', 'will', 'perception', 'emotion' and so on as 'spectres of our tribal animism'. On his view these animistic terms originated in 'prescientific times' and could at best form the basis for 'popular animistic pseudo-explanations' only. Along with such animistic terms, Bloomfield rejected nineteenth-century mentalism as a basis for a 'scientific' conception of language.

The first root of the Bloomfieldian materialistic conception of language, thus, is of a reactionary sort: Bloomfield's rejection of an animistic form of mentalism whose reverse side is his acceptance of a particular form of materialism. A mentalistic conception of language could not be the basis for a causal explanation of linguistic conduct. Only a conception on which language is something material --- such as sounds and scratches --- could. This root of Bloomfield's conception of language, then, can be reduced ultimately to his view of what a 'scientific' explanation should be.

Yes, I tend to agree, Dear Buyer, that Bloomfieldian antimentalism may be regarded as more than a mere root of the materialist conception of language. It could, indeed, be thought of as a conceptual carrot for Pagan Patrons of The Market. Surely, Bloomfield's spurning of the spirit, his thumping of the theologized, his trouncing of the tribe may seduce Secular Shoppers who are revolted by anything that 'reeks of religion'. But on a Mobile Market, where metaphysicists are constantly on the move, one cannot afford to cling to outworn sentiments, surviving as slick slogans and nothing more. There is a cautionary Market Maxim that says:

Trading in the trendy is guaranteed to trigger trouble.

What I am getting at? Simply, Dear Buyer, that not everything that reeks is a relict of religion. Antimentalism

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grown musty, and materialism gone mouldy, are themselves not sweetly scented either. These are -isms that should be similarly offensive to the scientific sensibilities of the Skeptical Shopper. Was that you, Buying Blue, snorting derisively in disbelief? Well, we'll then just have to look a little closer at the irreligious root of the Bloomfieldian Purified Product.

Bloomfield was not always an antimentalist. In an early phase of his development, he believed in the mentalistic psychology of Wilhelm Wundt.[5] Thus, Bloomfield (1914:vi) once declared that 'I depend for my psychology, general and linguistic, entirely on Wundt'. And, in the Wundtian mentalistic idiom, Bloomfield (1914) said such things as the following about language:

> 'Language is the form of expressive movement adequate to the mentality of man'. (p. 15)
>
> 'The word is ... psychologically a complicative association of those perceptual and emotional elements which we call its meaning or experience content with the auditory and motor elements which constitute the linguistic symbol ...' (p. 66)
>
> '[Linguistic phenomena] without consideration of their mental significance are unintelligible ...' (p. 71)

It was under the influence of his psychologist friend Albert Paul Weiss --- and indirectly that of Weiss's teacher, Max Meyer --- that Bloomfield resolved to cut out the Wundtian doctrine of ideas from his thinking; that he came to reject nineteenth-century mentalism as 'prescientific'; and that he came to accept materialism (or mechanism) as a basis for his conception of language.[6]

As noted by Erwin Esper (1968:179), Meyer and Weiss opposed the sort of introspection and mentalism 'found in the pages of Wundt's *Psychologische Studien*'. And it was Weiss who, in Esper's (1968:174) words, transmitted the objectivistic

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naturalism which had been developing, from the mid-nineteenth century, among biologically oriented psychologists in Germany. The postulates of this 'objectivist naturalism', as formulated by Weiss on the basis of the writings of Meyer and his teachers, stated that

> 'the phenomena studied by psychology are complications of those studied by physics, chemistry, and biology; the principle of determinism applies in psychology as in the other natural sciences; the phenomena studied by psychology depend upon the properties of the human nervous system in its interactions with the environment; the principle of evolutionary development applies not only to biological phylogenesis but to the history of individuals and of social institutions; the data of psychological research are responses to sense-organ stimulation, or to the after-effects of such stimulation --- responses which are observable, recordable, and --- ideally --- quantifiable.'[7]

Against this background, Weiss characterized behaviourist psychology as that type of investigation and theory which assumes that human activities --- educational, vocational and social --- can be fully described or explained as the result of forces found in the natural sciences. No other forces entered into such descriptions and explanations. The central problem of psychology did not concern the nature of mental faculties. Rather, it concerned habit-formation or learning on a stimulus-and-response basis.[8]

Bloomfield took over this view of psychology, replacing the Wundtian doctrine of ideas by the Weissian stimulus-response doctrine. As noted by Esper (1968:187), this 'obviated the obligation and temptation to interpret linguistic observations in terms of the introspections (or mentalistic speculations) of individual linguists'. Moreover, Bloomfield's adoption of Weissian naturalistic psychology 'facilitated the linking of a purely linguistic set of postulates with the postulates and definitions of psychology and other sciences... .'

In sum: Bloomfield's antimentalism (and materialism or mechanism) came from an old naturalistic intellectual doc-

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trine. This doctrine was transmitted to him by Weiss and, indirectly, Meyer --- scholars whom Bloomfield (1931) considered to be 'perhaps two of the greatest men of [his] time'. Weiss, in fact, was further elevated by Bloomfield; he saw in Weiss someone who 'will [probably] be counted as a heroic figure in the progress of science'.

Ah yes, by now you're itching, Dear Buyer, to remind me of my promise: I promised you metaphysical medicine for your tormented mind. And you feel that you definitely did not come to The Market for tiresome trading in trivia of this or that historical sort. But before becoming a Bored Buyer, let me hasten to reassure you that I, too, find history for history's sake depressingly dull and dreary. Our objective, indeed, is ontological: to explore the metaphysical roots of the materialist conception of language and, in doing so, to try and learn a thing or two about conceptual roots in general. So, if I have been going on about the scientific scruples of a few Physical Fellows, what is it that my 'tedious tale' is supposed to reveal about roots? It says something, Dear Buyer-to-Be, about a number of phenomena, utterly unphysical ones, which --- if yours is a materialist frame of mind (or body, so to speak) --- you and our Blue may find unexpectedly upsetting.

Consider, for a start, the phenomenon of a Principal Producer renouncing his Product, opting instead for its opposite. This kind of Conceptions Conversion has occurred more than once in the history of The Market, as in due course I will show you. It involves Radical Root Revision --- in Bloomfield's case, it consisted in the replacement of mentalism by materialism. But notice that such a radical revision by no means requires ontological originality or conceptual creativity. As our Metaphysical Magus will testify, animistic mentalism has been under attack by all sorts of materialists from time immemorial.[9] *Yes, antimentalism is a bearded body of beliefs.*

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There is more to learn in the line of metaphysics from Bloomfield's biography. As we have seen, the rhetoric used by Bloomfield to renounce animistic mentalism was rather rough. Recall, for example, how he rejected mentalistic terms such as 'mind', and 'consciousness' on account of their being 'spectres of our tribal past'. The roughness of this rhetoric did a lot to kill off animistic mentalism as a root of (American) conceptions of language. But Bloomfield's rhetoric did more than that. It kindled a kind of Root Rage that drove frenzied followers to reject indiscriminately, indeed blindly, ***all*** *forms of mentalism. 'All' here includes those forms of mentalism that are patently non-animistic and, therefore, in fact unscathed by Bloomfield's assault on animism. Bloomfield's rhetoric blinded his Materialist Men to the fact that not all that is mentalistic is musty. The resulting Antimentalist Myopia has, to this very day, ruinously restricted the use of reason in the inspection of mentalistic conceptions of language on The Market, as we will come to see in a study that is to follow. Thus, and this is the general point, Dear Buyer, the roughness of the rhetoric associated with Radical Root Revision can create an intellectual climate --- a* ***Zeitgeist*** *or* ***Zeitkörper****, if body language is what you prefer --- conducive to a crippling condition closely akin to conception-blindness.*

1.2.2 Making Much of Matter

This brings us to the reverse side of Bloomfield's rejection on mentalism: his acceptance of materialism (or mechanism) as a properly scientific basis for causal explanations of human conduct. Thus Bloomfield (1933:33) stated that

> 'The *materialistic* (or, better, *mechanistic*) theory supposes that the variability of human conduct, including speech, is due only to the fact that the human body is a very complex system. Human actions, according to the materialistic view, are part of

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> cause-and-effect sequences exactly like those which we observe, say in the study of physics and chemistry.'

