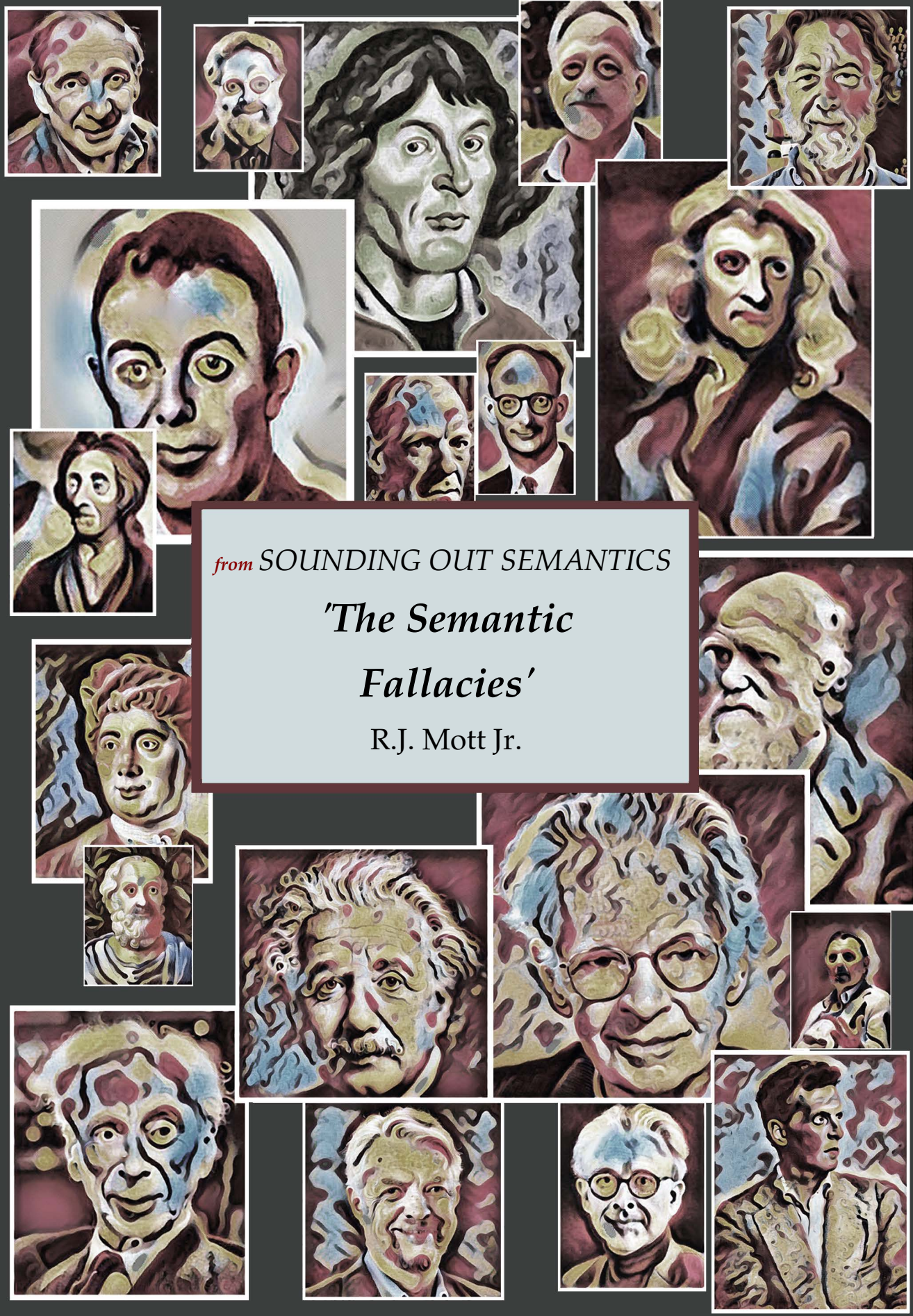


from SOUNDING OUT SEMANTICS

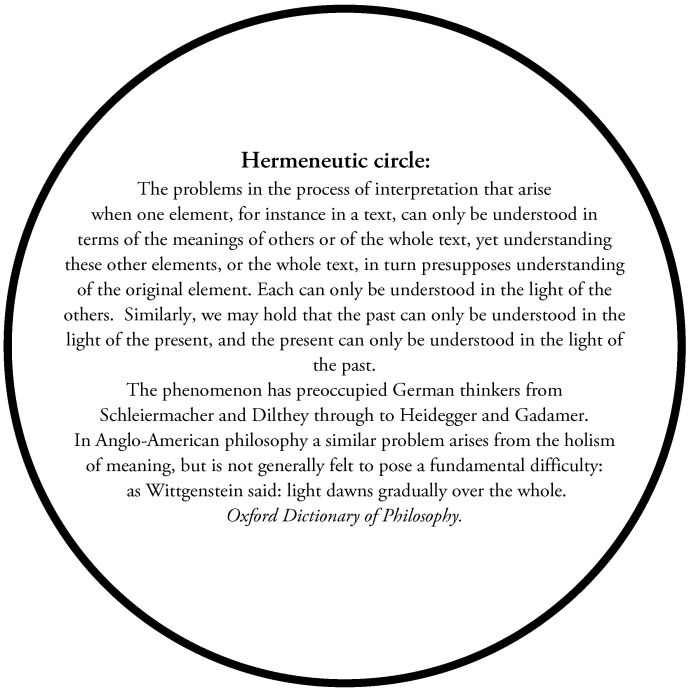
'The Semantic Fallacies'

R.J. Mott Jr.

Sounding Out Semantics

The Limits of Philosophy

by R.J. Mott Jr.



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CHAPTER ONE

SEMANTICS

Introduction

Words mystify us. Humans have been using words for eons, since long before recorded history. Human speech provided the means by which we increased our dominion over nature and enabled our species to prosper far beyond what our physical abilities would allow. Words have given humans a power and reach that far exceed those of our closest relatives in the animal kingdom. Yet, with all of our linguistic sophistication, we humans have been unable to give an adequate explanation for what we do with words. Words continue to mystify us. In this book I hope to provide some new insights that might lead the way to an adequate account of what we do with words, how language works. Armed with that knowledge, we will investigate other areas of analytic philosophy.

We must begin our discussion of language by acknowledging the inherent difficulties in talking about language. The difficulties arise because we must use language to talk about language. Philosophers often refer to the object language, the one they talk about, and the meta-language, the language they use to talk about the object language. They can both be the same language, as is the case in this book. I will be using English as the meta-language and English as the object language for the most part. I must use the language I grew up in. I must add a caveat concerning this book. All of linguistics is afflicted with terminological mayhem. Any survey of linguistics will find a total lack of terminological discipline. Hundreds of terms are used in a multitude of inconsistent ways. Even basic terms such as "statement", "syntax" and "language" are redefined regularly to fit the needs of theorists. Theoretical terms such as "productive" and "inflectional" appear to be even more flexible. Nevertheless, I will be using many of these terms without defining them. In reading the book you will learn why.

In writing this book I have used a few conventions that are specific to this book. To establish and maintain the distinction between speech and written language, I use different fonts. I do so because that distinction is critical for my analysis. For the most part, when I discuss words and language, I will be discussing speech, the vocalizations humans make. As such, I will be using double quotes and a bold script font: "*the dish ran away with the spoon*" to represent speech. The readers may, of course, vocalize the words to remind themselves of the fact that I am specifically talking about the sounds. At times, I request the readers do so, just to remind them of the fact that word sounds have acoustic characteristics, not letters. Also remember that spoken words cannot be misspelled, capitalized, punctuated, or use different fonts.

When referring to the printed words on paper or the pixels on a monitor or other device, as the case may be, I will use a different bold font: **'The dish ran away with the spoon'** with inverted commas. When this font is used, I am specifically writing about the written word in any form, the visual squiggles and lines that appear on various media in various forms. The written word **'spoon'** has five letters. The spoken word "*spoon*" does not; it only has acoustic properties. I also retain the customary practice of using italics for emphasis.

CHAPTER TWO

THE SEMANTIC FALLACIES

Origins

> "As early Sumerian writing functioned as a device to record commercial and bureaucratic transactions, the written language of that time is very restricted. Falkenstein (1964) calls it a 'sentenceless language'. This is not to be understood as a language that fails to reproduce the sentences of the spoken language, but rather as the absence of segments larger than a word or lexeme. Early Sumerian writing can thus be considered word writing in the sense that graphs represented words and words only… The expressive power of pure word writing is obviously very limited. In the beginning only concrete visible objects were represented with pictograms." Coulmas (1989: 77)

The history of writing provides some critical insights necessary for the proper analysis of human speech. As Florian Coulmas notes above, the first known *written* word symbols were non-arbitrary pictograms. They were developed by functionaries of the state as a means of keeping records. The pictograms or icons represented word *sounds*. The word sounds that were first represented were those used to refer to "concrete visible objects" and thereby easy to represent with pictograms. For example, ☼ could have been used to *represent* the Sumerian equivalent of the English word sound "*sun*". "Pure word writing" was a simple graphic system for representing some individual word sounds.

However, many word sounds used by early Sumerians were not used to refer to "concrete visible objects" and thus were difficult to represent iconically. The representations of some of these sounds were evidenced in later versions of Sumerian iconic writing systems as Roger Brown points out:

> "The Sumerians used the word *ti* for life but had no written sign for this idea. It is difficult to represent. As it happened, the spoken form *ti* had two meanings in Sumerian. *Ti* was a homophone meaning *arrow* as well as *life*. The arrow is easily represented as '→'. At some point it occurred to the Sumerians to use this same sign '→' to designate life. This is a shift to the phonetic principle in writing… The written form is generalized along a dimension of sound rather than meaning and so becomes a derivative form speech." Brown (1958: 63)

Indeed, writing has always been a derivative form of speech. Writing has always represented the sounds produced by humans, not "concrete visible objects" or "ideas". It has been and still is a way to record speech.

Eventually, iconic symbols gave way to non-iconic symbols that stood for, expressed, signified, represented, encoded, designated, denoted, or referred to sound units. The most prominent sound units were individual spoken words. Coulmas traces this further development of Sumerian writing:

> "The Sumerian ideograms, for example, were reduced to abstract symbols as

> early as 2500 BC, almost all of them having lost their iconic features. To the extent that visual iconicity was reduced, the relation of the sign to its linguistic form attained equal weight. Gradually the graphical sign thus came to stand for a sound unit. Initially this unit was a word, and the words which could thus be visualized were restricted to those having a concrete referent, such as *ox, grain, fish, mat, bird, donkey*, etc. For the most important practical purposes of writing this was quite enough. But words with more abstract meanings, such as *brother, go* or *dear* were still impossible to write. Generally speaking, properties, movements, states of affairs, events and relations could not be represented easily by means of pictorial sign… phonetization coupled with graphical abstraction opened the path to a solution of this problem too. As the relation between graphical sign and phonic word form became more stable and prominent, it became conceivable to use graphical marks for sound configurations only, irrespective of their meanings, because the meanings were no longer self-evident by the icon." Coulmas (1989:29)

As Coulmas details, phonetization and the loss of iconic features gradually led to a system of graphical marks for sound configurations in Sumerian graphology (he considered some meanings *abstract* because images could not be used to capture these (so called meanings.) The written word symbols were *phonetically* linked to the spoken words. This critical advancement enabled ancient writers to use graphical marks for all sound configurations, not just those "with a concrete referent". It allowed literate people to record all of their speech behavior.

Future technological advancements eventually allowed people to use devices that reproduce the sound for us, such as a digital recorder. However, we can still use written symbols for the sounds that allow readers to reproduce the sounds themselves. Such written text *is* representational; *it represents speech behavior*. The symbolic record of the activity, a series of written words represent speech acts, nothing more. For example, the written sentence **"The tree is tall"**, is a recording of a speech act utilized by someone at some time, either vocally or sub-vocally; *it does not represent meanings*.

Written word symbols, whether iconic or phonetic, have never stood for, expressed, signified, represented, encoded, designated, denoted or referred to anything other than sounds produced by humans, their verbal behavior, whether silent or aloud. Putting a so called "meaning" in the written symbol was a bit more understandable when iconic systems were prevalent and the symbols could be linked to the sound by virtue of their iconicity. After all, it took very little learning or imagination to understand that the written symbol ☼ represented a functional equivalent of the English word sound "sun". However, the *meanings* that were coupled with *phonetically* based written word symbols were not even determinable from the symbols alone, much less obvious. As Coulmas says, those *meanings* were not "self-evident". (There is much iconicity remaining in sign languages, e.g. ASL)

In fact, *meanings* for graphical representations of sounds were never self-evident; they were never there at all. Written words, whether they are iconically based or phonetically based, are transcriptions of vocal speech or sub-vocal speech. There is no reason to believe that these written symbols encode *meanings*, whatever meanings might be. To say that written words stand for meanings is akin to saying that the optical codes on CDs stand for meanings. Both the optical code and written words of any kind record sounds, sounds with functional roles to play in the

behavior of the human speakers who use them.

In addition to the history of writing, the history of reading provides some critical insights for linguists. Reading is a skill based on speech. Readers first learn to read out loud. Readers make the sounds. They speak the words. In fact, silent reading was very rare until the 10th century. With the addition of punctuation marks in the 15th century, comprehension of text became easier and more widespread. The act of reading also became predominantly private. Nowadays, there is an entire industry devoted to teaching sustained silent reading in our school systems. Most of us take silent reading for granted, but it is a relatively recent phenomenon and it takes a good deal of training to avoid the natural inclination to produce the sounds from which the functionality of written words is derived.

For competent readers, the written symbols that represent the sounds ultimately become functionally autonomous. Within the literate English-speaking community for example, the written symbol **"sun"** will function much the same as the word sound "*sun*" for a well-trained reader and speaker. Florian Coulmas puts it this way:

> "Indeed, mature alphabetic orthographies encode morphological and lexical information in addition to phonetic information; and mature readers make use of this information more than they do of letter-sound correspondences." Coulmas (1989:230)

Within the semantic paradigm where meanings or semantic information are associated with spoken word symbols, linguists recognize the functional transference from sound to symbol by saying the written word symbols have lexical information independent of the sound production. They do not. There is no lexical information or semantic content in either the sounds or the symbols for those sounds.

There are, however, functional values for phonetic units such as words, abbreviations, clauses, phrases, idioms, acronyms and complete sentences when used in context with relevant presuppositions. The written symbols themselves can perform the functional roles of their corresponding acoustic units when used by a properly trained writer or reader. The written symbols **'is', 'sun**' and **'he'** can be employed in the same way that the sounds "*is*", "*sun*" and "*he*" are for those who can read and utilize the original sounds. However, there is no literal information in those sounds or any other sounds. The sounds are *functional devices*, not signs or symbols with *meanings*.

When literate people become accomplished readers, the sounds and the symbols for those sounds perform the same *function*. When they see the symbol **'he**', for example, they recognize an anaphoric reference to a previously identified male subject. The written symbol can be an alphabetized symbol, a logograph, a pictogram or any other symbol for the original sound. If they can read silently, symbols of many kinds become functionally autonomous for users who no longer need to process the intermediate functional sounds upon which the symbols were based. The written symbol **'he'** has a functional value based on the sound it represents. There is no need to introduce something called the meaning of **'he'** into the analysis.[1]

The functional roles of human speech were lost with the formalization of speech that accompanied writing. Normative grammar and semantics are based on *written* language. The standards are established by writers, linguists and grammarians. The static structural analysis and the theoretical underpinnings of modern linguistic theory are based on standardized rule-based

writing, not conversation. As a result, linguists and grammarians talk about written word and sentence *meanings*, as if they had independent fixed semantic content outside of their use by humans. In Coulmas' terms:

> "The interpretation of a spoken utterance is first and foremost the interpretation of the speakers intended meaning. The focal question is *what* **the speaker** *means by the utterance*. Once the words are engraved in stone or clay tablets, inscribed on parchment and paper and thus given a stable physical presence, the focal question about their interpretation becomes *what do the words mean*. The meaning no longer resides in the speaker but in the text… However, it can hardly be doubted that strategies for interpreting written and spoken utterances differ on several counts. Written words possess meaning by virtue of the conventional relationship between linguistic forms and meanings. This is, of course, also true of spoken words. But their interpretation depends to a much greater extent on both context of situation and the assumed intentions of the speaker. Speech is bound to the 'here' and 'now' and 'I' (that is, to a specific deictic center, relative to which it is to be interpreted). The written word, on the other hand, is subsequently detached from the 'here', 'now' and 'I' of its production. In order to be fully interpretable, it must therefore be self-sufficient and explicit. All information that can be inferred from reference to common deictic field in speech has to be made explicit in writing. Reification thus means that a linguistic message becomes interpretable as detached from, and independent of, its conceiver. It also means the code itself becomes an object." Coulmas (1989:13)

In spite of the ambiguous use of "mean" and his semantic orientation, Coulmas makes a salient point about written words.

With the advent of writing, philosophers began to put an enduring, writer-neutral, stable and independent *meaning in the text*. Contrary to spoken language, written language has permanence. The written words are stable, enduring and the same for all readers. This allowed for a theoretical relationship between a stable written symbol and a stable enduring theoretical entity, *its meaning*. This fundamental assumption allowed philosophers, linguists, teachers and truck drivers to say when they see a printed word: "*what does that word mean*". An independent stable *meanin*g is thought to be encoded in the written word symbols regardless of who produced the symbols or the context of that production, including previous discourse. The printed words themselves are claimed to *say something*.

Furthermore, because theorists associated the *written word symbols* with stable independent meanings after the advent of writing, they also began to associate *spoken words* with stable independent meanings. The analysis of written words and sentences has led philosophers and linguists to the absurd conclusion that the sounds that issue from human mouths are signs or symbols that have speaker neutral, independent meanings just as the written symbols supposedly do. They attached stable consistent semantic content to the word sounds issuing from human mouths that is indifferent to the speaker's speech history, the speaker's goals and the context of the utterance. The word *symbols*, both the written and the spoken varieties, were said to have timeless, placeless, stable literal or lexical meanings encoded in them. This is the genesis of the first semantic fallacy, i.e. words of either kind have consistent *literal or lexical meanings* that are

identical for all speakers.

Since the time of Plato, philosophers and linguists have treated all words, both the spoken and the written varieties, as signs or symbols with stable independent semantic content. If we take their bait we inevitably end up in their camp. If we accept the contention that either written words or spoken words are *symbols* that have consistent *meanings*, we have lost the argument. We get caught up in their semantic world. We then accept their contention that the word symbols themselves *say* something independently of any speaker. i.e. word symbols have a *de dicto* reading in addition to their *de re* reading. When we do, we have crossed the Rubicon.

However, if theorists do not assume that spoken words are symbols, these theorists can still ask: what is the speaker trying to accomplish? They can also ask what the functional value of this acoustic device is for this speaker in this context. They can describe speech and analyze it in terms of a specific context, presuppositions, speaker goals and the functional role that the various grammatical devices play in a complex web of that human's communication behavior. They need not have independent literal or lexical meanings associated with each word sound. Nor do they need speaker meanings in the minds of the speakers. If words are not considered symbols, *meanings* of any kind can be taken out of the analysis.

Theorists *must* concentrate on *speaking* as one element within an array of communication behavior and not the inherently incomplete symbolic representations of word sound use, viz. written language. If they do so they may succeed in developing a theory that avoids the semantic trap which has plagued philosophers and linguists since antiquity. They must always remember that speaking is vocal behavior performed in coordination with other communication behavior at some time and place in response to some stimuli. It is action. Words sounds that are emitted from human mouths can only be interpreted accurately when they are *used* by someone at some time in conjunction with other behavior and an entire milieu of context and presuppositions.

The formalism begun with writing has led language theorists down the garden path of semantics. Never-the-less, to make the semantic claim that words have *literal* or *lexical meanings* which are separate and distinct from their use in context is unsupported by the data, i.e. human speech. In fact, all human speech is behavior conducted by a human with a history of word-sound use that affects any future speech behavior with acoustic devices conducted at a time and place with innumerable presuppositions and contextual elements that are indispensable to interpretation of the behavior.

As a consequence of writing and the breakdown of speech into grammatical units considered to be signs or symbols, *reference* was also put into the symbols. Many words are said to stand for, signify, denote or designate, refer to specific objects, concepts and so on. "Proper names" for instance, are said to refer to the people who bear the name. Robert J. Mott Jr. is my name. Both the script **'Robert J. Mott Jr.'** and the sound "robert j mott jr" are said to be word symbols that refer directly to me, the person writing this manuscript. Words and other units of speech such as the inscription **'the Queen of England'** or the utterance "the queen of england" are said to refer to other people as well. Reference was put into the symbols along with meanings. *Reference* is the second of the semantic fallacies and will be critiqued in due course.

Human speech has also been characterized as representational activity. Speech supposedly, consists of symbols that *represent*, express or encode mental activity. Speakers are said to have mental or psychological correlates for the word symbols in their minds or consciousness. Every theory of language that has been proposed since the time of Aristotle, other than that of the

behaviorists', has taken the *representational* nature of spoken words to be a given. Spoken words are claimed to be symbols or signs that represent or express mental experience, the thoughts in the mind or consciousness of the humans who utter and write them. This is the third of the semantic fallacies and will be critiqued as well.

As a corollary of this representational characterization of human speech, semanticists commit themselves to *dualism* of one sort or another. The individual word sounds and sentential utterances are claimed to represent mental or psychological entities, not brain components, i.e. axons, dendrites and synapses. If the word sounds that issue from human mouths represent thoughts, ideas, concepts, speaker meanings, mental representations, propositions etc., speakers must have minds or a consciousness to contain these mental or psychological entities that are correlated with the word symbols. A mind/body or consciousness/body dualism is a necessary corollary to the representational characterization of human speech behavior. A full-blown philosophical critique of *dualism* is presented in the next chapter.

I hope to show that all three of these semantic posits *meaning, reference* and *representation,* are erroneous and lead to the innumerable puzzles and problems in contemporary philosophy of language and linguistic theory. As skeptical as you may be, I hope to persuade you that human speech is not a symbolic activity. That being the case, spoken words do not have meanings of any sort; they have no semantic content. Nor do words refer to anything. The words do not make reference. Nor do they represent or express mental content, e.g. ideas, concepts, propositions etc. These three posits are pervasive and pernicious within both philosophy of language and linguistic theory. They are the bedrock foundations upon which all of current semantic theorizing rests. They are wrong. These three errors can be summed up as *the semantic fallacies*.

The non-semantic perspective I am proposing rejects all three of these semantic assumptions and the concomitant dualism necessary for semantic theory to succeed. In spite of the widespread belief that the *symbolic* nature of human speech behavior is obvious, theorists are making a huge and fateful error with this claim. It is neither obvious nor self-evident that human vocal behavior is a system of signs or symbols with consistent speaker-neutral lexical meanings and referents, or that speaking represents peculiar non-physical entities and processes in the speaker's head. In fact, spoken words, phrases and sentences are gerrymandered units of grammar, some of which have variable independent functionality when used by various speakers at various times in various contexts.

Words and Meanings

> "Words sit uneasily at the boundary between morphology and syntax. In some languages 'isolating' languages, such as Vietnamese—they are plainly low-level units, with little or no internal structure. In others—'polysynthetic' languages, such as Eskimo-word-like units are highly complex forms, equivalent to whole sentences. The concept of 'word' thus ranges from such single sounds as English *a* to *palyamunurringkutjamunurtu* ('he/she definitely did not become bad') in the Western Desert language of Australia.
>
> "Words are usually the easiest units to identify, in the written language. In most writing systems, they are the entities that have spaces on either side… Because a literate society exposes all its members to these units from early childhood, we all know where to put the spaces…
>
> "It is more difficult to decide what words are in the stream of speech, especially in a language that has never been written down. But there are problems, even in languages like English or French. Certainly, it is possible to read a sentence aloud slowly, so that we can 'hear' the spaces between the words; but this is an artificial exercise. In natural speech, pauses do not occur between each word, as can be seen from any acoustic record of the way people talk. Even in very hesitant speech, pauses come at intervals—usually between major grammatical units, such as phrases or clauses. So if there are no audible 'spaces', how do we know what the words are? Linguists have spent a great deal of time trying to devise satisfactory criteria—none of which is entirely successful. The Cambridge Encyclopedia of Language (1997: 91)

The use of the English word sound "*word*" or its equivalent in other languages came about as a result of the development of writing systems and the parsing of vocal behavior into units that could be represented graphically. The graphical representations for these parsed sounds, as well as the sounds themselves, came to be known as *words*. That grammatically prescribed unit of writing and speech, the word, could then be paired or correlated with a distinct and consistent independent meaning or meanings. This is the conventional semantic view of words and meanings espoused by philosophers, linguists, grammarians, lexicologists, philologists and the man in the street, and it has come about as a direct consequence of the linguistic formalism brought about by writing, grammar and phonetic spelling conventions.

However, there are profound problems with this view. For a start, dissecting human speech into words is an inexact enterprise. As David Crystal points out in the epigraph, there are clean delineations of independent words with visible breaks and boundaries in the written form. Yet, linguists have discovered that these breaks and boundaries do not necessarily coincide with speech breaks and boundaries. It seems that the dividing line between *spoken* words, phrases and sentences is often quite blurry. In fact, theorists are discovering that they need not carve speech into *words*. Most theorists these days talk about "lexemes" with meanings or "form/meaning

pairs".

Daniel L. Everett provides us with humorous anecdotal evidence for what may or may not constitute *a word* when analyzing speech:

> "Let us say it is about noon and you are hungry. You speak southern Californian English. So you turn to your friend or spouse or class and you say 'Squeat!' Everyone understands you, except the occasional foreigner in your midst. What the hell is 'Squeat'? Said more slowly it becomes 'Let's go eat.' Say it as fast as we normally do in American English and it comes out 'Squeat', even though we hear it differently, as 'Let's go eat,' which is itself a reduced form of 'Let us go and eat.' Sounds like one word but it is really four." Everett (2012:141)

Is the sound "*squeat*" really four words? Not everyone will agree that it is. Such sloppy diction, acronyms and abbreviations present insurmountable problems for semantic theorists. Consider this vocal speech behavior: "*the operation was fubar as nato commander in this sector um i want that report asap*" How many words did that speaker use? What about: "*huh i voted for that sob lbj*"? How about "*i aint gonna make that mistake again*". Consider the written forms as well. The point is simply: what constitutes a word is controversial, even when limited to the written form.

In normal discourse words often meld into one another. Not surprisingly, language learners often have difficulty picking out individual *words* within a stream of speech. They learn how to use combinations of phonemes but do not know which parts of speech are words. Recognition of the words is only apparent after they parse the written forms in grammar school where some gaps in speech are formalized with the separation of words in grammatically correct sentences. Why some sound units are called words and others called acronyms, abbreviations, morphemes, phrases, idioms or sentences can be quite mysterious. Among beginning grammar school students and illiterate humans, whether they are children or adults, the whole notion of *words* is suspect.

When children learn speech behavior in their community, they make no distinctions about what a word, a phrase or a sentence is; they simply use the phonetic combinations of various sorts and syntax as devices to get their linguistic work done:

> "Also from the perspective of language acquisition, Wray and Grace (2007, p. 561) summarize a similar view: '(Children) apply a pattern-recognition procedure to linguistic input, but are not naturally predisposed to select a consistent unit size (Peters 1983). They home in on phonological forms associated with effects that they need to achieve,… The units of the lexicon are, thus, variously, what the formal linguist would characterize as morpheme-, word-, clause-, and text size (Wray 2002b)'." Hurford (2012:270)

While an English-speaking child says: "*give it to me*" (a sentence), a Spanish speaking child says: "*damelo*" (a word). The sounds have an effect; they induce action on the part of the hearers. They are acoustic devices that get work done no matter how grammarians might categorize them in their parts-of-speech taxonomy.

Many speech communities have no formal systems for learning preferred speech behavior. They have no grammarians to teach grammatical distinctions and rules. Yet their children learn to speak just as their parents speak. They learn to speak the way their parents do because they

are learning the functional value of the acoustic devices that their parents produce, whether that noise is "*give it to me*" or "*damelo*", whether that phonetic device has been labeled a morpheme, a word, a name, a phrase, a clause, an idiom, a holophrase, an acronym, a contraction, a sentence, a lexeme or a linguistic gestalt. Learning to speak does not require dictionaries, reading and writing skills, grammarians or their parts of speech or their rules.

Nevertheless, (three words or one?), in learning proper grammar and spelling conventions *nowadays*, (three words or one?) students are consistently and incessantly told that they are speaking and writing with individual *words* that have meanings. As they become grammatically correct speakers they are conditioned to ask for or look up the meanings of words as if there is some stable semantic content that can be attached to words regardless of context or the speaker's speech history. They are led to believe that there is a "more or less fixed" meaning encoded in the symbol, whether it is a spoken word or a written word. We can blame philosophers, linguists, grammarians, lexicologists, philologists and teachers for this word/meaning model which is pervasive and pernicious.

Moreover, even if philosophers, linguists, grammarians, lexicologists, philologists and teachers can agree on some unit of speech being a *word* that has a *meaning*, further classification of that word into a verb, noun, auxiliary etc. is problematic. This classification of various *parts of speech* cannot be based on any theoretical semantic value or meaning for individual words. Consider the following speech act: "*the yinKish dripner blorKed quastofically into the nindin with the pidibs*". Mature English speakers who have had grammatical training will all agree on the nouns, adjectives, verbs, adverbs in that nonsense sentence. However, the mythical meanings of individual *words* play no part in this grammatical categorization.

Additionally, the grammatical categories of words are not precise or exhaustive. Guy Deutscher chronicles the transition of the word sound "*gonna*" from its original use in referring to the action of going, indicating movement, or "*going to*", to its use as a grammatical element, as in "*I am gonna try*", which has the same use as "*i will try*". He concludes that:

> "So if you discover that a word like 'gonna' won't fit neatly under either of your labels, then you should remember that what's problematic is not the word itself, but your labels." Deutscher (2005: 281)

As it turns out, the parsing and categorizing of human speech components is an inexact science at best, even the formal variety of speech that follows all the conventions imposed by grammarians. Many words defy the conventional grammatical *parts of speech* classification altogether, such as "*altogether*".

The category into which grammarians put many words is often *position based*, as in *pre*-positions, in spite of the fact that word order is not universal, fixed or stable. The history of English has shown many changes in the conventions of speech syntax. Worldwide, other languages show many different syntactic structures with and without parts of speech comparable to English. Nouns, verbs, auxiliaries, prepositions, etc. often have morphological regularities that give clues to a word's function within any syntactically conforming construction. But those morphological regularities have many exceptions and outliers as well. Theorizing about what is a noun, a verb, an adjective, an auxiliary, a preposition etc., as it turns out, is plagued with inconsistencies, exceptions and huge theoretical potholes that should give grammarians doubt

about their entire enterprise.

The parsing of human speech into words, phrases, sentences etc. is a tedious but necessary task that is required to produce the impoverished written recordings of speech behavior. However, it is not necessary to speak effectively. Speakers learn the functional value of acoustic devices and syntax from others in their speech community. What counts as a word, a phrase, a clause or a sentence makes no difference whatsoever to an infant learning to speak or an accomplished speaker in a preliterate society. The functional value of the acoustic devices "*damelo*" and "*give it to me*" are identical. These sound implements may have different etymological origins and different grammatical categories, but from a functional standpoint, there is no distinction to be made.

The fundamental problem in semantics is the word/meaning relationship brought about by the characterization of verbal behavior as system of individual spoken word symbols with individual meanings. The current semantic orthodoxy still holds that there is a context-invariant lexical or literal meaning encoded in each spoken word that is stable and grasped by all competent speakers. This is simply not the case. What both literate and illiterate speakers recognize when they use acoustic devices within specific syntactic constructions is the functional roles the devices play within those constructions. They recognize *how* they can implement these various devices in various syntactic constructions to point, connect, displace in time and space, indicate the direction of the action, and so on and so forth.