Bloomfield (1933:38) considered materialism to be less dangerous than mentalism. He judged mentalistic views dangerous because of their ability 'to tempt the observer to appeal to purely spiritual standards instead of reporting the facts'. But a scientist who accepted the materialistic theory 'is under no such temptation'. And this brought Bloomfield (1933: 38) to state

> '... that in all sciences like linguistics, which observe some specific type of human activity, the worker must proceed exactly as if he held the materialistic view. This practical effectiveness is one of the strongest considerations in favor of scientific materialism.'

Not all the doctrines that jointly make up materialism express exactly the same view on what the real world consists of. On the more extreme views, the real world consists of material things and nothing else. 'Extreme' materialism is conventionally taken to incorporate two fundamental theses. These Campbell (1967:179) formulates as follows:

1. 'Everything that is, is material'.
2. 'Everything that can be explained can be explained on the basis of laws involving only the antecedent physical conditions'.[10]

The first tenet says, in effect, that there are no incorporeal souls or spirits, no spiritual principalities or powers, no angels or devils --- no immaterial entities.[11] Nothing, therefore, can be explained by invoking such entities, a point captured in the second tenet of 'extreme' materialism. It is the two tenets quoted above that jointly form the backbone of Bloomfieldian materialism. The materialistic root of Bloomfield's conception of language, clearly, also lacks ontological originality.

But what does 'material' mean in this context? What is a material thing? How does one draw the line between what is material

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and what is not? As noted by Campbell (1967:179), one can list properties of material things --- for example, properties such as position in space and time, size, shape, duration, mass, velocity, solidity, inertia, electric charge, spin, rigidity, temperature, hardness, and the like. But, he adds, 'the list is open-ended'. From this follows that the questions formulated above 'have no determinate answers'. The distinction 'material vs. nonmaterial' is in fact badly blurred.

Materialism has many maladies, of which Campbell surveys a variety. One of these is of particular relevance in the context of the present discussion:

> 'The most critical problem facing contemporary materialism is to provide an account of the mind which has some prospect of being at once adequate and compatible with materialism.'[12]

The 'extreme' form of materialism adopted by Bloomfield, of course, could not address this problem in a satisfactory manner. There are forms of materialism, however, that do not construe this problem as a question of choosing between the mental and the material. Thus, Mario Bunge (1980:21) contends that:

> '... one can talk about **mental phenomena** without leaving the biological ground: the mentalist vocabulary originally coined by religion and dualist philosophy begins to make, or is hoped to make, neurophysiological sense.'[13]

And to make things even more interesting, there are not only forms of materialism that talk about the mental. There are also forms of mentalism that allow the mental to have a material basis, as we will see in a following study. Given these complexities, it may be useful to note that in the present discussion we are concerned with Bloomfieldian materialism and the Bloomfieldian materialist conception of language, not with materialism in its more sophisticated forms.

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You have one little question, Dear Buyer? How all of this is going to help you master The Market? The point, really, is plain: though seemingly sane and seductively solid-looking, the form of materialism embraced by Bloomfield is much too crude a creed to be the basis of a sound conception of language. In fact, to base a notion of language on this form of materialism is to infect it at its very conception with a degenerative disease, known as Root Rot. In the form of a caveat, Beguiled Buyer and Befuddled Blue, the message therefore is:

Buyer, beware of rotten roots.

1.2.3 Ravaging Reality

Bloomfield's materialist conception of language has been considered an instance of a more general philosophical view of what the world is composed of. This philosophical view or ontological theory has been called 'nominalism' by Katz (1981). Stronger versions of nominalism hold that there are no abstract objects, no objects of thought, no objects other than those of sense perception.[14] The world, on this view, is composed of physical objects and events, or units of sense experience.[15] Stronger versions of nominalism, moreover, hold that there are no universals in the form of categories or kinds, etc. of objects. The world, on this view, is composed solely of particulars: individual, unique objects.

In its extreme form, nominalism claims that

> '... there is nothing common to a class of particulars called by the same name other than that they *are* called by the same name ....'[16]

On this extreme view, then, only names or words are universal. To avoid complete subjectivity, more moderate forms of nomina-

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lism, however, concede that the universality of words depends on the resemblance between things. Thus *table* is a universal (word) that can be applied to all individual objects that resemble each other in certain respects. But, there is no abstract universal category or kind 'table' that exists in itself independent of the word *table*. The core assumptions of more moderate versions of nominalism, in sum, are formulated as follows by Katz (1981:22):

> 'Nominalism holds that only the sensible signs of language are real: the alleged use of them to name universals is nothing more than reference to space-time particulars with signs that apply generally on the basis of resemblance.'

The view that there is nothing real beyond the observable --- for example, disturbances in the air and scratches on solid surfaces --- forms the basis for Katz's (1981:12, 23) calling the Bloomfieldian conception of language 'nominalist'. The nominalist nature of the Bloomfieldian conception of language will become clearer in the later chapters where we will consider non-nominalist conceptions of language.[17]

In its extreme form nominalism 'is so clearly untenable that it may be doubted whether anybody has actually tried to hold it'.[18] And in more moderate forms --- those resting on the idea of resemblance --- nominalism becomes difficult to distinguish from other ontological views of the world, views from which it is supposed to be distinct.[19]

What to think of nominalism? Well, Dear Buyer, you have been given above some judgements by Fellows of the Fraternity of Philosophers. And there is a diagnostic device developed by the Order of Ordinary Ontologists. Who these would be? Labouring in labs and libraries, they are the lesser lights --- practising scientists who see themselves as worrying about the wheelwork of the world, researching the recesses of

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reality, nosing around the nebulous nooks of nature. But let us consider their list of 'Could-you-live-with' questions:

The Lesser Lights' Co(s)mic Check List

Could you live with:

1. *a universe uniformly inhabited by independent individuals?*
2. *planets patternlessly populated by particulars?*
3. *a world whirling around a non-existent nub?*
4. *sensibilia strangely stripped of structure?*
5. *a reality ravaged of all but its appearance?*

If you have answered 'No' to one or more of these loaded questions, then it is incumbent upon the Officers of the Order to communicate to you this weighty warning:

Buyer, beware of the nothingness
behind the names of nominalism.

Nominalism, indeed, they deem a decimating dogma --- a dogma that denies reality all dimensions of depth and delicacy.

What to make of a mixed bag of 'Yeses' and 'Noes'? The worst, I fear, Having-botched-it Blue. Either you have serious problems with the pragmatics of 'yes' and 'no'. Or you have a personality at odds with itself. Which would mean that yours is a condition in which Ontological Angst is compounded by Scholarly Schizophrenia.