In fact, if you insist that verbal utterances carry *meaning*, syntax itself could also be said to carry *meaning*. Syntax in the form of grammatical constructions carries useful information independent of the words in the construction. Michael Tomasello makes the point:

> "Thus if I say to you 'The dax got mibbed by the gazzer,' you know—without knowing the meaning of a single content word—that the gazzer did something (called mibbing) to the dax (and we have entered that event from the perspective of the dax, as patient). Indeed, the Gestalt properties of constructions can even 'override' individual word meanings in many cases. For example, the grammar books will say that the verb *sneeze* is an intransitive verb, used with a single actor, the one who sneezes. But I can say something like 'He sneezed her the tennis ball' and you will concoct a scene in which his sneezing caused a ball to go from him to her. That movement is not communicated by the verb sneeze, but rather by the construction as a whole (the ditransitive construction). It is thus not an exaggeration to say that the construction itself—the abstract pattern—is a linguistic symbol, albeit a complex one with internal structure (Goldberg 1995). This means that just as linguistic communities pass along particular words in their vocabulary, they also create and pass along grammatical constructions." Tomasello (2008:298)

Linguistic communities pass along syntactic regularities because they are critical to comprehension. Speech must flow in a certain way; some elements must precede others. They often provide critical information about the scene or activity the speaker is trying to describe. Most theorists have concluded that they carry meaning, *grammatical meaning* as opposed to the *lexical meaning* of the individual words.

Information about the direction of the action, for instance, is indicated in the use of many

verbs, e.g. "*john gave mary the glass*" The temporal order in which the sounds "*john*" and "*mary*" are made within that grammatical construction indicates the direction of the act of giving, who gave to whom. The temporal asymmetry of speech can be used as a functional device just as the word sounds are. The syntax has functional value as do the acoustic devices that were used in the production of that syntactic sequence. Other languages use other devices, e.g. tone languages.

The erroneous word/meaning paradigm has produced a litany of theories of meaning. For example, philosophers and linguists often attempt to explain the mythical *meanings* of word sounds by saying those words have *semantic features*. The meaning of the word sounds "*leopard*", "*lion*", "*panther*", "*tiger*" and "*Kitty*", it is claimed, have the feature of being feline. The analysis of a zoologist might conclude that, but a child can use all of those words competently without any idea that they have anything to do with being feline. In fact, children competently use sounds all the time without knowing that they have semantic features, much less knowing what those features are.

Similarly, other theorists have claimed that word meanings have *properties*, or that concepts embody properties, or that words have combinations of properties. For example, the meaning of the word "*father*" or the concept of father has the *property of* being a parent. That property distinguishes the word "*father*" from the words "*uncle*" or "*bachelor*", which share the property of male and adult. One such view holds that word meanings are clusters of these properties. However, it is quite clear that when children use the sound "*father*", they do not need to know how to use the sounds "*male*" or "*adult*" or recognize the properties of being male and adult. Kids use "*father*" or "*papa*" or "*dad*" long before they learn how to use "*adult*" or "*male*". They have no idea that the word "*father*" has the *properties* of being an adult male parent.

After the fact, philosophers, grammarians, philologists, and lexicologists attempt to classify a word such as "*father*". How many features or properties could they give it? Adult, male, animal, has offspring, biologically related, legally related? By which state laws? Theorists head down a slippery slope with features and properties. Speaker *uses* of the phonetic device "*father*", as it turns out, are no more precise than the uses of "*adult*" or "*Kitty*". Giving words properties and features is not required if you acknowledge that word sounds have functional roles to play in situational human communication behavior. The sound "*father*", for instance, can sometimes be used by a child to point to the big guy next to her.[2]

Nor are speakers required to have *facts* about words to determine the mythical semantic content, not even core facts: the fact that an adult must be 18 years old, for instance. Or is it 19, or 21 or 16? The word sound "*adult*" has no core facts that are paired up with it by children acquiring English as a primary language; the sound has uses in context, often conflicting and disparate uses. When children use sounds such as "*father*", "*adult*", *or* "*Kitty*" they know nothing about words, meanings, properties, features or facts. Nevertheless, they learn the functional value of vocal instruments, no matter how the grammarians classify and explain them.

In spite of the inability to explain human speech within the word/meaning paradigm, many intellectuals insist that a word must have an *essential* meaning. As intellectuals are wont to do, they have labeled those who subscribe to that theory as *essentialists*. These philosophers claim that word sounds have core meanings that we humans can abstract from the various uses of the

word. They claim that words such as "*father*", "*parent*", "*adult*", "*Kitty*", "*game*" and "*furniture*" can be precisely delimited by reducing them to stable core meanings. And after speakers grasp these essential meanings they can competently use the words and enhance the essential meanings in various ways. This essentialism has been handed down from the Greeks and should be given the same credence that we give the ancient Greek view of the cosmos.

Just as an exercise, try to determine the *essential meaning* of "*furniture*". Try to delimit the use of that word. Try to list the necessary and sufficient properties, features, facts or conditions for the competent use of the word sound "*furniture*". Which of the following would you say are furniture: a bean bag chair, a stove, a school desk, the old bar stool next to your work bench, a portable work bench, a table-top television, a console TV, a foldable TV table/tray, a nicely designed humidifier, faux plants, a large sculpture (how large?), built-in bookshelves, a Murphy bed, a bed frame, a reading lamp, a table, a pool table, a card table, a cable spool being used as a table, a filing cabinet, an easel, a pillow, and so on? What features, facts or properties do all of these items have in common? What is essential to all of these items? What boundary separates furniture from non-furniture?

As it turns out, sometimes the word "*furniture*" seems appropriate to describe the above items and at other times it does not. In between there are times when our linguistic intuitions are in doubt. However, these intuitions about the use of the sound "*furniture*" are not based on meanings, essential or otherwise. The use of the word sound "*furniture*" in different situations generates intuitions about future use. Have other people you know routinely said that bean bag chairs are furniture? If they have, you will consider the use of the word sound "*furniture*" to be appropriate when talking about bean bag chairs. The point is, there are simply no universal or essential properties, features, facts or conditions that can be associated with word sounds which would enable you to definitively determine what is or is not furniture.

To suggest that there are stable speaker neutral definitions or meanings for all words, even essential meanings, is simply unsupportable by the linguistic data. Words with multiple, flexible, shifting or nonexistent meanings abound: pronouns such as "*he*," "*she*", "*it*", "*we*", "*you*", "*them*", prepositions such as "*if*", "*of*", "*on*", demonstratives such as "*this*", "*that*", locatives such as "*here*", "*there*", articles such as "*the*", "*a*", speaker/hearer centric phrases such as "*my bike*", "*your dog*", temporal indicators such as "*today*", "*tomorrow*", "*now*", "*then*", quantifiers such as "*some*", "*most*", "*every*". None of these words has anything that might qualify as a stable meaning or definition.

Many times the supposed meanings for individual words are completely ignored. Idioms such as "*kicked the bucket*" and "*spill the beans*" provide examples of speakers using words without regard for the lexical meanings or definitions of the individual words. Only when word sounds are utilized in combination are listeners able to determine if they have been implemented in their most common use or in figurative or metaphorical or ironic or poetic or rhetorical uses, or a multitude of other ways. Listeners must make an uptake of speaker presuppositions and context to determine how individual words are being utilized on any occasion of use.

Furthermore, the literal vs. figurative meaning is a distinction that works for various grammatical constructions, such as idioms. But it does not work for individual word sounds. Word sounds must be used in conjunction with other word sounds and a lifetime of speaker experience to properly construct an effective message. Isolating a word sound and claiming that

it has a fixed core meaning is simply not consistent with the linguistic data, i.e. human vocal behavior. There are no fixed, core meanings, referents or definitions that can be correlated with human word sound use, even if there was agreement on what constitutes a word.

As exemplified previously, polysemy is a recurring nightmare for semanticists. Word sounds with multiple *meanings* abound in all languages. Speakers use these like sounding words effortlessly and often. Take the word sound "play". What is common to playing: baseball, soccer, ping pong, chess, cards, a record, a person, a movie, a violin, a flute, a drum or a piano? In English any given use of that speech sound is governed completely by pragmatic consideration of context, presuppositions and speaker goals. What it means to *play* varies dramatically. There is simply no way in which semanticists can isolate that word sound and determine a meaning for it outside of its pragmatic employment within a specific frame of reference.[3]

It is also said that *definitions* are word meanings; the meaning of a word is its definition. There are some circles in which it is believed that word definitions are in the heads of speakers. Perhaps you have a mental dictionary in your mind, one with definitions for every word you can use? After all, if you don't know the definition of a word, how could you use it? Well, as a matter of fact, competent speakers use many word sounds every day that they would find impossible to define, or give an accurate *meaning* for, e.g. "adult", "take" and "number". I use these word sounds every day without being able to adequately define them.

I use "adult" repeatedly when talking to my grandchildren. Fortunately, they never ask me to define it. My dictionary has 107 definitions for "take". I can't remember one of them. I am also able to utilize the word sound "number" quite competently without being able to define it. It took Bertrand Russell and Alfred North Whitehead two years to define "number" in Principia Mathematica. The rest of us need not do so. We are able to use these acoustic devices competently without being able to give an adequate definition or a meaning for the words because our ability to deploy words in various contexts is based on their functional value, not *definitions or meanings*.

Definitions and meanings for words, like so many other aspects of languages and our attitude toward them, are a consequence of writing and books, viz. dictionaries. Humans used words long before lexicologists began to give us words with their definitions and meanings. Speakers adopt the use of acoustic devices without knowing their definitions or meanings because they are conditioned to use them in context based on their utility. By observing and adopting the vocal behavior of their care givers, young speakers establish behavioral patterns which will guide their future use of these devices.

Analogously, the fact that the function of a screwdriver can be described in terms of torque and inclined planes, does not entail that competent screwdriver users must be able to explain screwdrivers in terms of torque and inclined planes. Humans use linguistic devices of many kinds, without the ability to describe or explain how they use them. Nevertheless, they are able to demonstrate their skill to others and adjust it as circumstances warrant based on a complete history of their interactions with linguistic devices used in context with innumerable presuppositions.

Not long ago my daughter came over for a visit. As is our custom, we consumed a couple of delicious brewskies from the Capital Brewing Co. As I opened her bottle she began talking. Not wanting to interrupt her, I grabbed a glass from the cupboard and extended it toward her in an offering gesture. I simply went through the motions after I decided to offer her a glass.

Similarly, had I said: "would you like a glass", I would not have combined the meanings

of "would", "you", "like", "a" and "glass" in my head to make the offer. After I had determined my objective, I would have simply uttered the words. They would have come out with no cognitive effort. Humans often use words without forethought or planning. The sounds just flow out of our mouths in response to stimuli. They are conditioned responses to the situational stimuli. In this case, my goal could have been achieved with either of the communication devices at my disposal, the gesture or the speech act. Either action would have had the same effect. The only difference was the choice of *behavior*.

We humans utilize various communication devices to get the response we want from our audience. Speakers understand the functional value of various acoustic devices just as they understand the functional value of facial expressions, prosody, gestures, syntax etc., and apply them to accomplish their communicative tasks. These instruments are used to generate effects on other humans. In the scenario above, many body parts were put into action to make gestures. In the second option, vocalization muscles did the work.

The same sounds that issue from a human mouth can be used in a multitude of widely varying functions, depending upon context, speaker goals and the occasion of use. Even the most common verbs are found to be highly ambiguous by contemporary semantic theorists. Thus they come up with layers of meaning in addition to the literal meaning: pragmatic meaning, truth-functional meaning, lexical meaning, structural meaning et al. The nature of *meaning* is as mysterious now as it was 2500 years ago. It is so, because word sounds and their derivative symbols *have no meanings*, literal or otherwise. All sounds used by humans have communicative functional values that are shaped by a broad array of cultural, historical and contextual elements.

Unfortunately, the semantic paradigm has been a huge impediment to a functional analysis of human speech behavior. That is not the case with non-human animal communication:

> "A number of scholars have recently cautioned against using human language as an interpretive framework for non-human primate communications (Owings and Morton 1998; Owren and Rendall 2001). According to these theorists, non-human primate communicative signals are not used to convey meaning or to convey information or to refer to things or to direct the attention of others, but rather to affect the behavior of others directly. If this interpretation is correct—and it is certainly consistent with the facts outlined above—the the evolutionary foundations of human language lie in the attempts of individuals to influence the behavior of conspecifics, not their mental states." Tomasello via Morten Christiansen & Simon Kirby (2003:101)

Indeed the "interpretive framework" for human communication is the problem. The proper framework should be the same for all primates. Neither human nor non-human communication is used to convey meaning or information, but rather to affect the behavior of others, including their future verbal behavior. Any "information conveyed" requires a change in verbal behavior about the world, not changes in so called "mental states".

In the final analysis, words and their meanings are totally unnecessary for the use and comprehension of human vocal behavior. *Words* and *meanings* are artificial constructs that obfuscate an accurate account of the acquisition and use of vocal behavior by humans, phylogenetically and ontogenetically. You assume that words have *meanings* because you have been thoroughly conditioned to do so from your earliest introduction to language. That inherited

word/meaning paradigm is thoroughly embedded in your speech behavior about speech. You have been misled.

If spoken words are not considered to be symbols, they need not be associated with any *meanings*. There need not be semantic content, lexical meanings or literal meanings associated with word sounds. Phonetic units, whether grammarians call them morphemes, acronyms, words, contractions, phrases, clauses, idioms, sentences, lexemes or linguistic gestalts, can all be analyzed in terms of their communicative function and its consequences on their audience. One can ask: What is the functional role this phonetic device performs within the totality of the communicative behavior of this speaker under specific circumstances? Is it a device used to point to people, objects, actions, events, kind-sortals, states of affairs etc.?[4] Alternatively, is it a speech element of another type: a marker, displacement indicator, a logical operator etc.? How does the use of this device meet the needs of speakers in the context of their overall communicative performance?

Meanings give certain *words* semantic content in formal semantic theories, but they are inexplicable and completely superfluous in the analysis of human verbal behavior. So, let us join J.L. Austin, Donald Davidson, Willard V.O. Quine, B.F. Skinner, the radical pragmaticists et al., and dispense with individual word meanings altogether.[5]

The Meaning of "*meaning*"

> "… As Quine has long urged, we should abandon the notion of meaning altogether. With the exception of Quine, most verificationists have found this course unattractive. Thus they were caught in a serious dilemma—caught between their desire to continue talking about meaning in something like the traditional way, and their adherence to the network theory of meaning which taken seriously implies that nothing can be made of the notion of linguistic meaning." Putnam (1975: ix)

> "Quite simply, Wittgenstein holds that philosophers come to their tasks with a certain conception of how things must be. This picture lies in the background, unexamined, and dictates questions asked and specifies the form the answers will take. One such picture concerns the essence of language: Words stand for things—these things being their meanings—a sentence is a combination of such words." Fogelin (1976: 109)

> "The current state of knowledge about meaning phenomena is very patchy: some areas are relatively well charted compared with others. But in all domains, serious black holes of ignorance abound. Many of the fields of uncertainty involve very fundamental issues… " Cruse (2015: 448)

Old philosophies die hard. The prevailing wisdom amongst most philosophers and laymen alike still claims that words are symbols that encode *meanings*. People persistently ask: "*what is the meaning of that word*". It is assumed that words are symbols that stand for, express, signify, represent, encode, designate, denote or refer to those meanings. Words are thought to have stable semantic content of some sort, lexical or literal meanings and these meanings are something other than the uses of word sounds by various people at various times in various contexts.

Prevailing wisdom also holds that speakers must know *the meaning* of a word in order to *use* it. *Meaning* and *use* are said to be two different areas of research and theory. Semantics proper is concerned with the lexical or literal word *meanings*, the semantic content of words. Pragmatics, on the other hand, is the study of the *use* of the word symbols for various purposes once their literal meanings have been grasped by competent speakers, i.e. how the words are employed in various ways: implicatures, sarcasm, irony, hyperbole, metaphors, metonyms etc. Thus the same word with the same meaning can be used differently on different occasions; so say philosophers, linguists, teachers and truck drivers.

This characterization of words is a mistake. As skeptical as you may be, one of the aims of this thesis is to persuade you that words do not have literal meanings, lexical meanings or meanings of any kind; they have no semantic content. I will attempt to demonstrate that the semantic paradigm is an incorrect view of language. In order to do so, we must talk about the pragmatics

of "*meaning*". We must talk about the *uses* of the word sound "*meaning*". We will be pulling ourselves up by our bootstraps.

Our first step in talking about the *uses* of "*meaning*" is to analyze how speakers deploy "*meaning*", the word sound, so that we may be clear about some of its uses and make some necessary distinctions. Lexicologists will all acknowledge that the spoken word "*meaning*" has multiple uses. For example, in some instances competent speakers use the word sound in lieu of "*significance*" or "*importance*". The sound "*meaning*" can share their functional value.