1.3 Sterilizing Science

So what, then, is the second root of the Bloomfieldian conception of language? It takes on the form of a particular view of science and the methods of science, a view that has been labelled '(logical or neo-)positivist' and '(logical) empiri-

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cist'.[20] Of the various beliefs making up the Bloomfieldian view of science, its aims and methods, three are of special interest to us:

1. To be meaningful, a scientific statement must report a movement in space and time.[21]
2. Abstract terms or concepts of scientific descriptions are no more than convenient fictions.[22]
3. Science does not aim at giving a true representation of reality.[23]

These three beliefs had an important part in the thinking of Bloomfield and Harris as they lay the foundations of a materialist conception of language. What we have to do, then, is to explore the ways in which these beliefs are linked to the materialism espoused by Bloomfield and Harris.

1.3.1 Mincing Metaphysics

Bloomfield strongly believed in the idea that to be scientifically meaningful a statement has to report a movement in space and time. Thus, he (1936:90) remarked:

> 'Statements that are not made in these terms are either scientifically meaningless or else make sense only if they are translated into statements about language.'

He used The world is known to me only through my perceptions as an example of a scientifically meaningless statement, contending that

> 'This statement is scientifically meaningless, for it directs us to no observation at any place or time; it predicts nothing.'

On Bloomfield's view, however, such meaningless statements could be made meaningful. This could be done by translating them in a specific way into statements about language. Bloomfield (1936:90) illustrated this point with reference to the

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sentence Redness is a concept:

> 'This makes sense only if it is translated into a statement about language, namely: In the English language the word redness is a noun.'

But something more had to be done, as Bloomfield (1936:90) remarked in a footnote:

> 'The term *noun* ... must then be defined, for English grammar, and the term *word* for language in general, as technical terms of linguistics; this definition, moreover, must be made in terms of the postulates, undefined basic terms, and earlier definitions of linguistics --- not by definitions of meaning and not in metaphysical terms.'

The negative note on which these remarks end is particularly significant. It reflects a central concern of Bloomfield's: finding a means of ridding linguistics of metaphysical claims.

To Bloomfield, (animistic) mentalism could not form the basis of a 'scientific' conception of language. In his thinking, statements made in terms of such mentalistic expressions as 'meaning', 'ideas', etc. could not direct linguists to observations at any place or time. Such statements predicted nothing and had to be rejected as meaningless metaphysics. Only statements made in materialist or physicalist terms --- referring to movements in space and time --- could be considered scientifically meaningful from this perspective. So Bloomfield's view of what was scientifically meaningful and what was not was a powerful force that drove him and his followers to the conception of language as something material.

Bloomfield was not original in either his abhorrence of metaphysics or his adoption of a particular criterion for scientific meaningfulness. As he pointed out himself (1936:90), these philosophical concerns represented a doctrine at which other scholars had earlier arrived: his friend Weiss and, in the 1920s, the logical positivists of the Vienna Circle. The latter included Schlick, Waissmann, Neurath and Carnap among others. Following Mach, these scholars viewed science as fun-

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damentally the description of experience. Metaphysics, on their view, was a 'mess of verbiage' choking both science and philosophy to death. And so metaphysics had to be eradicated.[24]

Michael Scriven (1969:195) gives a graphic account of what the logical positivists were after:

> 'The Vienna Circle or *Wiener Kreis* was a band of cutthroats that went after the fat burghers of Continental metaphysics who had become intolerably inbred and pompously verbose. The *kris* is a Malaysian knife, and the *Wiener Kreis* employed a kind of Occam's Razor called the Verifiability Principle. It performed a tracheotomy that made it possible for philosophy to breathe again ...'

With the aid of the Verifiability Principle of Meaning, metaphysics was reduced to 'meaningless nonsense' or 'sheer gibberish', in the words of Karl Popper (1976:80). In essence, this principle was an attempt at answering the question 'Under what conditions is a sentence cognitively or factually meaningful?'.[25] And the principle stated that a statement must either be analytic or empirically verifiable in order to be meaningful.[26] This means that to be meaningful, a (non-analytic) statement must express a proposition that can, at least in principle, be shown to be true, false or to some degree probable by reference to empirical observations. In a parodied form the Verifiability Principle boiled down to the following:

> 'If [something] can't be seen or measured, it is not meaningful to talk about.'[27]

In terms of the Verifiability Principle, such statements of traditional philosophy as 'Reality is spiritual', 'The Absolute is beyond time', 'Beauty is significant form' are cognitively meaninglessness. Such sentences, it was contended, could not be verified on the basis of experience. Hence they represented 'metaphysical gibberish'. In assigning a central role to experience, the Verifiability Principle is obviously empiricist. It reflects the general epistemological position that, ultimately, our knowledge is based on experience that we get through our senses.[28]

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We cannot consider here the intricacies and technicalities of the Verifiability Principle of Meaning.[29] It should be clear, however, that Bloomfield's idea of what is scientifically meaningful and what is not echoes the essence of this principle. And it may be expected that the former idea will also reflect the flaws of the latter principle, a point we will explore below.

You're turned on, as a duo, Buyer and Blue, by the ideal of a sanitized science stripped of all statements of a pseudo-scientific sort? And you rather like Bloomfield's idea of using a variant of Verifiability as a Conceptual Cutter for carving away sediments of a supra-sensory sort? A clinically cleared-up conception of language is just what you're after too? I hate to douse your delight, but on The Market that you have to master, dealing as if you dwelled in a dreamworld of your own invites doom. So I won't beat about the bush: verifiability turned out, in the course of time, to be little better than a vice. It proved to be without real virtue both in more refined forms such as Carnap's Cutlass and in less expert editions such as Bloomfield's Blade.[30] *What's that? Would I care to elaborate? But of course.*

The Verifiability Principle gave rise to a range of controversial philosophical questions: about its function, its status, its content, its application, and so on.[31] And it has been argued --- by Hempel (1965:117), for example --- that this principle is based on an untenable view of what the appraisal of scientific statements is about. What is at stake in such appraisal is not whether any individual statement considered in isolation is meaningful, verifiable, falsifiable or some such. What is at stake, rather, is whether a system or network of statements called a 'theory'

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for short can be given an empirical interpretation when considered as a whole. For deciding the latter question, there is no single, simple acid test. On the contrary, to arrive at a nonsimplistic answer to it in any particular instance, scientists in fact consider a whole range of properties of theories: the clarity and precision with which the theories are formulated, the explanatory and predictive power that the theories have in regard to observable phenomena, the formal simplicity of the theories, the extent to which the theories have been confirmed by experimental evidence, and so on.

The Verifiability Principle, moreover, turned out to be overly destructive: it was not aimed at metaphysics alone, but also posed a serious threat to respectable science. Scientific laws --- laws which the positivist proponents of the principle accepted --- were diagnosed by it as meaningless:

> 'For such laws, are, by the nature of the case, not conclusively verifiable; there is no set of experiences such that having these experiences is equivalent to the truth of a scientific law.'[32]

And, there ultimately

> 'was the sheer absurdity of the use of verifiability as a meaning criterion: how could one ever say that a theory was gibberish because it could not be verified? Was it not necessary to **understand** a theory in order to judge whether or not it could be verified? And could an understandable theory be sheer gibberish?'[33]

So the *Wiener Kris* called Verifiability was an ill-designed instrument. It could not do the kind of cutting considered necessary for saving science and philosophy. Consequently, it had to be discarded as a defective device. Or, to continue in Scriven's (1969:195) medical metaphor:

> '... when the populace begins to show signs of worshipping the device of deliverance, it is appropriate to point out that we can go on to better devices, indeed, that to fail to do so is to risk an infection that might prove just as fatal as choking to death on a mess of verbiage.'

Present-day philosophers of science are not sold on the idea

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of sanitizing science. It is generally agreed that science is so shot through with metaphysics that surgical separation of the two is impossible. And what is more, it is argued, such separation would be bad for science. Core assumptions of science, assumptions without which scientific inquiry cannot proceed, are metaphysical in that they cannot be made subject to empirical tests. In support of this contention, Bunge (1977) lists such 'metaphysical hypotheses' of science as the following: 'There is a world external to the cognitive subject', 'The world is composed of things', 'Forms are properties of things', 'Everything changes', 'Nothing comes out of nothing and no thing reduces to nothing'.[34] So much, then, for general versions of Verifiability.

We still have to look at what Bloomfield did with his version of Verifiability in trying to manufacture a materialist conception of language that would be metaphysics-free. To dispel any doubts that may have remained about the empiricist essence of Bloomfield's endeavour, consider the following oft-quoted exposition that he (1939:13) once gave of his view of science:

> 'we can distinguish science from other phases of human activity by agreeing that science shall deal only with events that are accessible in their time and place to any and all observers (strict **behaviorism**) or only with events that are placed in co-ordinates of time and space (**mechanism**), or that science shall employ only such initial statements and predictions as lead to definite handling operations (**operationalism**), or only terms such as are derivable by rigid definition from a set of everyday terms concerning physical happenings (**physicalism**).'

Bloomfield (1939:13), moreover, made a quite curious claim about this view of science:

> '... this delimitation does not restrict the subject matter of science but rather characterizes its method.'

Noam Chomsky (1964) and Jerrold Katz (1964) have strongly argued that this claim by Bloomfield cannot be accepted. The Bloomfieldian view of science, they contend, radically and

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ruinously restricts the range of phenomena that may form the 'subject matter' of science. In the case of linguistics this view, in the words of Katz (1964:129), reduces the subject matter to

> '.... the corpus of elicitable utterances, behavioral responses to such utterances, and observable features of the context in which utterances occur ...'

Beyond the Bloomfieldian boundaries lies a whole range of significant linguistic phenomena to be accounted for: the infinity of the number of grammatical sentences of any language, the creativity of language use, the freedom of language use from stimulus control, and the appropriateness of the vast majority of used utterances.[35]

The Bloomfieldian materialist conception of language, moreover, provides no basis for an account of these and other related phenomena. Such an account has to refer to mental capacities, events and processes which lie beyond the empiricist Bloomfieldian boundaries of science. This is so because the former phenomena and the latter capacities, events and processes cannot be described in strictly behaviourist, mechanist, operationalist or physicalist terms. And for this positivist powerlessness there is a further price to pay. Without an adequate description of the mental capacities, events and processes just referred to, it is impossible to answer three fundamental questions formulated as follows by Katz (1964:134):

1. What is known by a speaker who is fluent in a natural language?
2. How is such linguistic knowledge put into operation to achieve communication?
3. How do speakers come to acquire this ability?[36]

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'Barren', Dear Buyer, this is the Seasoned Shopper's verdict on a conception of language that provides no basis for understanding the nature of knowledge of language, the nature of linguistic performance, or the nature of language acquisition. Bloomfield's Blade turned out all wrong. It had been meant to be a sharp scalpel --- just what the doctor had ordered for surgically slicing away the malignant metaphysical matter in the (animist) mentalistic conception of language. But in the event, Blinded Blue, it proved to be a blade woefully blunt, good only for bludgeoning --- a Positivist Pole-axe that paralyzed the patient, that pulped rather than purified the Product. So the Bloomfieldian moves to make mince-meat of meaningless metaphysics were, in the end, an emasculating empiricist exercise. It produced a linguistic science of stupendous sterility, a materialist conception of language infamous for its infertility. To sum it all up in a Market Moral for the Careful Customer:

Sanitized science isn't sane science.

Could I throw in a caveat or two for the Beginning Buyer who is still not sure what it means to be careful when venturing into The Metaphysics Market? But, of course, Bothered Beginner, caveats I have many, the following being as good as any:

Buyer, beware of sterile seeds that send up shrivelling shoots, of positivist pips that produce poisonous plants.

1.3.2 Fixing It with Fictions

Bloomfield, we have seen, held a nominalist view of reality and a positivist/empiricist view of science. As for his view of reality: Bloomfield's materialism reflected the nominalist belief that there is nothing real beyond what can be sensed. Reality, on this belief, does not include abstract objects or categories. As for Bloomfield's view of science:

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his positivism/empiricism was embodied in his view of what is and what is not scientifically meaningful. To be scientifically meaningful, statements have to be made in terms that referred to observable movements in space and time.

One would expect Bloomfield's descriptions of languages to be strictly in accord with his nominalist and positivist/empiricist beliefs. This, however, was not the case. In some of his linguistic descriptions, Bloomfield was forced to use terms and expressions that were abstract in the sense that they did not denote entities that could be found in linguistic utterances. In being abstract, these entities violated Bloomfield's nominalism. And the statements made about these entities could not be verified with reference to experience. Hence, in violation of his empiricism, such statements were scientifically meaningless.

Bloomfield's (1933:213) description of irregular English plurals such as knives, mouths and houses is a case in point:

> 'We can describe the peculiarity of these plurals by saying that the final [f, θ, s] of the underlying singular is replaced by [v, ð , z] before the bound form is added. The word "before" in this statement means that the alternant of the bound form is the one appropriate to the substituted sound; thus, the plural of *knife* adds not [-s], but [-z]: "first" the [-f] is replaced by [-v], and "then" the appropriate alternant [-z] is added.'

In this description, the abstract terms that violate Bloomfield's nominalism are *before*, *after*, *first*, and *then*. They were problematic, since on Bloomfield's (1933:213) view

> '... it goes without saying, for instance, that the speaker who says *knives*, does not "first" replace [f] by [v] and "then" add [-z], but merely utters a form (*knives*) which in certain features resembles and in certain features differs from a certain other form (namely, *knife*).'

Terms such as *before*, *after*, *first* thus denote ordering relations (among rules) that could not be part of English on Bloomfield's conception of language. His solution to this embarrassing problem was to declare the ordering relations

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in question (descriptive) fictions:

> 'The terms "before, after, first, then", and so on, in such statements, tell the *descriptive* order. The actual sequence of constituents, and their structural order (§13.3) are a part of the language, but the descriptive order of grammatical features is a fiction and results simply from our method of describing the forms.'

This strategy of assigning embarrassing abstract terms the status of convenient fictions was adopted by various followers of Bloomfield.[37] Terms such as 'phoneme', 'morph', 'juncture', 'long component', 'noun', 'verb', 'sentence', 'sentence-form', 'construction type', 'transformation', were too abstract to denote anything that could be observed in utterances. To take care of the embarrassment caused by such 'abstractions' to their nominalist ontology, Bloomfieldians declared abstract terms 'convenient fictions', 'descriptive conveniences', 'purely logical symbols', etc.: useful as descriptive tools without having to be part of observable lingusitic reality. The device of useful fictions, thus, enables the Bloomfieldian linguist to retain his belief in nominalism, and thereby his materialist conception of language. At the same time this notion allows him to use whatever abstract term he wishes in his descriptive work.