Consider this sentence: "*dis foto of mi muther has deap meening fer me*". (Sound it out.) The word sound "*meening*" in this context has no similarities to its use in lexical contexts. The *meaning* of the photo has nothing to with the semantic content of the photo. In this instance, the picture has sentimental value to the speaker. We can conclude that "*meaning*" can often be used by speakers as the functional equivalent of the word sounds "*significance*", "*importance*" or "*sentimental value*".

In other non-lexical contexts, the use of the word sound "*meaning*" can be translated as intention. We may ask about the motives for someone's actions: "*what was your meaning in saying that*". Translated: "*what was your intention or purpose why did you say that*". This use of the spoken word "*meaning*" is a request for an explanation as to why the speaker said what they said and/or a more comprehensible translation of what was said. The derivation of this use of the word is "to have in mind", purpose, design or intent. It is used in context to request the motives for the action of the speaker or writer and an interpretation of what was said.

There is also what is sometimes called *the causal theory of meaning*. We often say things like: "dark clouds, lightning, and thunder approaching *mean* it will soon be raining," or certain symptoms appearing in a patient mean that they have cancer. "Meaning" used in this sense can be used to foretell certain consequences which are caused by observable signs extant at the time of the claim made by a speaker.

However, in linguistic contexts, when we ask for the meanings of words, we are asking for something that is linked to or associated with the individual word symbols. We ask what the words stand for, express, signify, represent, encode, designate, denote or refer to. We assume that both spoken words and written words are *symbols*. We assume they are tokens or proxies for something else, their *meanings*. This is the *semantic use* of the spoken word "*meaning*".

Such requests for the meaning of symbols are found throughout society and are the subject matter for the field of *semiotics*. For instance, one can ask: "*what is the meaning of that wheelchair symbol on that sign*". This is not a request for the sentimental value of the icon or the intentions of the person who posted it. Nor is it a request for the consequences of posting the sign. Within a semiotic context it could be construed as: How am I to interpret the symbol? What should I associate with the symbol? The symbol is a proxy for what? What does the symbol *stand for* or *mean*?

Likewise, if theorists assume that spoken words are *symbols*, they conclude that when people ask for the meaning of a word they are asking for an explanation of the semiotic kind, one that requires an association or relation between the spoken word symbol and something called its meaning. They put semantic content in the vocal symbol or sign. They assume that there is

something aside from the word sound's idiolectic functional value in the speaker's individual human speech behavior that can invariably be associated with the word symbol. They make an assumption that is unwarranted.

To sum up this brief introduction, adding to the difficulties in explaining what we humans do with word sounds are the multiple ways we English speakers use the word sounds "*mean*" and "*meaning*". One use is clearly tied to *lexical* or *literal meaning* and is an illegitimate offspring of linguistic theorists. Alternatively, if theorists acknowledge that speech is behavior, not symbol manipulation, there is nothing other than the speaker's speech history, encyclopedic knowledge and contemporaneous context, along with the variable functional value of word sounds within a broad spectrum of individual human communication behavior, available to explain the employment of word sounds and their derivative written symbols. Spoken words need not be tied to semantic content if we do not treat them as signs, symbols or semantic de*sign*ators. Words can be linked to neurological events in the brains of speakers and the contingencies of reinforcement. In doing so, we can join Michael Reddy in rejecting the conduit metaphor and begin to appreciate Willard V.O. Quine's plea to abandon the notion of meaning altogether.

Spoken Words vs. Written Words

> "For the explicit codification of lexical conventions and grammatical rules sets standards against which utterances may be judged more or less correct or linguistically well-formed, standards which—to varying degrees—may be emulated or enforced. That is to say, language has acquired the status of an institution. Children not only learn to speak, as they have always and everywhere done, through immersion in an environment of vocally accomplished caregivers, they also receive formal schooling in the principles of language, as formulated by those appointed by society to act as its guardians—the grammarians and dictionary-makers. Above all, they are taught to *write*. The influence of writing on modern ideas and practices of language cannot be overestimated… For writing is not simply the equivalent of speech in an alternate medium. It is rather a kind of reconstructed, as if speech: as if the verbal utterance were fully amenable to systematic analysis in terms of syntactical rules; as if the tone of voice and pronunciation were entirely dispensable to meaning; as if the utterance had an existence in its own right, independently of the context of its production.
>
> "None of these things are actually true of speech, except perhaps for some kinds of 'reading aloud'. Yet modern linguists have operated largely on the assumption that they are. Thus it turns out that the prototypical instance of the linguistic utterance, a rule-governed, context-independent proposition delivered without expression or affect, is that artifact so familiar to us but unknown to non-literate societies: the sentence of writing." Gibson and Ingold (1993: 458)

Kathleen R. Gibson's and Tim Ingold's points in the above quote are well taken. The effect of writing systems and formalized grammars on human vocal behavior cannot be overstated. The breakdown of speech into grammatical units of words, phrases, sentences, nouns, verbs, etc. is a direct consequence of writing. These units of grammar derived from the analysis of written language, along with *rules* for the formation of grammatically correct written sentences, have been institutionalized and passed on from literate speakers and writers to their progeny. These grammatically correct written sentences, in consequence, have had a profound effect upon human speech behavior by establishing recommended speech patterns.[6]

This *rule-bound* recommended speech behavior has been taught to generations of literate human speakers. Thus, many of the regularities witnessed in various speech communities are a result of these *prescriptive rules* which are inculcated in speakers and passed on from generation to generation. Even so, there are numerous speech communities which have no prescriptive rules, or the rules are ignored. Much of their speech behavior is fragmentary or elliptical, i.e. structurally incomplete according to grammarians. Sentence fragments and deviant speech patterns form an overwhelming portion of the speech behavior in some speech communities. Most of their speech is *unruly*.

The more salient point for my purpose is that writing is a "… kind of reconstructed, as if speech." The use of spoken words and the use of written words are interrelated, but there are profound differences between them that must be accounted for in linguistic theory. Unfortunately, the analyses of grammatically well-formed *written* sentences that are said to designate fixed semantic content had become the hallmark of analytic philosophers, logicians and linguists in the twentieth century. Yet their analysis of grammatically well-formed written sentences had not been able to solve paradoxes, puzzles and contradictions that have been around for millennia.

In an attempt to solve these language mysteries a clear distinction will be made in this thesis. To reiterate and reemphasize, I will make it a point to talk about *spoken words* represented by this script font: "thees spoKin wurds" (sound it out). For the most part, I will be discussing *human speech*, the phonetic units that are emitted from human mouths. These units are not misspelled or punctuated: they have no letters or spaces. They are fleeting physical phenomena with acoustic properties. Yet they must be the units of analysis for all language theories. When necessary, I will talk about written words using this font: **'these written words'**. These units of writing have visual properties, not acoustic properties.

To begin, speaking requires humans to produce sounds. "these spoKen words" (sound it out) have a temporary quality. Spoken words have an *occasion of use* because they are actions, vocal behavior that occurs at a time and a location. Every occasion of spoken word use is unique. In ordinary conversation, the original and primary use of human language, of speech behavior, requires the speaker and the hearer to have spatial-temporal proximity. Writing, telephones, the internet etc. have extended these dimensions of human discourse. However, before the advent of writing and modern technology, normal human discourse had a location and occasion of use that was shared by all participants and was critical to comprehension.

These sounds produced by humans not only have an occasion of use, they are goal-oriented actions. They are multi-use vocal implements utilized at various times for various human goals. Consequently, all speech behavior has conditions under which it is effective in reaching the goals of the speaker, and conditions under which it is not effective. To analyze the symbolic written representations of speech behavior, i.e. text, out of context, is a fool's errand. It is a fool's errand in which philosophers and linguists have been engaged for millennia. Language scientists and theorists alike must *listen* to the data *in context*. The *vocal behavior* is the subject to be studied, not written recordings of such behavior outside of any context.

The limitations of analyzing written language cannot be overstated. Even semanticists acknowledge that written language is a greatly impoverished version of spoken language. Linguists refer to the intonation, pace, volume, spacing, stretching, rhythm, pitch etc. as the *prosodic features of speech*. These prosodic features are rarely represented in written words, phrases and sentences, yet they are more often than not, critical to the proper interpretation of the speaker's intended message. Neither can the written word symbols do justice to all the accompanying gestures, facial expressions and body language. The introduction of emoticons and emojis of late, is an attempt to reintroduce some of these contextual features into the static written representations of speech behavior. Yet, even with some of these prosodic and contextual features spelled out by means of punctuation, font variation, emoticons, emojis etc., written sentences simply cannot fully represent human speech.

For instance, according to much research, gestures are not simply an add-on to human speech.

They are an essential part of the overall communication effort on the part of speakers. Michael C. Corballis reports on psychologist David McNeill's research:

> "… He has shown on the contrary, that the gestures we use when we speak are in fact precisely synchronized with the speech, suggesting that speech and gesture together form a single, integrated system… More importantly perhaps, nearly all of these gestures are made during speech, indicating that gesturing is not an alternative to speech or a compensation for an inability to find words. Iconic gestures, in particular, are an integral part of the language process." Corballis (2002:101)

In addition to the prosodic features and accompanying gestures etc. that differ on each occasion of use, there are innumerable cultural, social, philosophical, and historical *presuppositions* involved in speaking. These presuppositions are essential components of mature competent speech in any language community. The same word sounds may be used quite differently depending on this encyclopedic background information and the goals of the speaker. The instances of failed speech communication because of mistaken interpretation of any of these elements of discourse are legend. The probability of miscommunication expands geometrically with textual representations of speech activity when many of the writer's presuppositions are not shared by readers, reading Shakespeare for instance.

All of the presuppositions required to speak competently can be considered elements of *context*. Although the word "context" is often used in linguistic theory and communication theory, definitions vary. Michael Tomasello provides a broad construal:

> "Instead, in the current view, a large part of the explanation for human's uniquely complex ways of communication gesturally is that 'context' for humans means something very special. For humans the communicative context is not simply everything in the immediate environment, from the temperature of the room to the sounds of birds in the background, but rather the communicative context is what is 'relevant' to the social interaction, that is, what each participant sees as relevant as well—and knows that the other knows this as well, and so on, potentially ad infinitum. This kind of shared, intersubjective context is what we may call, following Clark (1996), common ground or, sometimes (when we wish to emphasize the shared perceptual context), the joint attentional frame. Common ground includes everything we both know (and know that we both know, etc.), from facts about the world, to the way that rational people act in certain situations, to what people typically find salient and interesting (Levenson 1995)." Tomasello (2008: 74)

Although he was discussing gestural communications, the elements of context for gestural communication hold constant for most vocal communications. I will be using "context" in this sense, synonymously with "common ground". The "shared, intersubjective context" or "common ground" Tomasello refers to includes innumerable presuppositions about human physiology and how humans interact with other humans, implements, artifacts, animals, plants, natural features of the environment and so forth. Such knowledge about how humans interact with other humans, artifacts, implements etc. underlies all human behavior, including speech.

For example, if someone introduces the word sound "car" into the domain of discourse, there are an incredible number of presuppositions about car structure and operation by humans that enter the discourse as well. If a speaker was to say: "the car was headed for the ditch so i grabbed the wheel from the driver and kept it on the road" listeners with car familiarity would not conclude that the speaker removed the steering wheel from the column. Listeners would correctly conclude that the passenger took control of the steering wheel to guide the car away from the ditch. These presuppositions gained through experience with cars are necessary for the effective use of the English word sound "car". It is "intersubjective context" or "common ground" or "background". Take virtually any word you want and your experience in the world informs you about its use. It is what some linguists call "encyclopedic knowledge" gained from a lifetime of experience. It is *context*, broadly construed.

Even children with limited real-life experience and fewer presuppositions than adult speakers develop a probable world strategy to interpret sentences for their most probable meanings, sentences such as: "Jim gave his dog a bath yesterday and his cat last week." (did Jim bathe the cat or feed it to the dog?) The sentence is grammatically correct, yet it yields at least two interpretations. Hearers who are trying to find the correct meaning of that statement use the most plausible one, even language learners who have had limited experience with pet owners and their animals. That plausibility comes as part of their encyclopedic knowledge.

The phenomenon of polysemy (the same word with many meanings) provides extensive evidence for the effect of this common-ground or encyclopedic knowledge on speech. Polysemous words abound and present innumerable examples of speech data that do not fit the individual word/meaning semantic paradigm. Speakers use polysemous words extensively and effortlessly, navigating through a thicket of multiple interpretations for the same word sound. The word "open" is a case in point. Opening a car door, a bottle, a store, an envelope, a window, a line of credit, a hole in the defensive line, etc. are very different things. There are innumerable ways to use the word sound "open" and the interpretation of the word in each case depends on what is being opened. Relevant experience with car doors, bottles, store openings, envelopes, windows etc. is critical to understanding the use of "open" on every occasion of use. In many cases, only the non-linguistic context can determine how to construe "open". For instance, saying "would you open it" as you hand a bottle of wine to your host.[7]

In fact, some radical pragmaticists insist that the context only provides *some of the relevant evidence* necessary for a proper construal of a sentence such as "open the bottle":

> "Suppose Mary says to Peter: Open the bottle. In most situations, she would be understood as asking him to uncork or uncap the bottle. One way of accounting for this would be to suggest that the general meaning of the verb 'open' gets specified by the properties of the direct object: thus, opening a corked bottle may be the standard way of opening it, but another way is to saw off the bottom, and on some occasion, this might be what Mary was asking Peter to do. Or suppose Mary says to Peter: Open the washing machine. In most situations, she would be asking him to open the lid of the machine. However, if Peter is a plumber, she might be asking him to unscrew the back; in other situations, she might be asking him to blow the machine open, or whatever…

> "The general point of these examples is that a word like 'open' can be used to convey indefinitely many concepts. It is impossible for all of these to be listed in the lexicon. Nor can they be generated at a purely linguistic level by taking the linguistic context, and in particular the direct object, into account. It seems reasonable to conclude that a word like 'open' is often used to convey a concept that is encoded neither by the word itself nor by the verb phrase 'open X'." Wilson and Sperber (2012: 33)

Context also includes innumerable presuppositions about cultural norms and rational human behavior. If someone was to say: "*bill repairs cars*" hearers would not conclude that Bill is in his shop 24-7 under the hoods of cars and that is the only thing in life that Bill does. They would also assume that Bill uses tools, not magic, to repair cars. Most folks would rightly conclude that Bill has a skill that he uses on occasion, either in pursuit of a hobby or an occupation, but none of this information is carried by the word sounds: "*bill repairs cars*". It is all shared, intersubjective context or common ground that is learned through experience within a specific culture by interacting with other rational humans and human artifacts.

These presuppositions may vary, dramatically, from speaker to speaker. Even with the introduction of the simple word "*car*", the number of presuppositions would vary with each participant and their relevant experience with cars. A mechanic may have many presuppositions about cars that a college professor would not. Discourse participants bring a lifetime of experience, an encyclopedic knowledge, to their speaking behavior and rely on it for relevant presuppositions that are not encoded in the words and can differ from speaker to speaker. These independently learned but shared presuppositions are essential to any effective discourse.

Shared presuppositions may often come from previous discourse. In fact, as a result of discourse deixis, almost every verbal utterance changes the context and therefore the interpretation of all succeeding utterances. Obvious examples are anaphoric pronouns such as "*we*" or the temporal indicator "*then*". The relativized "*we*" is controlled wholly by presuppositions from previous discourse about whom "we" includes. The word sound "*then*" is also inherently context driven and ultimately anchored to the discourse time. Even traditional linguists will admit that there are many words that must be analyzed within the context of the previous discourse. They claim that "meaning crosses sentence boundaries". We have many words that help us do precisely that:

> "To return to straightforward issues in discourse deixis, there are many words and phrases in English, and no doubt most languages, that indicate the relationship between an utterance and the prior discourse. Examples are utterance-initial usages of *but, therefore, in conclusion, to the contrary, still, however, anyway, well, besides, actually, all in all, so, after all*, and so on." Levinson (1983: 87)

Word location within a phrase, sentence, paragraph or book can also vary the interpretation of many terms. For example: contrast "*i went to the bank to make a deposit*" with: "*i went to the bank to check the river level*". The placement of the word in a grammatical context changes the interpretation of the word. Thus many semanticists have parted company with literal or lexical semanticists who insist that words encode stable core meanings outside of

any grammatical context. Along with radical pragmaticists they view all context, including occurring discourse as pieces of evidence that when combined, can provide an accurate determination of word function on that occasion of use.

Presuppositions about the speaker can also modify the interpretation of any speech produced by that speaker. Previous experience with the speaker, his reputation or his so- called personality affects the interpretation process for listeners. For example, if someone has a dry sense of humor listeners must be on the lookout for puns and clever remarks that are not intended to be taken seriously. Neither can sarcastic people be taken "at their word". So too, the speech of temperamental people must be construed differently on each occasion. They produce understated and overstated claims. Some speakers are ironic, using irony extensively. Competent speakers in any culture must adjust their interpretation of speech behavior for the person doing the speaking and his or her personality or mood.

Furthermore, within various social circumstances people familiar with each other, say a husband and wife, make numerous assumptions about each other's habits and beliefs that affect their conversation. If one spouse says "*i am going to the club*" the other spouse makes certain assumptions about which club "*the club*" is. The club to which the speaker is going is assumed because of previous habits and the belief that the speaker will continue to do as he has in the past. Shared intersubjective context can be specific to certain discourse participants and is often critical to accurate comprehension.

The same holds true for entire cultures where cultural norms are assumed by all discourse participants. Only deviations from normal patterns of behavior are required to be expressly stated. As Daniel L. Everett puts it after an explanation of a Wari story:

> "Once again the background of culture is most clearly seen in what people do *not* say. Culture is thus found throughout discourse, in what is said and what is not said, the latter being what I call the 'dark cognitive and cultural matter' of discourse." Everett, (2012: 198)

For an example that is a little closer to home, suppose an adult American says: "*i haven't had a drink in two months*". A non-native English speaker who is not familiar with Western culture might be inclined to ask: "How can you possibly survive that long without liquids?" Of course, adult Americans would recognize that the speaker was referring to alcoholic beverages because of previous behavior, verbal or non-verbal, even though that is not what they said.

Culture is reflected in all human behavior, including speech behavior. In close-knit, small speech communities much is not said because it is assumed by all discourse participants. In large, diverse speech communities, effective discourse requires speakers to explicitly provide more information to hearers. Nevertheless, much information about cultural norms, such as the operation of automobile or alcohol consumption, is assumed by all discourse participants.

In addition to the "dark cognitive and cultural matter of discourse" that are assumed by all, there are other matters, for one reason or another, which cannot be stated. There are often prohibitions against certain speech because it may be considered sacrilegious, profane, offensive, or just inappropriate. Polite conversation in American culture, for example, does not allow small talk about personal hygiene, personal sexual activity or personal finances. As Otto Jespersen wrote:

> "But learning a language implies other things, learning what you may not say in the language, even though no reasonable ground can be given for the prohibition." Jespersen (1964: 139)

Much speech behavior is also bound by unstated and unique conventions for maintaining propriety and civil discourse.

Another one of the critical presuppositions in human discourse is honesty. Honesty is the default setting for most conversation. Listeners assume the speaker is being straightforward unless there is an uptake that indicates otherwise. There are many linguistic and non-linguistic clues that inform listeners that a speaker is being ironic, sarcastic, hyperbolic, deceitful or mocking, but the presupposition of straightforward truthful communication is generally the starting point. This presupposition is rarely questioned by semanticists who routinely treat all discourse samples and their derivative textual representations as straightforward honest declarative statements.

All human discourse requires non-speaking experience, innumerable presuppositions and expectations about human behavior. Under this broader construal of *context*, all this information is necessary for the proper utilization and interpretation of the word sounds. Although speakers do not have every presupposition about the word "*car*", "*open*" or "*drink*" in mind when they use the words, based on previous uses within a variety of situations, all competent speakers have some relevant experience, presuppositions and expectations that affect such speech. They have many pieces of evidence.

If there is a lack of experience or failure of presupposition discourse breaks down. Saying: "*i grabbed the wheel from the driver*", "*open this bottle*" or "*no drinking this week*" would make no sense whatsoever to a Munduruku tribesman, a newly arriving alien or a 15th century peasant time-traveling to the 21st century, none of whom would have the relevant experience and presuppositions about cars, bottles and alcohol, or how modern people use them.

The evidence is incontrovertible. The human use of vocal behavior is inextricably tied to a huge web of presuppositions. Yet, philosophers and linguists are notorious for analyzing the impoverished transcriptions of discourse, the "as if" speech. They parse symbolic representations of grammatically correct speech, a written text, and attempt to recreate the actual conditions under which the speech behavior could be used to reach various goals by adding back novelty conditions, felicity conditions, familiarity conditions etc. The conditions and presuppositions must be added back to make the "as if" speech amenable to a comprehensive analysis.

Even so, the common ground reconstructions are never complete. The prosodic features, gestures, facial expressions and numerous mutually shared presuppositions that induce correct listener uptake of the speaker's *meaning* are not reconstructed. No matter how many conditions and presuppositions analysts try to recreate, the textual recordings of speech simply do not carry the information necessary for an adequate interpretation of the human speech behavior they represent.

Of course, written words have occasions of use as well: when we write them and when we read them. They have multiple occasions of use because they can be used at many times in many places by many people. However, they also have a life of their own. These written symbols for the sounds remain after each occasion of use; they are enduring stable entities. Between uses, they lie dormant until a skilled person uses them again, and when a skilled person learns to read the word symbols, they resurrect the action, the verbal behavior, though they cannot resurrect the speaker's goals and presuppositions or the context of the original utterance. The present point

is that philosophers and linguists simply *must* analyze each speech act with all of its prosodic features, presuppositions and contextual elements to determine how it is being used on each occasion of use. They cannot analyze a written recording of a speech act, a written sentence, in isolation. They must *listen* to the data in context (broadly construed).

A Non-semantic Proposal
Acoustic Devices

> "From a more functional point of view, children are hearing and producing whole utterances, and their task is to break down an utterance into its constituent parts and so to understand what functional role is being played by each of those parts in the utterance as a whole. When they produce holophrases, children have simply assigned the function of the utterance to a single linguistic unit (perhaps with an associated intonation contour), and so in the future they will have to attend to other linguistic units in similar utterances and in this way fill out their linguistic expression to fit the adult-like conventions." Tomasello (2003: 40)

The human use of language begins with noise production. Language learners must first sort out and limit their noise production. They must learn to produce phonemes. Linguists have categorized over 150 phonemes. Yet, in any given speech community only a fraction of those 150+ are used. Learning infants acquire the phonemes that their caregivers use, and the evidence clearly shows that the rapidity of that acquisition is strongly correlated to the frequency of use by the caregivers. After acquisition, novice speakers combine these phonemes into functional units, holophrases, words, idioms, acronyms, abbreviations, etc., using the same prosodic features that others in their speech community use.

This functional interpretation of language acquisition in children is completely contrary to the current compositionality or lexical syntax theories where the *meaning* of a complex expression is determined by *the meanings* of its constituent words and their grammatical relationships. Such lexical syntax theories are after the fact reconstructions presupposing grammatically correct complete sentences composed of words with stable consistent lexical meanings. But these theories cannot be reconciled with the observed speech behavior of humans. Human speech simply cannot be deconstructed into *words with meanings*; it must be parsed into multipurpose acoustic devices of many kinds based on their functional value when all contextual elements, including relevant presuppositions and the speaker's speech history are recognized and accounted for.

Among competent adult speakers, counterexamples to lexical syntax theories are too numerous to count. Consider the much-used idiom, "kicked the bucket". (Sound it out.) In contemporary America the use of that utterance is not dependent upon knowing the theoretical meanings of the sounds "kicked", "the" or "bucket". Even non-English speakers can learn to use the idiom when and if they have heard it used in context in lieu of the word sound "died". They can learn how to use that holistic three-word lexeme and utilize it without regard for the dictionary meanings of its constituent terms or the grammar of the English language.

There are many such idioms that have *uses* totally unrelated to the individual words. There

are innumerable other "dead metaphors". They have lost their metaphorical connection, yet they remain in common use because speakers within certain speech communities know how to employ these acoustic units without having any knowledge whatsoever about their metaphorical origins. Etymology may reveal their historical roots, but that knowledge is not required to utilize them effectively. Dead or alive, metaphors are holistic functional devices with a host of presuppositions and contextual elements necessary for their successful deployment, while familiarity with the mythical meanings or functional values of their constituent terms is unnecessary.

Semanticists have come up with a dodge to account for this holistic word use phenomenon. They say that our speech is composed of *meaningful units* called *lexemes*. Morphemes, words, phrases, idioms, dead metaphors, even complete sentences can all be lexemes. "Kicked the bucket" as a lexeme, supposedly has a meaning that is not dependent upon its constituent words. Well, what happened to the individual word meanings? How do competent speakers know when to attach so-called semantic content to the individual words and when not to? What rules allow speakers to use the multiword holistic lexeme as a single unit and ignore the constituent terms? In fact, these "lexemes" are holistic devices just as their constituent words may be on other occasions of use.

Of late, many linguists have come to express the lexeme/meaning relationship as a "form/meaning pair". They say that words, as well as other grammatical *forms* such as idioms, have *meanings*. Linguists are driven to this form/meaning dodge through their inability to tie individual meanings to individual words or other units of grammar, in many cases. However, they need not do so because neither words nor idioms, nor any other grammatical forms, have meanings. Various combinations of phonemes have various functional values when used in various contexts, regardless of whether grammarians call these linguistic units morphemes, words, phrases, idioms, dead metaphors, lexemes or grammatical forms.

The semantic content of so-called lexemes is a recurring theme in *philosophy of mind*. Philosophers like to discuss the phenomenology of speech, the what-it's-like feel of speech activity. They attribute the phenomenal feel of vocal behavior to the semantic content of the activity. Terrence Horgan and John Tienson for example, discuss the phenomenal aspects of word use, "the what-it's-likeness of intentionality." They acknowledge that we often speech-think with words, and that when we use words, they are accompanied by "auditory imagery". Via Chalmers (2002: 523) (Speech-thinking is simply silent or covert speech, only accessible to the speaker.)

They then relate Galen Strawson's comparison between two people who listen to speech in a language familiar to one and foreign to the other. Imagine yourself (if you are a monolingual English speaker) at the UN listening to the Chinese representative speak in his native language. The phenomenal what-it's-like feel of this speech would be totally different for you as opposed to a native Chinese speaker. These philosophers would attribute this difference to the *content* of the speech activity, that is, listeners do or do not know the *meanings* of the words. (Ibid 522.)

Alternatively, I would suggest that the different what-it's-like feel of the speech is a result of listeners recognizing or not recognizing, the functional value of the acoustic devices being used. One listener recognizes what the speaker is *doing*; the other does not. Speakers and hearers must know *how* to use so-called lexemes and use them the same way, in the same context. They must recognize and appreciate the *utility* of each acoustic device which is engulfed in a lifetime of Chinese-speaking behavior, not the mythical meanings of the word symbols and other lexemes. At times, this recognition of utility also gives listeners the phenomenal what-its-like feel of speech

behavior in their native tongue at times. This sudden comprehension of speech or writing presents listeners and readers with an "Aha, now I get it!" moment.

Consider the following example from Horgan and Tienson:

> "Consider, as a similar example for a single speaker, first hearing 'Dogs dogs dog dog dogs,' without realizing that it is an English sentence, and then hearing it as the sentence of English that it is. The phenomenal difference between the experiences is palpable. (If you do not grasp the sentencehood of the 'dogs' sentence, recall that 'dog' is a verb in English, and compare, 'Cats dogs chase catch mice.')" Via Chalmers (2002: 523)

Even if we vocalize these sounds as we read them, we may not immediately grasp the *use* of these word sounds. The grammatical construction of the sentence is unclear as are our intuitions about the functional roles of the sounds. Ordinarily, the syntax, morphology, prosody and context give listeners clues as to the roles the words play. However, in this instance they are opaque.

In the above quote, which words are being used as devices to refer to animals and which ones are being used to refer to the action of dogging something, as would a doggedly determined detective? When hearers do recognize the functional roles the components play, the phenomenal experience changes, not because they become aware of the *content* of the words, but rather because they realize how the writer was employing the words.

We recognize that the speaker is referring variously to animals, a characteristic about them and an action they perform. That is the phenomenal feel that hits us at the "aha!" moment; we finally recognize what the speaker is attempting to accomplish with the words. He is making a statement about dogs that can be dogged by other dogs. Those dogs, in turn, can dog other dogs. We have all experienced many such "aha" moments when we recognize what someone else *is doing and how*: recognizing how an elegant computer program will function, or how a solution to an engineering problem works. We recognize *utility not meaning*.

Much similar recognition is an integral part of the socialization process. From contemporary social rituals to tool use, observers familiar with modern societies are able to appreciate the utility of much of their behavior. On the other hand, Munduruku tribesmen, a newly arriving alien or a 15th century peasant time traveling to the 21st century would be baffled by our language, social customs and use of modern technology because they lack the requisite encyclopedic knowledge. They simply would not understand the functional value of much of our behavior, including our vocal behavior. However, upon recognizing the utility of such behaviors they would have "aha" moments when a light goes on and they say "now I get it". They could then adopt the behavior and utilize it in the proper context.

The point is, linguists should not ask for the *meaning* of words, because they have none. We must follow the lead of the radical pragmaticists. Linguists can only ask what the functional role of any acoustic device is in a given situation for an individual speaker. Learning what we can do with these acoustic devices comes from others in our speech community. It is conditioned behavior that has been acquired by a human organism by means of lifelong iterated learning. Glib speakers have a whole bag of holistic utterances ready and waiting for an occasion of use, from morphemes to complete sentences such as: "yahearwhatiamsayin". Speakers learn the functional role of these utterances within their linguistic communities and within specific contexts; they then ad lib.

They can improvise because the implementation of acoustic devices is not limited to the ways they have been used in the past. Speakers can originate novel speech behavior just as they can create other novel behavior because they recognize the utility of such behavior. They can create new vocal combinations because they have learned *how* to use morphemes, idioms, metaphors, metonyms etc., not because they know their mythical meanings. For instance, they learn *how* they can embed phrases such as "*your dog*" in a multitude of syntactic sequences. It is recursive verbal behavior comparable to much other human behavior where small units of behavior are nested within other larger units of behavior.[8]

The combinations of phonemes that originate in human mouths may differ from culture to culture, but the functional value is often the same because human needs are often the same. For instance, speakers are able to get what they want by producing the sounds "*give it to me*" *or* "*damelo*", depending upon where they grow up. A phonetic device of that type, no matter what its grammatical form, will be found in almost every language *because it is useful*. Humans were making use of such culturally distinct phonetic combinations long before philosophers, linguists, grammarians and lexicologists began to parse, speak and write about words and meanings.

Do humans need acoustic devices that are larger than individual words? "*youbetcha*". Is that combination of phonemes a word, a sentence, a phrase, an idiom or a lexeme? None of the above! Does it have meaning or semantic content? No! Is it an acoustic device with a history and a function? Yes! It can be used in lieu of "*you're welcome*" and "*de nada*" to acknowledge a "*thank you*" from someone. In colloquial America, with appropriate prosody, facial expressions etc., it can also be used as a forceful affirmation or agreement indicator. In that case it is an acoustic device that has the same functional value as demonstrably nodding your head in agreement. Either form of *behavior* has the same effect on discourse participants. Will a competent speaker of American English know when, where, why and how to employ it? You bet cha!

Reference

> "There is support for such a pragmatic concept of reference in Strawson's (1950) claim that 'referring' is not something an expression does; it is something that someone can use an expression to do"; and in Searle's view that "in the sense in which speakers refer, expressions do not refer any more than they make promises or give orders" (1979: 155).
>
> "Thus, in discourse analysis, reference is treated as an action on the part of the speaker/writer." Brown and Yule (1983: 28)

Apart from the difficulties of explaining *words* and their so-called *meanings*, semantic theorists find it impossible to explain *reference*. Some grammatical units are said to *refer*. In addition to their meanings, or by virtue of their meanings, spoken words and phrases are often said to refer to people, objects, actions, events etc. For example, the spoken name "winston churchill" and the spoken definite description "the prime minister of england during the latter part of world war two" are said to *refer to* a specific man. Other examples: the word sound "sun" is supposed to *refer to* the astronomical body we see in the sky, the word sound "money" is supposed to *refer to* the paper and coins of the realm that are used in commercial transactions, the word sound "reading" is said to *refer to* the behavior you are engaged in now. We have been led by philosophers and linguists to believe that, because words are signs or symbols, the words and phrases do the referring, *whether they are spoken or written*.