Using fictions to take care of the embarrassment caused by abstractions to a nominalist ontology is a move credited to Mach. Mach, a positivist **par excellence**, was deeply embarrassed by his recourse to molecules, entities that were too abstract to be observed. To save his sensationalism, he declared molecules to be a 'valueless image' representing a mere **'façon de parler'**.

> 'If hypotheses are chosen [so] that their subject can never appeal to the senses and therefore also can never be tested, as in the case of the mechanical molecular theory, the investigator has done more than science, whose aim is facts, required of him --- and this work of supererogation is an evil ... In a complete theory, to all the details of the phenomena details of the hypothesis must correspond, and all rules for these hypothetical things must also be directly transferable

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> to the phenomena. But then molecules are merely a valueless image.'[38]

As a 'valueless image', molecules are useful tools for making computations about observable phenomena. And, having been declared 'fictions', molecules need not to be shown part of the observable world. But having recourse to valueless images can hardly be reconciled with the Machian position that science should aim at giving a description of an observable reality. To say that something is a fiction is, in the words of Nagel (1961:134), to say that it is 'not true of the facts'. And this is bad, unless it could be argued that truth didn't really matter, a line of thought that we will pursue in the next paragraph below.

Ultimately, Dear Buyer, the Machian Machination of using fictions is no more than a **Façon** *of Face-saving. And we note the following Market Motto:*

> *Fictions are tell-tale signs of tinker-toy science.*

Flights into fiction are what one is forced into by clinging to nominalist beliefs. And a science tooled up with fictions can hardly be more meritorius than a science making use of metaphysical machinery. Of all people surely you, Dear Blue, should have a care or two for the commodity called consistency?

But, however that may be, you were wondering if I could couch the core of my concern in a caveat? No problem --- that is all in the day's work to me, Dear Buyer:

> *Buyer, beware of flowers that are formless figments without fragrance, of fruits that are fleshless fabrications without flavour.*

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1.3.3 Trampling on Truth

Nominalists embarrassed by abstract terms, then, have portrayed these as convenient fictions. Let us dig a little deeper into the consequences which this strategy has for the aims of science.

A first consequence concerns the nature of the relation between science (or scientific theories) and reality (or the world). A view widely held by ordinary scientists is that one of the aims of science is to give a true description of the world.[39] Fictions, however, do not purport to represent any aspect of reality at all. It follows, then, that if a scientist uses a considerable number of fictions, he cannot seriously claim to be describing the world or to be representing reality.

As noted by Katz (1981:32), Harris (1970:272, n. 5) realized this when he stated that the idea of theories in linguistics being put forth as true representations of reality

> '... has something of the absolutist postwar temper of social institutions, but is not required by the character and range of these tools of analysis.'

Linguistic theories, to Harris, are not descriptions of anything. Rather, they are (sets of) tools for analyzing corpora of utterances. From a conventional perspective, tools cannot be taken to be about an aspect of the world or of reality. So the use of too many fictions --- as a means of dealing with embarrassing abstract terms --- makes nonsense of selecting for science the aim of giving a description of reality.

A second and related consequence of the use of fictions concerns the status of truth in characterizing the aims of science. On the conventional view, scientists aim to give descriptions of reality that are true, correct, etc. But if science does not make descriptive claims about the world or reality, science cannot make claims that aspire to being empirically true. And

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this was realized by Harris too, a point well-made by Katz (1981:26-27):

> '... Harris, unlike his fellow structuralists, conceived of linguistics as making no claim to strictly scientific truth. He thought of linguistics more in the way that some people think of literary criticism or artistic depiction, as illuminating aspects of their complex subject without involving a claim to be the sole truth. For Harris, the study of languages illuminates its subject matter by means of a variety of alternative treatments, none of which can claim a monopoly on truth.'

It does not make sense to think of computational or analytical tools as being true or false. And Harris did not think of the resulting 'computations' or 'analyses' as being true or false either. The analyses resulting from applying Harris's theoretical tools to corpora of utterances took on the form of classifications or arrangements of utterances and their various component parts. These classifications were not considered true or false by Harris --- merely more or less 'convenient', 'simple', 'consistent', 'compact' or 'useful'.[40] The following statement by Harris (1951:72) gives a clear illustration of this point:

> 'The phonemes resulted from a classification of complementary segmental elements; and this could be carried out in various ways. For a particular language, one phonemic arrangement may be more convenient, in terms of particular criteria, than other arrangements. The lingusitic requisite is not that a particular arrangement be presented, but that the criteria which determine the arrangement be explicit.'

Note, here, moreover, how the use of convenient fictions led to a redefinition of the aims of (linguistic) science. In terms of this redefinition, science no longer aims at giving a true representation of (aspects of) reality. In terms of this redefinition, science essentially provides tools for classifying observable phenomena. Recall that the resort to fictions was a strategy for defusing the threat posed by abstract terms to nominalism. And recall that nominalism was manifested in linguistics in, among other things, the Bloomfieldian materialist conception of language as disturbances in the air. In sum: to

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enable the linguist to think of language as something material, a radical redefinition of the aims of (linguistic) science was required.[41]

You can live with the consequences of calling on convenient fictions to make the materialist conception of language tick? In fact, you demand to know what is wrong with renouncing reality and trampling on truth? Nothing of course, Bellicose Blue. Nothing is wrong, that is, as long as you don't care two hoots about lowering the sights of science. Nothing, if you fancied fiction as much as fact, convenience as much as correctness. Nothing, if you are sanguine about science shrivelled up. But if you find all of these agreeable simply to keep your nominalist nose above water, to save your sensationalist skin, you are in trouble. Then, I fear, your game is up, as has been pointed out by Katz (1981:38-39):

> *'Only so much contrary practice can be explained away as* ***façon de parler.*** *Once all the interesting constructs in the theory turn out to be* ***façon de parler,*** *as was the case with Harris's transformational theory, the game is up. Once too much of the theory is construed as a mere piece of computing machinery with no implications for the subject-matter of the theory, the theory can no longer be taken to be about what it is supposed to be about according to the gospel.'*

One could do as you suggest: one could, indeed, attempt to invoke instrumentalism to provide principled props for the position that theories are in essence mere tools for making computations and predictions about observable phenomena. But this won't help all that much. To see why not, we have to take a closer look at what instrumentalism is all about.

1.3.4 Insulating It with Instrumentalism

Instrumentalism represents a cluster of philosophical positions that is concerned with the nature of the relation between scien-

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tific theories and the reality on which they are supposed to bear. The so-called instrumentalist position represents one of various views as to the cognitive or ontological status of theories.[42] Reduced to essentials, instrumentalism portrays theories as instruments, tools or computational devices for the organization of observations and the ordering of scientific laws. On the instrumentalist view, theories are not taken to describe an underlying reality. And as means of organizing observations, theories don't make claims that can be true or false. As tools of organization and computation, theories can only be more or less simple, economical, etc.[43] The following remarks by Nagel (1961:129) succinctly capture the essence of the various formulations of instrumentalism:

> 'The central claim of the instrumentalist view is that a theory is neither a summary description nor a generalized statement of relations between observable data. On the contrary, a theory is held to be a rule or a principle for analyzing and symbolically representing certain materials of gross experience, and at the same time an instrument in a technique for inferring observation statements from other such statements.'