Reference is a core issue in semantic theory, and throughout the history of semantics, the multiple uses of the word sounds "refer" and "reference" have caused a great deal of confusion. As a result other word sounds such as "signify", "designate" and "denote" have gone in and out of favor, but the basic idea is the same. Both spoken and the written words and phrases are said to direct the attention of listeners and readers to other things. The reference, *sign*ification, de*sign*ation or denotation is made by the signs or symbols independently of the speaker or writer who might use them. The relationship proposed is a relationship between the word symbols and *their* referents. *The reference is put in the symbols*. This characterization of both written and spoken words is widespread and pernicious. It is another of the semantic fallacies.

Of course, the acoustic devices "refer" and "reference" have no *meaning*. They have multiple *uses*, none of them precise. These uses tend to get conflated when philosophers and linguists talk about human word sound use. Philosophers P. F. Strawson and John Searle, per the above epigraph, have attempted to disambiguate the uses of "refer" by saying that word symbols signify, designate, denote, stand for, etc. while speakers *use those symbols to refer*. They attempted to split *reference* from signification, designation, denotation, standing for etc., because they discovered that certain words and phrases, whether written or spoken, could be *used to refer* to different things on different occasions; the putative referents are not stable. These theorists

attempted to take the *reference* out of the symbols and put it in the speaker or writer, taking reference out of the semantic realm and putting it squarely in the pragmatics realm. However, this distinction is not widely acknowledged in linguistic theory and practice. Most philosophers and linguists still talk about the *referents* of words and phrases.

Even if it had taken root, it simply changes the historic puzzles concerning *reference* into puzzles about standing for, signification, designation and denotation. Be-that-as-it-may, if someone asks for the referent of a word sound, we must say that there is none. Contrary to the claims of philosophers and linguists, acoustic devices used in referring acts by speakers, do not stand for, signify, designate, denote or refer to anything because they are not signs or symbols. They are acoustic units that have functional values when utilized by competent speakers in appropriate circumstances. As part of a vocal repertoire, some are devices that can be used to refer. At times, under certain conditions with appropriate considerations for context and presuppositions, speakers can perform referring acts with some acoustic devices and their derivative symbols. However, the reference does not lie in the grammatical unit, whether that unit is a name, a word, a phrase, a description or any other category grammarians prescribe; the reference lies in the behavior of the speaker.

The Referring Act

> "In the months around their first birthdays, and before they begin acquiring language in earnest, most infants in Western culture begin pointing, with some evidence that this is a widespread, if not universal, pattern cross-culturally (Butterworth 2003)." Tomasello (2008: 111)

> "Young children do not learn their initial linguistic conventions by simply associating or mapping arbitrary sounds onto recurrent experiences in an individualistic manner. Rather, they acquire their initial linguistic conventions by attempting to understand how others are using particular sounds to direct their attention within the space of their current common ground…" Tomasello (2008: 161)

> "When we observe the child in action, however, it becomes obvious that it is not only the word mama which means, say, 'Mama, put me in the chair,' but the child's whole behavior at that moment (his reaching out toward the chair, trying to hold on to it, etc.). … the only correct translation of mama, or of any other early words, is the pointing gesture. The word, at first, is a conventional substitute for the gesture; it appears long before the child's crucial 'discovery of language' and before he is capable of logical operations." Vigotsky (1962: 30)

As I mentioned previously, humans do many things with language: we command, pray, cajole, lie, question, entreat, joke, beckon, exclaim, promise etc. We use word sounds for many reasons without performing *a referring act*. If a speaker was to say to a child: "*come here*", for instance, the speaker would not have performed a referring act. This utterance may be directed at the child, but *the speaker has referred to* nothing. The speaker is not making a claim or a declaration *about* anything. The utterance is a command or directive that initiates a response from the listeners. That is its functional value. It is vocal behavior that moves a child in some way. Many such speech acts do not include a referring act. They have no subject matter. They are not about anything. Linguist James R. Hurford et al., have classified such acts as "dyadic" because they only involve a speaker and listeners. Hurford (2007: 167)

However, speech behavior that does have subject matter: questions, declarative statements et al., generally includes acts of reference because the speech is about something, a subject. This vocal behavior is "triadic" because it involves a speaker, listeners and *a subject*. Referring to the subject of conversation is called "topicalization" by many linguists. It is the process of fixing the subject of the conversation by *pointing with sounds*. One of the most fundamental thing we humans do with words, the thing we must know how to do in order to establish the subjects of our discourse, is to point with sounds. We must learn how to connect to the world with acoustic devices of many kinds.[9]

Ordinarily, speakers introduce the subject matter into a conversation with an initial referring act. I could ask about a dog, for instance, by using a deictic vocal device: "*what breed is that*" and point my finger to a nearby dog at the same time. In a PowerPoint presentation, while the audience is focused on the screen, I could flash a picture of a dog and say: "*this dog*", thereby establishing the subject of discussion with another deictic vocal pointing device. At times, presuppositions and contextual elements of discourse will lead to assumptions about the subject of the discourse by discourse participants. Two people could be viewing the neighbor's dog romping through their yards and one could ask the other: "*what breed is he*". The subject of the conversation is implied by the context of the utterance and a possible nod or a glance. The referent of "*he*" has been fixed by contextual elements of the conversation.

However, speakers often want to talk *about* something, or someone, displaced in time or space. Under appropriate circumstances and with correct presuppositions, a speaker could say: "*what breed is your dog*" even though the dog is not present. They are using the phonetic device "your dog" in a referring act. They are fixing the subject of discourse by means of a deictic referring act performed with sounds, (diectic because "*your dog*" is listener-centric). For a competent mature English speaker who hears these sounds in the proper context, the phonetic device "*your dog*" will have an effect. It will focus the listener's attention on a specific dog, even if the subject dog is displaced in time and/or space.

Speakers can also establish the subject of discourse by the use of speaker-centric (deictic) descriptions, as in: "*my neighbor jims german shepherd*" Speakers can use proper names to perform referring acts as well, by themselves or in combination with descriptions, as in: "*jim smiths dog*". There are many ways to fix the subject of the discourse by performing referring acts with various acoustic devices. The salient point being, that much of human speech requires topicalization or establishing a subject. Such vocal behavior often includes *acts of reference* with acoustic devices to draw the attention of other humans to the target of their discourse.

There are many ways to establish the subject of a conversation, but once it has been established, speakers must *track* the subject somehow in continuing discourse about it. Once the subject of discourse is established, speakers perform subsequent acts of reference during the production of declarative sentences or questions. Subsequent referring acts can be abbreviated. Instead of saying: "*my neighbor jims german shepherd*" each time, the speaker can say: "*jims dog*" or "*the dog*". Speakers can use the definite article in subsequent referring acts because the subject of conversation has already been established. The present point is, after the subject has been established, speakers maintain focus on the subject by means of their word-use skills, by performing subsequent referring acts with the definite article, pronouns etc. Discourse participants can thereby keep *track* of the subject.

Such linguistic referring acts establish and maintain focus on the subject of the discourse and allow speakers to continue saying things *about* the subject. The referring acts give conversations the aboutness that they have. Performing an act by stating "*jims dog*" produces a result in hearers. It is conditioned human behavior that generates behavior in other similarly conditioned humans. These acts of reference are performed with culturally specific phonetic combinations by competent speakers within any language community, and to reemphasize, *the behavior constitutes the reference, not the acoustic device employed in the act*. It is a fundamental form of human behavior performed with functional acoustic units; it is not symbol manipulation.

Analogously, in context, humans are able to connect to their targets with fingers, pointers, laser beams, sticks, eyes, their chin and feet. All of these can be used as devices in acts of reference. In all cases, *reference* is the relation between the person and the target of their pointing. The device used is incidental. None of the devices has any independent connection to the target, be they fingers or words (for reasons that will become apparent, the relation between certain phonetic units and the world will be discussed in much greater detail in the next chapter. For now, the *act* of reference is the focus.)

Unfortunately, because of one semantic fallacy, theorists often say that the sentence itself, either the written words or the spoken words, has aboutness or "intentionality" in the jargon of many philosophers. In this view, the vocal devices are said to be about something. For example, the vocal utterance: "jims dog ran away". The reference, the "intentionality" or the aboutness of the utterance is put in the words, not in the behavior of the speaker. The relationship of reference is said to be between the word symbols and the target, not between the speaker and the target. It is a fundamentally flawed characterization of linguistic reference that has toxic ramifications.

Referring acts are fundamental forms of *human behavior*. They are some of the first things human infants learn. Referring acts in children begin as gestures:

> "The ontogenetic origins of pointing are less clear than for other gestural categories (Lock et. al., 1990), but it appears to be a gesture with universally similar form.
>
> "In addition to these physical gestures, the infant develops vocal counterparts to them…Common to these systems are the views that these vocalizations are not truly symbolic, are very tied to specific contexts, and are not phonetically structured. The complementarity between these vocalizations and the gestures that are used alongside them is apparent in the empirical findings of Bates et. al. (1979), who concluded these systems are equivalent… Grieve & Hoogenraad (1979) have characterized these early forms as a means of *sharing* experiences rather than *meanings*; that is, they are not fully referential. This shift to the referential, symbolic domain is accomplished in the next stage… The transition to symbolic, referential communications is poorly understood. It involves the establishment of vocalizations as names. Vocalizations become less tied to contexts, and, apparently, more to objects. A 'naming explosion' has often been reported, and is taken as evidence that a child has gained the insight into the general principle that things have names." Gibson and Ingold (1993: 280)

The medieval analysis that words are names for things will not go away. It leads to untold confusion, as we shall see. What linguists mis-name the "naming explosion" is not naming at all. Children do not learn that things have names. Children learn that they can connect to things in the world with acoustic devices as well as their fingers. After they begin their pointing behavior with fingers, the maturation of the nervous system in children times the onset of vocal pointing. They then learn vocal behavior that compliments and ultimately replaces their fingers.

There is considerable clinical and neurological evidence to support this conclusion. One piece of evidence is the fact that linguistic impairments tend to correlate with gestural impairments. For instance:

> The present study has not shown that gesture and language are inseparable, but rather that in at least one clinical population, gesture and one aspect of language—the lexicon—are impaired in parallel manner." Gibson and Ingold (1993: 211)

> "For over a hundred years clinical observation has suggested that aphasia and ideomotor apraxia, more often than not, co-occur… Despite different methods of assessment and different subject selection criteria, researchers have consistently found significant correlations between gesture and language disturbance. This is particularly true for referential gestures, transitive actions used in the recognition or labeling of common objects." (Gibson and Ingold 1993: 194)

Humans learn how to point with sounds just as they point with their fingers. They are not learning unique names for unique items. They are not "labeling common objects". Theorists must simply wake from their dogmatic slumbers. The erroneous semantic word/referent paradigm for human vocal behavior that has dominated philosophy and linguistics corrupts all further analysis.

Much psychological research reveals equivalence between gestures and speech in early childhood communicative behavior. The utterance of the sound "*blanky*" is substituted for and combined with pointing gestures. However, that behavior does not establish a **meaning** for the word sound "*blanky*". Nor does it establish a *name* or *label* for an object or a *referent* for the word sound. It establishes a *functional value* for the sound. Children replace fingers with sounds as instruments for pointing and ultimately learn that the vocalizations used by competent speakers to do their pointing are far superior to fingers, because they can point to much more than objects in the here and now. They can point to things displaced in time and space.

Based on such research, James R. Hurford recently put it: "Displaced reference in language starts its evolutionary trajectory with an intuition of object permanence." Hurford (2007: 41) It is a well-established fact that, early on, children learn that the objects of their perception do not go out of existence when they are not perceived. "The intuition of object permanence" enables children to point to objects displace in time and space. Not only can a child make his "*blanky*" the subject of dad's attention when it falls on the floor next to the crib, he can point to the "*blanky*" out of view in the hall with a word sound. Dad dutifully responds to the "*blanky*" request regardless of whether the blanky is next to the crib or unseen in the hallway.

In any case, the vital point here is that the functional nature of human speech is apparent from the start. Initial human word sound use is egocentric. Children must be able to direct the hearer's attention to the object of their desire. Using sounds, they get what they want. The critical element in language learning is utility. Does the vocal behavior get the desired results? Does the child get his blanket when he says "*blanky*"? The sound "*blanky*" is functional behavior that is reinforced by the consequences of using it in context.

When humans learn how to point with their fingers or point to with sounds, they initially start with basic objects. They begin to learn *how* to direct the attention of caregivers to the ball, the blanket or the dog by pointing or uttering, the words: "*ball*", "*blanky*", and "*dog*". If word sounds are considered to be signs or symbols, it is easy to believe that the word sounds refer to, stand for, *sign*ify, de*sign*ate, denote, name or label the objects. This is what philosophers have

been assuming since antiquity. Bertrand Russell makes the claim explicit in the mid-twentieth century:

> "…'object words' are defined, logically, as words having meaning in isolation, and, psychologically, as words which have been learnt without its being necessary to have previously learnt any other words." Russell (1940: 80)

He and other logicians established their "object language" as the most fundamental in a hierarchy of languages.[10] To Russell the primary language was an "object language" or language of objects, the lowest type and the first one an infant learns. According to Russell and many other theorists, children first learn the *referents* of object words, such as "*ball*" and "*crib*" in their language acquisition process. This process of learning the referents of object words first supposedly accounts for what is called "the noun bias" in language acquisition by native speakers. That thoroughly debunked theory alleges that infants begin their language acquisition by learning the *meanings* or *referents* of the grammatical noun-class words first.

However, that theory is not even close to being accurate. Some children first learn to use word sounds as social lubricants or aids for influencing the behavior of others. Michael Tomasello points out that this aspect of language acquisition is often ignored:

> "And quite often the first words children learn are not nouns but personal-social words such as hello, goodbye, please, no, and thank you. Because these words are performatives, and not referential at all, they are largely ignored in discussions of children's first words. But the important point is that the nature of the referent involved cannot be the only factor determining whether children do or do not learn a word because they learn some words that lack a concrete referent." Tomasello (2003: 47)

The salient point here is that children learn *how* to use the vocal devices to achieve their goals. The word sounds do not have referents, concrete or otherwise. Word sounds have functional value. Some have value as social lubricants. Some can be used in performative speech acts: "*i promise to be good dad*". Others have value as devices for pointing. There is no need to posit meanings and referents for words or any other gerrymandered grammatical units; and to say that children learn to name things is positively medieval, or worse.

Once their referring skills improve, children can connect to more than the objects of their desire. They can point to the running of the dog, not just the dog. A caregiver points to a running dog by saying "*the dog is running*". The running of the dog is similar to the running of the cat. The children distill that similarity out of the flux of experience with the help of the referring acts of others. They recognize that they can point to the action of running with sounds. They learn the functional value of basic verbs. They learn to point to the running, the walking and so on. They engage in iterated learning.

Nouns and verbs are often used to point to objects and actions. Not incidentally, nouns and verbs are the two grammatical classes of word sounds that appear to be universal, depending on how you define nouns and verbs of course.[11] Later on, modifiers such as adjectives and adverbs are utilized in pointing to the *black* dog running *down* the driveway, although adjectives and adverbs are not present in some languages. Children initially learn to use sounds to point to objects, then actions, events, directions, kind-sortals, etc. that their caregivers connect with via

language, even when displaced in time and space. All of these functional acoustic devices become part of a child's vocal repertoire.

Children also learn that pointing with specific phonetic combinations is much more precise than pointing with fingers. Pointing with fingers is confusing because hearers cannot be sure what in the child's field of vision they are pointing to. If a child were to point to a running black dog with their finger and say "*flibix*", how does anyone know what they are pointing at? The finger goes out and the sound "*flibix*" comes out of the child's mouth. The hearer does not know if the child is pointing at the dog, the dog's leg, the color of the dog, or the dog's running. They cannot use her finger to point at the blackness as something distinct from the dog's running or the dog's leg. Only after the child learns how to use culturally specific word sounds can they point to the color of the subject, the shape of the subject, or the action of the subject.

Fingers are used to point, but what they are being used to point at can be quite confusing. Ludwig Wittgenstein clearly recognized the problems with gestural pointing:

> "Point to a piece of paper. And now point to its shape—now to its color—now to its number… How did you do it?" Wittgenstein (1958a#33):

What prevented Wittgenstein from recognizing the pointing use of sounds was his conviction that words are symbols that refer to, stand for, represent, encode, signify, designate or denote other things. However, the phonetic units a child uses are not symbols; they are devices that have functional values based on the speech history of the child. The functional value of these various devices is stored in the form of 3-D neurological structures within *the brain*.

Human infants learn how to perform referring acts with sounds. However, unlike finger pointing and because of the ability to point at things displaced in time and space, speakers can point to inferred entities with phonetic units. If a hearer has complete contextual congruence and a mutually shared history of word sound use, the speaker can point to angels, demons, spirits, minds, mojo, centers of gravity, point-particles, the concepts of prosperity, disappointment and infinity. Such referring acts often go unexamined because we are accustomed to this vocal behavior. But when we do reflect upon them, not surprisingly, the response is often "*what are you talking about*".

When we humans talk *about* many "things" we have the desire to objectify them and make existential claims about these things. We have a tendency to say that when we put a word in the subject position of a sentence and talk about *it*, there must *be* something that we are talking about, e.g. disappointment. Whatever the subject matter is, it must have existence, physical, metaphysical or mental.

Alfred Bloom wrote extensively on this "entification" process for English speakers. (he claimed that traditional Chinese speakers do not "entify"):

> "But when an English speaker adds '-ity,'-ness', '-ance,' '-tion,'-ment,' '-age' to talk of 'sincerity,' 'redness,' 'importance' and 'abstraction,' of 'the committee's 'acceptance' of that proposal,' of 'John's 'discovery' of that ancient theory,' of 'the proliferation' of nuclear arms,' or of 'Joan's 'generalization' of the argument from one context to another,' he talks of properties and actions as if they were things; he converts in effect what are his baseline model of reality characteristics of things and acts into things in themselves—and by means of such entification,

> ascends to a more conceptually detached way of dividing up the world." Bloom (1981: 37)

Other theorists have been led to the same conclusion about the English language. Michael Tomasello states:

> "Langacker (1987b) notes that the discourse function of identifying the participants in events and states of affairs requires language users to construe whatever they wish to talk about as a 'thing,' so it can be referred to, no matter what its 'true' ontological status. And the major characteristic of a 'thing' is that it is bounded often spatially, but sometimes only conceptually (as in *The disappointment lasted all night*) in a time-stable manner. (Givon, 1979) Tomasello (2003: 197)

These theorists can be forgiven for their lapses into mentalism with the use of "conceptually" detached or bounded. What they explain as conceptually detached or bounded is accurately explained as behaviorally detached or bounded. What induces this entification of grammatical subjects is the behavioral intuitions inculcated through the previous uses of word sounds to point to objects which do exist.

Because of our vocal acts of reference, we speakers *infer* sincerity, redness, importance, acceptance, disappointment, gods, demons, animal spirits, gravitational fields, non-extended point particles, and on and on, to give order and stability to what we sense. These inferences get us into inextricable philosophical perplexities, as we shall see. However, the universe does not change because of human utterances. Nothing of ontological significance results from the noises coming out of human mouths. We speaking humans should not be misled by our entification.

Nevertheless, because of this entification process, many philosophers and linguists have come to talk a certain way about their use of word sounds. They say that there must *be* something referred to by a word sound or phrase. Thus, if they use the word sound "chair" in a generic way not referring to any specific chair as in: "bring a chair with you", they claim that there must *be* something referred to by the word sound "chair". They claim that the word stands for, represents or refers to a universal or an abstraction or the concept of a chair. Au contraire, the word "chair" stands for, represents and refers to nothing. That phonetic device is not a symbol. However, it does have a functional value within the speech repertoire of a competent English speaker.

In this instance "a chair" is used to indicate an unknown or unspecified subject of a certain kind; it is used as a placeholder or variable. That is its functional value. "a chair" functions as a place holder or variable just like "A" does in: A + 7 = 12. Words often function as placeholders until speakers get the specific identifiable people, objects, actions, events, kind-sortals, etc. as subjects of discussion. Indefinite descriptions, used as variables, such as "a chair" or "any dog" and terms such as "somebody", "anytime", "something" are ubiquitous in our linguistic behavior. These variables allow mature speakers to speak about unknown or unspecified subjects until they can make a more specific reference.

For example: "anybody can come", "whenever you get there", "something for nothing", "the whatchamacallit is here". Speakers learn to use various culturally specific phonetic units as variables to make claims about unspecified people, places, objects and so on.

When a speaker abuses linguistic variables, it baffles the listeners. *Someone* can say: "*a man is something*". It has the correct grammatical form but seems vacuous because there is no referring act performed. "*a man*" and "*something*" are used as variables until a specific man and a specific kind-sortal can be selected. In this case, both the subject and the predicate are indeterminate. A hearer doesn't know quite what to make of such statements because there is no subject of discourse. There is nothing for the statement to be *about*.

Another example is "*a man is a man*". That utterance seems to be egregiously vacuous. It is an obvious tautology. Most English speakers know the functional value of the phonetic device "*a man*" and realize that it is being used as a variable. No acts of reference have been performed with that utterance. The statement is not about anyone. The question should be: what use could possibly be made of that utterance? What human goals could be furthered through the use of the utterance "*a man is a man*"? A speech act used in this way is often pointless blather. Competent speakers recognize that fact.

Nevertheless, someone may use "*a man is a man*" sensibly. Using the prosodic features of speech in context, with that utterance a speaker may imply that men and women are different and that a man who is the subject of the conversation is indeed acting like a man in these circumstances. The conventional explanation of this phenomenon would distinguish between what is said and what is implied. We are told that it is not what the words mean but what the speaker means with the words. In context with appropriate presuppositions, prosody and speaker goals, a competent speaker can employ the utterance "*a man is a man*" to perform an implicature, though, most often, the phonetic device "*a man*" is simply *used* as a variable.

Many phonetic units can be utilized as variables or referring-use expressions based on speaker goals and context. For example, a speaker may use "*the president*" as a variable, intending to refer to the man who occupies the Oval Office, whoever that might be. He could say: "*the president needs to be experienced in foreign policy matters*", not intending to refer to the current president specifically, but to any person who is president. This is the aforementioned *de dicto* reading of "*the president*" as opposed to the *de re* reading in which that phrase is used in context to refer to a specific president, say Donald Trump.

A speaker may *use* that definite description as a variable, *or* in a referring act depending upon context and speaker goals. If theorists believe that the phrase itself refers to, stands for, signifies, designates or denotes a specific individual their analysis falters. One such theorist is Philosopher Keith Donnellan who sets up one puzzle this way:

> "If someone said, for example, in 1960 before he had any idea that Mr. Goldwater would be the Republican nominee in 1964, "The Republican candidate for president in 1964 will be a conservative"… the definite description here would denote Mr. Goldwater. But would we wish to say that the speaker had referred to, mentioned, or talked about Mr. Goldwater? I feel that these terms would be out of place. Yet if we identify referring and denoting, it ought to be possible for it to turn out (after the Republican Convention) that the speaker had, unknown to himself, referred in 1960 to Mr. Goldwater. On my view, however, while the definite description used did denote Mr. Goldwater (using Russell's definition) the speaker used it *attributively* and did not *refer* to Mr. Goldwater." Donnellan via Martinich (1985: 253)

The correct analysis of Donnellan's scenario is that before the Republican convention, whoever used the phonetic device "the republican candidate for president in 1964" would have been speaking about an indeterminate person and attributing something to him, whoever he might be. The definite description was being used as a variable. After the nominating convention, when the Republican candidate had been established, the specific individual (Barry Goldwater) could be referred to with that acoustic device. In one incident of use the subject is not known, in the other he is.

Speakers deploy various linguistic devices to perform their referring tasks depending upon many presuppositions and other contextual elements, including the time of the utterance. Donnellan's example clearly demonstrates that the reference does not lie in the acoustic device. The initial definite description "the republican candidate for president in 1964" used prematurely refers to no one. Nor does it denote anyone. It can be used as a variable or used to refer to someone in particular, depending upon the circumstances. Competent speakers recognize that the utility of these descriptions varies and effortlessly adopt the various uses.

Regarding "definite descriptions", Donnellan also asserted that if a speaker believes that nothing fits the description, "it is likely that he is not using it referentially." even though he says:

> "it is possible for a definite description to be used referentially where the speaker believes that nothing fits the description." He claims that "there is a presumption that the speaker believes something fits the description – namely, that to which he refers." (Ibid: 253)

We should not make such presumptions. Speakers can utilize "definite descriptions" and "denoting phrases" in many ways. Mocking is one of them. For example, a speaker could have mockingly referred to Nicolas Sarkozy through the use of the description "the King of France" even though they are fully aware of the fact that there is no king of France.

The use of denoting phrases or definite descriptions for referring acts is fraught with possible misinterpretations. The fact that the phrases themselves, both the utterances and the written recordings of those utterances, *can be used* to refer to different things has been amply demonstrated by many theoreticians. The same grammatical unit can have varying functional values depending upon a multitude of contextual elements that speakers must recognize to employ the terms effectively. Speakers can assert, imply, mock etc. with the same grammatical units, depending upon the circumstances.

The successful use of referential linguistic devices, no matter what they are called by grammarians and philosophers, is always context dependent. In Donnellan's example there are multiple scenarios where the referring act fails. Suppose the hearer knows nothing about American politics. Suppose the hearer knows nothing about history. The hearer may be a perfectly competent English speaker without the requisite background knowledge for the reference to succeed. The referring act by the speaker simply fails to produce the desired results. Sometimes definite descriptions are utilized successfully, sometimes not, depending upon a multitude of factors that competent speakers must recognize and consider when they deploy these devices.

The form of the speech act often gives clues to what the speaker is trying to accomplish, but much more is needed to properly construe an act of reference. The listeners must detect and consider the observable elements accompanying the speech: prosody, gestures, expressions,

previous discourse, and innumerable presuppositions along with the immediate context. Their previous vocal experiences enable competent listeners to rapidly interpret all these elements of context and accurately recognize the vocal behavior as a referring act most of the time.

Sometimes, the referring act is successful despite the inappropriate use of a linguistic device. For example, a speaker may be intending to refer to a *presumptive nominee* before the Republican convention, not the candidate. He may have used the denoting phrase "*the republican candidate for president in 1964*" inappropriately, i.e. before the presumptive nominee was actually nominated at the convention. Nevertheless, listeners could recognize the speaker's goals and focus their attention, accurately, on the person who is the presumptive nominee but not yet the candidate. From the speaker's standpoint, his referring act was successful, in spite of the fact that he used an inappropriate linguistic device.

A speaker can also be mistaken about the target of his referring act. One of the most famous examples from Bertrand Russell is "*the present King of france*". Someone may say: "*the present King of france is bald*" and make perfect sense, even though there is no present king of France. To a minimally informed person, the speaker's referring act simply failed. The hearers do not know about whom the speaker is talking. Listeners recognize the goal of the speaker and the reference he was attempting, *but the referring act failed*. The speaker's behavior failed, not the words. Had he used the words in other circumstances his behavior may have succeeded. Moreover, he could be using that definite description mockingly as in the case mentioned above.

Listeners might realize that a speaker is performing a referring act by virtue of the form, yet the act itself is unsuccessful. Without knowing the speaker's objectives, listeners have no idea if their referring act was successful or not. Only the speaker can determine that. If the speaker and his listeners are talking about the same subject, their referring act has been successful. However, all referring acts are subject to failure, whether they are done with fingers, laser beams or other devices such as names, demonstratives, definite descriptions, denoting phrases, etc.

When denoting phrases or definite descriptions are recorded symbolically in the written form, readers recognize the writer's reference by virtue of the speech act that has been recorded. The text only transcribes the speech act of the writer; it records the acoustic devices utilized by the writer, either silently or aloud, within a communicative background of encyclopedic knowledge. These written references still require all the presuppositions and contextual elements that vocal references do. The point is, the textual recording still does not refer to anything other than the functional behavior it records, and that behavior is what does the work.

On a practical level, we are able to perform referring acts with spoken words in many ways. We can use proper names such as: "*george washington*". We can use definite descriptions such as: "*the father of our country*". We can refer by position in space or time: "*the man on the far right in the painting*", or "*the man who preceded thomas jefferson as president*". People who are adept speakers are able to refer to the same thing in myriad ways. The more one knows about something, the more ways one can refer to it. I can say "*william jefferson clinton bill clinton the 42nd us president hillary clinton's husband the last president to be impeached,*" etc.,etc. And by so altering our method of referring, we can spin the referring act with *affective* language use.

In addition to their referring-use functional role, most referring-use acoustic devices have an affective functional role in human behavior. That is not to say that words have *emotional*

meanings. It just means that different words and combinations of words have different emotional effects. Words with an affective role to play in the use of language serve to evoke emotions, express feelings, and inspire action. Words produce visceral responses.[12] Many words are "fightin' words". Other words are verbal palliatives to facilitate civil exchanges and prevent them from becoming heated. This affective force is an essential element in all speech behavior, including acts of reference. After all, "It is not what you say, but how you say it."

Referring acts are not sterile. Proper names come closest to isolating the referring role from the affective role of the behavior. Proper names, supposedly, have no senses or connotations. In spite of that, many parents take extraordinary care in naming their children, fully recognizing the effects of naming a son "*sue*" or "*rover*". This affective role of various acoustic devices cannot be minimized or ignored in analyzing human speech. Nor can philosophers, logicians or linguists use the graphical representations for the sounds, i.e. text, as a medium of analysis and expect to find context-indifferent and affectively sterile *meanings* for the words used in referring acts.

The referential role and the affective role of acoustic units vary with each use and user. People use sounds in the way they have been conditioned to use them. Some may have little or no referential value for them; others may have little or no affective value. However, the functional roles the acoustic devices play within human speech behavior are not separated or contradictory, they are complementary. Referring acts conducted with sounds or their derivative written symbols almost invariably have an affective component that mature speakers recognize and account for in a judicious selection of words and phrases with which they perform their acts of reference.

The affective functional role of referring use expressions is scalar, with "*this*", "*that*" and proper names at one end of the scale, and "*the omniscient supreme leader*" at the other. This affective functional role of words and expressions drove Bertrand Russell to the conclusion that "*this*" and "*that*" were the only logically proper names, "names" with no connotations or senses. The sounds "*this*" and "*that*" have a shared egocentricity when used by a speaker with a demonstrative point of a finger in a referring act near the hearer. So, the referential efficacy is great, and the affective force is near zero, under these circumstances. (Prosody could still add affective force.) At the other end of the scale, the definite description "*the omniscient supreme leader*" seems to have a great deal of affective force, enough to inspire humans to kill each other. Words have that power and competent speakers know it.

Of course, many philosophers recognize that much speech behavior is used affectively. There is nothing revolutionary about this hypothesis. J. S. Mill spoke of connotations and denotations. Gottlob Frege spoke of sense and reference (sinn and bedeutung). J. L. Austin characterized the affective use of language as: "...the second kind of 'meaning', or the force, of an expression." Caton (1970: 43) Yet many philosophers and linguists, under the influence of logicians, have chosen to ignore this functional role of human speech in their search for invariant sterile meanings and referents encoded in the symbols. Gilbert Ryle, for instance, wrote: "Differences in stylistic elegance, rhetorical persuasiveness, and social propriety need to be considered, but not, save *per accidens*, by philosophers." Caton (1970: 126) Ryle recognized the different functional roles of verbal behavior, yet, he wanted to ignore the affective use of words in the search for the core invariant semantic content which could provide the stable truth value for propositions. That ignoramus didn't know what he was talking about.

Prosody provides another avenue for the affective use of speech behavior. There is a great deal of cross language evidence that the prosodic features of speech are the first thing infants pick up

on. They react to the tone, rhythm, volume, etc. before they react to any of the theoretical semantic content. These prosodic features of speech often do far more to inform listeners about the emotional state and the goals of the speaker than the words themselves. How speakers alter their prosody reveals a great deal about their purpose and their strategy. Politicians and pundits regularly shape their referring acts with prosody as well as word selection to appeal to their audiences.

In addition to the prosodic features of speech, there are innumerable clues that accompany speech behavior. There are multiple uses for word sounds depending upon gestures, body language, facial expressions etc. that contribute to the affective force of speech. A lifted eyebrow, a wink, a curled lip: all sorts of clues tell us that the speaker is conducting a referring act in a disparaging way for instance. Listeners assess speech in this context. The semantic paradigm that allows for the analysis of words and phrases devoid of affective force should be thoroughly discredited. The paradigmatic straightforward grammatically well-formed declarative sentence delivered without any affective force is beloved by philosophers and linguists, but it represents a minute fraction of actual human speech behavior.