The merits of instrumentalism have been debated at length. It is not necessary to go into the details of this debate here. We will consider only a couple of general reasons that make the adoption of instrumentalism rather less than attractive. To begin with, there is a consideration of a historical sort. As Popper (1969:114) points out, eminent physicists --- including Bohr, Heisenberg and Einstein --- embraced instrumentalism as 'a way out of the special difficulties' that arose in their theories. The general point is that leading scientists have not tended to adopt instrumentalism for principled philosophical reasons. They were driven to instrumentalism in an attempt to save threatened theories. Historically, instrumentalism thus has been an escape hatch for scientists haunted by problems of an empirical sort.

Instrumentalism, moreover, provides a solution to a scientist's difficulties by obscuring them. As is well known, theories that make truth claims about the world can under certain cir-

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cumstances be refuted. But theories conceived of as instruments of computation or prediction are immune to refutation. In the words of Popper (1969:112-113),

> 'An instrument may break down, to be sure, or it may become outmoded. But it hardly makes sense to say that we submit an instrument to the severest tests we can design in order to reject it if it does not stand up to them.'

Instrumentalism makes it possible for a scientist, in other words, to retain a refuted theory as 'a calculating device with a limited range of applicability'. And, as Popper (1969: 113) notes:

> 'We may sometimes be disappointed to find that the range of applicability of an instrument is smaller than we expected at first; but this does not make us discard the instrument **qua** instrument --- whether it is a theory or anything else.'

A strict adherence to instrumentalism, then, will not spur on the scientist to subject his theories to real tests. And instrumentalism cannot account for instances of scientific progress that have been made by means of the refutation of theories.

In addition to the problems pointed out above, there is still the matter of consistency to be considered. Calling in the aid of convenient fictions is a ploy that has a place in a descriptivist view of theories. The essence of this view, as noted by Nagel (1961:118), is that science must 'merely describe' in a simple or economical way 'the succession of events'. Recourse to fictions is a means of fixing false descriptions. But calling theories 'instruments' is something completely different. Instruments, by their very nature, are not descriptive of anything. Having a maximally limited range of applicability does not turn an instrument into a fiction.

Considerations such as these have brought Nagel (1961:134) to state:

> 'It does not follow, however, that on the instrumentalist view theories are "fictions", except in the

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> quite innocent sense that theories are human creations. For in the pejorative sense of the word, to say that a theory is a fiction is to claim that the theory is not true to the facts; and this is not a claim which is consistent with the instrumentalist position that truth and falsity are inappropriate characterizations for theories.'[44]

So, Dear Buyer, one could try to patch up the nominalist underbelly of the materialist conception of language with the help of fictions. But one cannot bestow propriety on this plastering-over procedure by intoning the name of instrumentalism. Instrumentalism, simply, is not the right sort of stuff for fixing foundational fissures caused by the use of fictions. Of course, Dear Buyer, this can be captured in a caveat for customers keen to recognize, for what they really are, rifts roughly repaired with philosophical filler:

Buyer, beware of cracked conceptions kept from crumbling
by no more than metaphysical mortar of an instrumentalist sort.

So, Dear Blue, if I were you I wouldn't be that keen on going instrumentalist.

1.3.5 Spitting on Speculation

This brings us to the Bloomfieldian requirement that scientific descriptions must be, not speculative, but inductive. This requirement applies both to what Bloomfield called 'general grammar' and to particular grammars of specific languages. As for the former, Bloomfield (1933:20) stipulated that the study of general grammar 'will be not speculative but inductive'. And he (1933:21) elaborated:

> 'The only useful generalizations about language are inductive generalizations. Features which we think

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> ought to be universal may be absent from the very next language that becomes accessible.'

We have here a specific articulation of the metascientific belief that the inferential links between a theory and the phenomena on which it bears have to be simple and direct. Generalizations about phenomena have to be directly inferrable from data about these phenomena by means of simple induction.

Influential Bloomfieldians applied this inductivist requirement to particular grammars too: grammatical descriptions had to be inductively linked to corpora of utterances. To ensure this, these Bloomfieldians attempted to devise simple analytical operations that could be mechanically performed on the utterances of a corpus in order to 'grind out a correct taxonomic grammar', to use a phrase of Katz's (1981:35). These operations --- including segmentation, identification, matching, classification, and so on --- had to be applied first at the most 'objective' level, that of the acoustic signal. From this concrete level the operations had to be applied stepwise to higher levels of grammatical description. To avoid circularity, the units of a higher level (e.g. morphemes) could be established only after units of the immediately lower level (e.g. phonemes) had been identified. Proceeding step by step, linguists had to arrive at the various levels of grammatical description in a fixed order: phonemics, morphemics, syntax, discourse.[45] This step-by-step procedural approach to linguistic description embodies the belief that scientific inferences must be simple, direct, nonspeculative.

But how does this belief tie in with the Bloomfieldian materialist conception of language? Calling the step-by-step methodological approach 'empiricist', Katz (1981:35) has answered this question as follows:

> 'Nominalism fixes the character of the ground level, while empiricism makes sure that higher levels of grammatical classification are built up from the

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> ground without anything entering into the construction above the ground level.'

Bloomfieldians, in other words, invoked inductivism to enforce nominalism in its materialist manifestation. Speculative or non-inductive thinking could, as it were, put wrong ideas into the materialist's head. Being less direct, any speculative or non-inductive inferences could make the materialist lose touch with the 'ground level' of his observable reality. Accordingly, inductivism had to provide the inferential chains that anchored higher levels of grammatical description securely in sounds and scratches.

Notice that inductivism and positivism/empiricism are not linked in the same way to materialism. Positivism/Empiricism disallows claims about unobservable entities. In so doing, it rules out (animist) mentalistic claims as not scientifically meaningful. And thereby, in turn, positivism/empiricism more or less forces Bloomfieldians to believe in materialism. This is not the case with inductivism: a linguist can be an inductivist without being a materialist. That is, in contrast to positivism/empiricism, inductivism is not a root of the materialist conception of language. Moreover, a linguist can be a materialist without being a rigid inductivist. This is true, for example, of Harris. As has been noted by Hymes and Fought (1975:1051), for Harris the 'inductivist idiom' meant that

> '... one needs an operational foothold in a corpus of data, but given that foothold one can take imaginative, inventive leaps.'

Harris saw linguistics as an essentially mathematical science, a view not compatible with a rigid adherence to the belief that linguistic descriptions must be inductive, not speculative.[46]

The Bloomfieldian belief in induction reflects what has been called 'the Baconian view of science'. With reference to the essence of this view, Bacon remarked:

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> 'But then, and only then, may we hope well of the sciences when in a just scale of ascent, and by successive steps not interrupted or broken, we rise from particulars to lesser axioms; and then to middle axioms, one above the other; and last of all to the most general ... The understanding must not therefore be supplied with wings, but rather hung with weights to keep it from leaping and flying.'[47]

Eminent scientists and leading philosophers of science have alike come to reject the Baconian view as an erroneous reconstruction of the logic of scientific inquiry. Significant scientific discoveries, it has been contended, cannot be made through Baconian induction or any other purely logical procedure. Imaginative, creative, intuitive leaps --- of the kind disallowed by Bacon --- are needed to arrive at the hypotheses, theories and laws which will provide the required understanding of the world.

Thus Einstein (1973:299), one of the most eminent of scientists, rejected the idea of there being an 'inductive method which would lead to the fundamental concepts of physics'.[48] He (1973:266) took the concepts and fundamental principles of scientific theories to be 'free inventions of the human intellect'. Leading to the laws of science, Einstein (1973: 221) saw 'no logical path': 'only intuition resting on sympathetic experience can reach them'. And, on Einstein's (1973: 334) view, a theoretical idea 'is produced by a creative act'.

Philosophers of science too have argued forcefully that the logic of scientific inquiry cannot be inductive. Popper and his followers have become famous for their efforts to dispel the 'Baconian myth of induction'.[49] Popper (1969:46), for example, has argued that

> 'the belief that we can start with pure observations alone, without anything in the nature of a theory, is absurd; as may be illustrated by the story of the man who dedicated his life to natural science, wrote down everything he could observe, and bequeathed his priceless collection

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> of observations to the Royal Society to be used as inductive evidence. This story should show us that though beetles may profitably be collected, observations may not.'

And finally there have been the linguists whose work has shown Bloomfield's belief in induction to be in error. Decisive, in this regard, has been Chomsky's disillusionment with step-by-step inductive data-processing procedures. His application of such procedures to corpora of utterances failed to yield adequate syntactic descriptions of the infinitely many sentences of the language:

> 'The failure of inductive, data-processing procedures at the syntactic level became more obvious the more I worked on the problem.'[50]

'The problem' here, as noted by Katz (1981:35), is 'the difficulty of specifying the inductive step that, according to structuralist doctrine, takes the linguist from a finite corpus to a syntactic description of the infinitely many sentences of the language'.

So, does the Bloomfieldian belief in induction provide yet another reason for rejecting the materialist conception of language? Not necessarily. As we have seen, this belief was not an essential ingredient of the materialist conception of language. It was a metascientific mainstay of Bloomfieldian linguistics, though. The point is plain: what we have been doing all along is to inspect the materialist or Bloomfieldian conception of language and not Bloomfieldian linguistics as such --- nor for that matter, neo-Bloomfieldian, taxonomic, distributionalist or American structuralist linguistics. The materialist conception of language is but one of the components of Bloomfieldian linguistics, which, in addition to that conception, included much else besides: assumptions about linguistic structure, metascientific beliefs such as the one about induction, methodological practices such as those of segmentation, matching, classification and so on.[51]

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What I am getting at, then? Simply, Dear Buyer, that the fate of the materialist conception of language was not inextricably tied up with that of the Bloomfieldian belief in induction. The former did not of necessity have to go under along with the latter. Which is not to say that inductivism, in its insipidity, did not supplement materialism in the staking out of a sterilized science. But in the case of (neo-)Bloomfieldian linguistics, it was a different matter. This body of beliefs had to be buried along with the Bloomfieldian belief in Baconian induction.[52]

1.4 Settling Down to Serious Business

Having turned the Bloomfieldian materialist conception of language inside out, we can now get down to serious business. Indeed, we are ready to face the eternal question. Not wishing to keep you in suspense any longer, Dear Buyer, I will give it to you straight: I most certainly wouldn't buy this conception as a cure for Ontological Angst. Language, in essence, is not sounds and scratches or something of a similar sort of sensible stuff. Which means that I wouldn't pay a penny for musty materialism of the Bloomfieldian brand. And not a nickel for the neutering nominalism and emasculating empiricism which are part of the package deal. And next to nothing for the frigid fictionalism and impotent instrumentalism which Bloomfieldians threw into the bargain.

No, Bitter Blue, you have not been led up the market path. Delving into the depths of the Bloomfieldian conception of language most certainly was not a waste of valuable trading time. For those who have to master The Market, it was an enlightening exercise. We have learnt at least four general lessons from

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our visit to the Empiricist Emporium:

1. *On the essence of language: it is not something of a stuff that can be sensed.*
2. *On constructing a conception of language: matter must be the master of method.*
3. *On appraising a conception of language: look at roots and fruits.*
4. *On metaphysical medicine: concreteness cannot be a cure.*

As for the first lesson, more than enough has already been said for guiding even the Blinkered Buyer.

Lesson number two could bear just the briefest of elaborations. A conception of language, we noted in the introductory paragraph of this chapter, is a body of basic beliefs about the very nature or essence of language. We saw, moreover, that these beliefs are products of serious thinking about language itself. Once a linguist has arrived at a body of beliefs depicting language as made up of a certain kind of stuff or matter, he can proceed to look for metascientific principles and methods that can be fruitfully used in the detailed investigation of the nature and properties of language. This is normal practice: in scientific inquiry, the nature of the stuff of which something is made up dictates the methods by which it can be further investigated.

Bloomfieldians, by contrast, did it the other way round. They proceeded from certain a priori metascientific beliefs --- beliefs in nominalism, empiricism, and so on. And they allowed these beliefs to dictate to them what they should take to be the stuff making up the essence of language: empiricistically sanctioned sounds and scratches. Chances are slim that such a cart-before-the-horses conception of something can ever capture its nature, a point borne out by the bankruptcy of the Bloomfieldian Business.

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The third lesson has been comprehensively and concretely taught. A conception of language cannot be better than the assumptions and presuppositions on which it is founded. That is why one has to dig up its roots. And a conception of language cannot be better than its empirical and conceptual consequences. That is why one has to taste its fruits. Heuristic fruitfulness, indeed, is a prized property of a Product. Roots and fruits, obviously, are not all that matter. Internal consistency --- recall the mismatch between fictionalism and instrumentalism? --- is another consideration that counts. And I will draw your attention to others as we make our way through The Market.

Lesson number four, I guess, must have been painful to you, Dear Buyer. But you simply have to accept that the world, as we sense it, forms no more than a small segment of what exists. This is why craving for a concrete conception of language will actually aggravate your Angst. The concreteness of materialism is offset by the fictions it fosters and by the various nuances of nominalist nothingness needed to keep it from collapse. For mending a metaphysical malady, one needs an abstract antidote, a prescription that you will yet come to appreciate, Dear Buyer.

Learning these general lessons by no means exhausts the benefits that can be derived from getting to the bottom of the Bloomfieldian conception of language. Knowledge of the clockwork of this conception will allow more profitable probing of some of the other Products on The Market: of both the cognate conceptions of language constructed in harmony with the Bloomfieldian conception, and the competing conceptions created in violent confrontation with the Bloomfieldian one. Without a sound understanding of the hidden springs of Bloomfieldian materialism, Dear Buyer, one simply has no hope of getting the hang of the history and dynamics of The Market.[53]

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NOTES

1. For this distinction between a conception and a dictionary definition see further Katz 1981:46.

2. Cf. Longman Dictionary of Contemporary English (1984 Reprint), p. 617.

3. I have found Katz's (1981, 1985) ontological characterization of the Bloomfieldian conception of language highly instructive and will refer frequently to it below.

4. As observed by Bunge (1980:3, 9), animism represents a specific view of the mind-body problem, the view that the mind 'affects', 'causes', 'animates', 'controls' or 'pilots' the body. Of the influential proponents that animism has had over the centuries, Bunge mentions Plato, Augustine, Aquinas, Freud, Popper and Toulmin.

5. As noted by Esper (1968:27ff.), Wundt regarded language as originating in 'expressive movements' which were the physical components of 'psychophysical' processes. The primary function of speech is the expression of ideas, a sentence being the expression of an apperceptive, volitional process. Complete sentences express an aggregate idea partitioned into individual ideas. Cf. also Esper 1968:42ff. for a discussion of Wundt's mentalistic view of syntax.

6. Cf. Esper 1968 for an instructive account of the influence which the psychology of Weiss, Meyer and their German forerunners had on Bloomfield's thought.

7. Cf. Esper 1968:176 for this summary.

8. Cf. Esper 1968:180 for a more detailed account of Weiss's view of psychology.

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9. Cf. Bunge 1980:2ff., 25ff. for a substantiation of this point.

10. For the different claims covered by these two tenets cf. Campbell 1967:179.

11. Cf. Campbell 1967:179.

12. Cf. Campbell 1967:187. For a survey of problems besetting contemporary materialism cf. Campbell 1967:183ff.

13. Bunge (1980:3, 9) calls this form of materialism 'emergent materialism'. It characterizes the mind or mental as a set of emergent brain functions or bioactivities. A property of a thing or a function of a system is considered emergent by Bunge (1977:97) if (a) it is not possessed by every component of the thing or system, but (b) it can be explained in terms of the properties of the components without (c) being reducible to these properties. For example, being stable, being alive, having a certain structure, and undergoing a social revolution are instances, on Bunge's view, of emergent properties of entities 'because they are not possessed by every component of the whole'. Emergentist materialism has a tradition whose contributors include Diderot, Darwin, Schneirla, Hebb, and Brindera, among others.

14. Cf. Woozeley 1967:194.

15. Cf. Goodman and Quine 1947:105. For a recent restatement of his nominalist position cf. Goodman 1984:50-53.

16. Cf. Woozeley 1967:203.

17. For more recent but rather peripheral nominalist conceptions of a language see Pateman's (1987:54ff.) and Wunderlich's (1979:339ff.) discussion of views held by Hudson 1980) and Kanngiesser (1972), respectively.

18. Cf. Woozeley 1967:203.

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19. For this and other problems with moderate forms of nominalism cf. Woozeley 1967:204-205.

20. Cf. Katz 1964:125ff., Newmeyer 1980:4. For some of the many senses in which the term *positivist* has been used cf. Phillips 1987:37ff.

21. Cf. Bloomfield 1936:90, and Esper 1968:187.

22. Cf. Bloomfield 1933:213 and Katz 1981:31, 38.

23. Cf. Harris 1951:72 and Katz 1981:26-27.

24. For a synoptic characterization of the concerns of the logical positivists cf. Phillips 1987:39. For a fuller account cf. Passmore 1967, Feigl 1969 and other contributions to Barker (ed.) 1969.

25. Cf. Ashby 1967:245.

26. Cf. Ashby 1967:240.

27. Cf. Phillips 1987:39 for this formulation.

28. For a discussion of the basic ideas of empiricism and their history cf. Hamlyn 1967.

29. Cf. Ashby 1967 and Passmore 1967 for some discussion of its historical antecedents (in the work of Hume, Mill, Mach, Wittgenstein, etc.), of its affinities with other philosophical positions (such as the pragmatism of Peirce, James and Dewey, and the operationism of Bridgman), of the different formulations that it received in the Vienna Circle itself, and of less stringent versions of it formulated in terms of concepts such as 'disconfirmability', 'falsifiability' and so on.

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30. For Carnap's various formulations of the Verifiability Principle cf. Carnap 1936/37.

31. Cf. Ashby 1967:240ff. for the following examples of these questions and some discussion of their implications:

> '(1) What is it to be applied to --- propositions, statements or sentences? (2) Is it a criterion for determining what the meaning of any particular sentence is, or is it simply a criterion of whether a sentence is meaningful? (3) What is meant by saying that a statement is verifiable, or falsifiable, even if in practice it has not been, and perhaps cannot be, verified, or falsified? (4) What type of statement directly reports an empirical observation, and how do we ascertain the truth-value of such a statement? (5) Is the principle itself either analytic or empirically verifiable, and if not, in what sense is it meaningful? (6) Is the question that the principle is intended to answer (that is, the question "By what general criterion can the meaning or the meaningfulness of a sentence be determined?") a logically legitimate question?'

32. Cf. Passmore 1967:55.

33. Cf. Popper 1976:80.

34. Cf. Bunge 1977:16-18 for these and other metaphysical hypotheses of science and for a list of eminent scientists and philosophers who have stressed the metaphysical character of many scientific hypotheses.

35. For a characterization of these phenomena cf., e.g., Chomsky 1964, 1972 and Lyons 1981:228ff.

36. A more recent formulation of these questions by Chomsky (1986:3) reads as follows:

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1. What constitutes knowledge of language?
2. How is knowledge of language put to use?
3. How is knowledge of language acquired?

37. For example Twaddell 1935:33ff., Harris 1951:18, Hockett 1961:36. For further discussion see Swadesh 1935:245, Anrade 1936:11, Joos 1957:80, Bar-Hillel 1966:39 and Botha 1968:84ff.

38. Quoted by Katz (1981:31) from Mach 1893:57.

39. This view Popper (1969:114) characterizes as the '... Galilean doctrine that the scientist aims at a true description of the world, or of some of its aspects, and a true explanation of observable facts ...'.

40. Cf. Harris 1951:8-9, 1970:777.

41. From the account given by Hymes and Fought (1975:1029ff.) of neo-Bloomfieldian linguistics, it is clear that some followers of Bloomfield's had a less rigorous logic, one allowing them to maintain the idea that linguistics aims at giving 'correct' descriptions of linguistic phenomena.

42. There are two other major views that are alternatives to instrumentalism, namely descriptivism and realism. To these we will come further down below.

43. For some discussion of the various versions of instrumentalism see for example Nagel 1961:129ff., Kaplan 1964: 306-310, Hesse 1967:407, Popper 1969:107ff., Rescher 1984:153-159.

44. Cf. Nagel, incidentally, presents a quite sympathetic reconstruction of instrumentalism.

45. Cf. Newmeyer 1980:6 for further elucidation of this point.

46. See Hymes and Fought 1975:1050-1051 for an explication of this position.

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47. Quoted by Bach (1965:19) from Bacon's *Novum Organum* (1893).

48. See Allan 1988 for an instructive discussion of the relevance of Einstein's views of science to an understanding of the metascientific foundations of linguistic theory. I am indebted to Allen for this and other references to the work of Einstein.

49. Cf., e.g., Popper 1965, 1968, Lakatos 1968, Watkins 1968. For a review of the various views of the roles of induction in scientific inquiry see Botha 1973:57-70.

50. Cf. Chomsky 1975:30.

51. For attempts to characterize what is common to the various forms of (neo-)Bloomfieldian linguistics see, for example, Bierwisch 1971, Hymes and Fought 1975, Kaldewaij 1986, and Salverda 1985. The account by Hymes and Fought is exemplary in its attention to detail. It reveals in a striking way just how heterogeneous this approach to the study of language was.

52. For illuminating discussion bearing on this point see, for example, Bach 1965 and Allan 1988.

53. Other benefits of having had a close look at the materialist conception of language are of a materialistic sort. Should you ever venture into the trade of textbook writing, Dear Buyer, you would find the Bloomfieldian conception good for at least one chapter.

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