Antonio R. Damasio (1994) argues persuasively that this emotive aspect of language use has its roots in neurophysiology. These feelings generated by words are an integral part of our decision making and cannot be separated from the reasoning process. We rarely have all the information necessary to make completely rational decisions relying on reasoning with emotionless indicative statements. We often rely on what he calls "somatic markers". Yet this theory cannot be reconciled with current semantic theory or logic. Completely neutral referential acts without any affective force are still pipe dreams for linguists and logicians.

There is also a reciprocal role for referring acts in human emotions. The words speakers employ say as much about the speaker as they do about the subject of their speech. People judge other people based on their word use. They guesstimate a speaker's status, sophistication, intelligence, education etc. based on his or her speech. The highbrow British accents heard on television in England and America are widely regarded as evidence of superior standing in all these areas compared to the lowbrow chatter heard on sitcoms and talk shows. The performance of referring acts with style and elegance is a finely-honed skill that pays many dividends for those who perfect it.

When speakers assess the impact of their referring acts, they also recognize that the act may have an attributive role; they can attribute characteristics to the subject of their reference through their choice of referring devices. This functional role is a complement to the referential role and the affective role of a referential speech act. For instance, someone could say: "*jfk was a great president*". The attribution of greatness is done with a predicate. The moniker "*jfk*" can be used referentially without much attributive or affective force. The response could be: "*that sob led us into viet nam*". The referring act is carried out through the use of "*that sob*" which also has a great deal of affective and attributive force. We have attributed certain traits to JFK by tracking him through the use of "*that sob*".

Attributing characteristics to the subject of reference via the referring act has confused semantic theorists for centuries. Gottlob Frege, for example, confronted this issue in the 19th century. He was perplexed by the paradox of reference. How can two expressions *that refer* to the same object have different *meanings*? By his analysis, the phrases "*the morning star*" and "*the evening star*" both de*sign*ate the same object, the planet Venus. Yet, he concluded they

have very different *senses*. His analysis produced a complicated and implausible solution that began with the distinction between sense and reference (sinn und bedeutung). In his words with his parentheses:

> "Now it is plausible to connect with a sign (name, word combination, expression) not only the designated object, which may be called the nominatum of the sign, but also the sense (connotation, meaning) of the sign in which is contained the manner and the context of the presentation…We let a sign express its sense and designate its nominatum." Frege via Martinich (1985: 200)

Frege made the same fundamental error that others did. He treated spoken words as symbols; "signs" in his terminology. Because he considered spoken words to be signs that de*sign*ate, the reference and the connotation was in the "sign" not the speaker's act. He failed to recognize that *the referring acts*, done with acoustic devices, have attributive and affective components. *It is the behavior that must be analyzed*, behavior with many functional roles in human communication.

Referring use words and descriptions can be *used* attributively and affectively. Clearly, speakers can spin a referring act in many ways. Philosophers might say that words and phrases have different "senses" or "connotations". However, this is nothing more than saying that the words and phrases have multiple roles to play in the communicative behavior humans acquire from their caregivers. The attributive and affective roles that words play in human vocal behavior cannot be separated from their roles as referring devices.

Moreover, there is no mental entity that is expressed or represented by a finger-pointing gesture. Nor is there any mental entity expressed or represented when you point with referential acoustic devices. Speakers are stimulated internally or externally and point to their target with eyes, their chin, fingers, laser beams or word sounds. They are engaging in behavior that generates a response in similarly skilled humans. Saying; "*the dog*", "*the running*" or "*the blackness*" have an effect. They focus the hearer's attention. No immaterial thoughts, ideas or concepts are necessary to implement or explain the use of these devices.

Unfortunately, neither pointing with fingers nor the use of acoustic devices are precise acts. This indeterminacy of reference has been a bugaboo of empiricists, logicians and logical positivists. Truth value is the Holy Grail for them, but the truth of indicative or declarative statements depended upon precise reference. There could be no disputes about what vocal word symbols referred to if these theorists were to determine the truth value of their propositions. Yet, the referents of word symbols (within their semantic paradigm) were imprecise. To this day, they search for word symbols, both written and vocal, with precise referents. They look for "rigid designators" and "natural kind terms" with unambiguous semantic referents, to no avail.

The point here is that the indeterminacy of reference is *not* due to the indeterminacy of word sounds because the word sounds do not refer to anything. Indeterminacy is due to inadequate skill of the speaker or the improper use of that skill. Accomplished speakers can make more precise reference than those with fewer words at their disposal. Their repertoire of acoustic devices and the ability to combine them is a skill that enables more precise reference, but not perfect reference. Referring acts are still subject to failure. If the hearer's attention is not directed to the speaker's target, the referential act fails, no matter what word sounds or other pointing devices they use.

The salient feature of language learning is functional value. Learners may get reinforcement from their speech acts. Does the phonetic device get the work done? Does baby get the right

blanket when he says "*blue blanky*". Babies learn to point more or less precisely with various word combinations and get the appropriate responses from their listeners. They learn to point to the "*blue blanky… now*". At this stage of development language learners know nothing about truth, falsity or how to produce a declarative statement that is true or false. Language learners, however, are not affirming the truth or falsity of propositions when they first learn to speak complete indicative sentences. They are learning how to point and connect with acoustic devices in a multiplicity of situations.

Learning this referring-with-sound skill is a *precondition* to propositional speech about the world. Without the ability to perform referring acts with sounds us humans cannot say much about the world. We cannot produce declarative statements. Talking about anything requires fixing and tracking the subject matter of our discourse. We must be able to point to the subject (the dog), the actions (the running dog) and the kind-sortal (the black dog), and we perform these acts with culturally specific natural language words. To talk *about* anything in the world, to engage in declarative speech, humans must be able to point with acoustic devices of many kinds.

The incorrect analysis of the referring acts of children has led linguists to many category mistakes. One such mistake is the distinction linguists make between content words and *grammatical elements*. The word sounds "*dog*", "*running*" and "*black*" would be examples of content words, words with hypothetical semantic content. Grammatical elements or grammatical items, on the other hand, are functional operators without any semantic content: conjunctions, determiners, complementizers, adjuncts et al. All these grammatical elements have functional regularities which contribute to the meaning of a phrase or sentence within a grammar it is said, but have no independent meaning or semantic content according to linguists.

This content/function dichotomy is also realized by linguists in the distinction between *categorematic* and *syncategorematic* expressions. The former are said to have independent content or meanings. The latter do not:

> "Categorematic expressions, which include the vast majority of words, are the descriptive words such as nouns, adjectives and verbs. These words are termed categorematic because their descriptive content, or sense, provides a basis for categorization… Syncategorematic words are all the rest, including the examples here… *as, some, because, for, to although, if, since, and most, all* …What syncategorematic words have in common is that they do not have independent, easily paraphrasable meanings on their own, and we can only describe their meanings by placing them in context. Unlike the categorematic words, they are not themselves descriptive of reality, do not denote parts of reality. Rather, they serve to modify categorematic expressions…" Kearns (2000: 5)

Language theorists are forced into this content/function bifurcation because of the semantic fallacies. While they fully recognize that some words, viz. grammatical elements or syncategorematic words, are functional components of speech and have no independent semantic content or meanings, they insist that other words do have meanings.

However, these so called "content words" contain nothing and refer to nothing. They have no meanings, no semantic content and no referents. What linguists refer to as "content words" or "categorematic expressions" are acoustic devices that have functional values just as their non-

content words do. Such words and expressions are functional devices because they produce effects in hearers. They are used by humans to point, deliver affective force, attribute characteristics to the referent of the act and a host of other functions. They move people in some way. The semantic fallacies lead theorists to the content/function divide when, in fact, there was and still is no divide.

Although the sounds may vary from language to language and occurrence to occurrence, the functional role of many of these phonetic units is apparent. By using word sounds in many different grammatical categories humans are able to affect their listeners in ways they desire. All word sounds do work. Contemporary anthropologist Michael Tomasello is a leading proponent of a functional interpretation of language acquisition and use. His work has led him to the following conclusion about many so-called "referring expressions":

> "…what is typically called a noun phrase may be constituted by anything from a proper name to a pronoun to a common noun with a determiner and a relative clause hanging off it. But for many syntactic purposes these may all be treated as the same kind of unit. How can this be—given very different surface forms? The only reasonable answer is that they are treated as units of the same type because they all do the same job in utterances: they identify a referent playing some role in the scene being depicted. Indeed, given the very different forms of the different nominals involved, it is difficult to even think of an alternative to this functionally based account." Tomasello (2003: 302)

Moreover, just as humans can direct a listener's attention to the "red ball rolling down the driveway", we can direct the listener's attention to our own speech. We humans can refer to our use of word sounds just as we can refer to our other behavior. Our speech can be reflexive. By using the proper acoustic devices in referring acts we speakers can refer to the processes of speaking. We talk about talking. However, do not be deceived. We are *not* talking about the *words with meanings and referents*. We are talking about observable behavior. There is no need to invent speaker meanings, ideas, propositions, thoughts or concepts in the mind of the speaker or independent speaker-neutral literal meanings and referents. All of the philosophical and linguistic discussions about meaning and reference are a result of the semantic fallacies and the dualism inherent in such speech about speech.

Some philosophers have insisted that reference is in the act, not in the word symbols, e.g. John Searle. In spite of their efforts, word/referent is still the paradigmatic model used in contemporary semantics. The process of metaphoric extension in linguistic theory, for example, is said to give a word a new referent which has something in common with the old referent. Metonymic extension is said to give words new referents as well. This sort of analysis is completely misguided by the semantic fallacies. It is high time that philosophers and linguists acknowledge this fact and get on with the analysis of referring acts conducted by humans with the various linguistic devices at their disposal. Linguistic reference is conditioned human *behavior* performed in response to stimuli as a result of previous reinforcement.

Representation

> "Besides articulate sounds, therefore, it was further necessary that he should be able to use these sounds as signs of internal conceptions; and to make them stand as marks for the ideas within his own mind, whereby they might be made known to others, and the thoughts of men's minds be conveyed from one to another."
>
> "Of Words" John Locke, 1690

Let me begin this part of my disquisition with a disclaimer. I must use the language I was brought up in. Consequently, it is not possible for me to avoid using mental terms when discussing language theory. We modern English speakers, much like John Locke, regularly talk about *minds* containing *thoughts, ideas, conceptions* which are conveyed to other minds by means of language. (The conduit metaphor.) Many such mental terms will remain useful elements when I write about English speech behavior. However, just as saying: "oh my god" does not stake out a theological position, saying: "i have an idea" does not put me in the dualist camp. This is how I have been conditioned to use words. That being said, let's discuss *representation* and *mind/body dualism* in both linguistic theory and English speech about speech. (Dualism will be taken up in the next chapter.)

Most conventional semantic theories suggest that speech is a dual-track process taking place in a dualistic universe. Speakers are said to have thoughts, ideas, concepts and propositions followed by or accompanied simultaneously by the verbal expression of those thoughts etc. The thoughts, ideas, concepts and propositions are *mental* in nature while the speaking behavior is allocated to the *physical* world. According to this theory these unobservable non-physical entities in the speaker's mind or consciousness are said to be expressed or represented by the word sounds that are projected by the speaker's physical speech organs. Mind/body dualism of one form or other is required to maintain this characterization of human speech.

Imagine a child who has already learned to use the sounds "cat" and "dog" in a referring way. The child watches a black dog running, then a white cat running. The English-speaking parent says: "running dog", then: "running cat". At some point, the child realizes that the sound "running" can be used to pick out the recurrent characteristic of running displayed by both animals. He recognizes running, the action. He has made a kind-sortal of running as opposed to walking. Philosophers and linguists contend that an ethereal thought, idea, concept, meaning or mental representation of [RUNNING] is created in that child's *mind*.

Alternatively, the child connects a word sound to a pre-existing mental entity, the nativists' option. The third option is a non-mind-dwelling universal or abstraction which is designated by the word sound "running" and enjoys a third ontological status outside of dualism, e.g. subsistence (Frege). However, why do we need to create these various non-physical correlates for human speech behavior? We do because our symbolic representational characterization of spoken

words and our conditioned English speech about speech *demand* it.

This dualistic *representational* explanation for human speech was popularized by philosophers, such as Locke in the above epigraph, and has since become a part of everyday English discourse. As English speakers, this ontological divide is now embedded in our linguistic behavior about our linguistic behavior. This is how we English-speaking humans talk about our talk. We have been conditioned to say that we have mind-dwelling entities as the semantic correlates for the word sounds and other grammatical units projected by our vocal system. Yet there is no empirical evidence whatsoever to support this speech behavior about our speech behavior and, upon critical analysis, even the theoretical foundation is shaky at best.

Theories that posit *mental phenomena* as necessary precursors or accompaniments to speech behavior are hard to square with the linguistic evidence and present innumerable puzzles. Consider *concepts*. The need for these mind-dwelling phenomena in linguistic analysis has been promoted by means of the following argument. The acoustic device "a dog", as in "i want a dog" cannot stand for, signify, designate, denote, express, represent or refer to a particular dog, say Fido or Rover. The indefinite phrase "a dog" must stand for or represent a universal dog, the idea of dog or the *concept* of dog. Many general words, it is asserted, must represent general concepts in the mind of the speaker. Plato had his ideal dog as the correlate for the word "dog". Aristotle had his dog impression on the soul. Succeeding theorists such as John Locke have ensconced thoughts, ideas and "internal conceptions" in the mind of the speaker as *mental* correlates for words such as "dog". This semantic paradigm of word sounds as symbols representing occult entities within human heads is as old as occidental philosophy and entirely misguided. It is the third of the semantic fallacies, i.e. r*epresentation*.

A word about etymology is in order here. Etymology is history, the history of linguistic tools. It is a history of how acoustic devices have been utilized. Like definitions, the etymology of a word's use is informative but unnecessary for the successful deployment of the word. Speakers grasp the functional value of acoustic devices, regardless of the historical backdrop or the dictionary definitions. However, that functional value which is handed down from generation to generation operates in a metaphysical milieu. That metaphysical background is presupposed in the word's use and is often revealed in its etymology. In the case of the word sound "concept", the etymology clearly indicates that it is a child of metaphysics.

The etymological origin of "concept" is Latin. It is an artifact of medieval scholars and their metaphysics. As Brand Blandshard points out:

> "As to the four words just noted by Professor Ryle as especially deceptive, three—'conception', 'idea' and 'judgement' – have been pointed out by Professor Passmore to be words not originating in common usage at all, but coined by philosophers." Blanshard (1962: 352)

For centuries, Western philosophers have needed occult mental entities as the correlates of word symbols in their dual-track universe. The use of these philosophical terms has since trickled down to linguists, teachers and truck drivers, along with the mind/body dualism their use requires. These thoughts, ideas, concepts, etc. are all philosophical straw men that have infiltrated the greater public domain.

Down through the years, various philosophers have attempted to explain just what *concepts*

are. Ludwig Wittgenstein famously analyzed the "concept of game". He could not come up with anything common to all *uses* of the word sound "game". He found a "family of resemblances" amongst the various uses of the word "game", but no core concept or necessary and sufficient criteria by which someone can determine whether an activity belongs in the category of *game*:

> "And the result of this examination is: we see a complicated network of similarities overlapping and criss-crossing: sometimes overall similarities, sometimes similarities of detail." Wittgenstein, (1958a: #66)

Well, you say there must be something essential which you take away from games to make them not-games. You say there must be an essential criterion for the use of the word sound "game", as the Greeks thought, that which makes something a game. However, there is no need to have essential criteria, meanings or concepts for word sounds if you do not claim that speech is a representational system of signs or symbols. Many times we English speakers cannot decide whether something is a game or not. Our intuition (conditioning) gives us clues, but no definitive answer.[13]

Are jigsaw puzzles games? Some of us may be convinced by reasoned argument that they are games. Others may not. There is no fact of the matter. Try to delimit the use of "game" and you will come up empty handed. Consider the following: archery, darts, baseball, bridge, snooker, ice dancing, Frisbee, love, small-game hunting, duck duck goose, shooting craps, soccer, rowing or crew, mountain climbing, sudoku, drag racing, ice fishing, yoga, jazzercise, roller skating, sledding, cheerleading, synchronized swimming, solitaire, *Wii*, ring around the rosy, sailing, bird watching, wrestling, professional "wrassling", boxing, ultimate fighting, playing catch, cricket fighting (very big in China), cock fighting, dog fighting, bull fighting. What do they have in common? What distinguishes a game from a sport? As it turns out, the various uses of "game" or "sport" do not have to satisfy any essential criteria for things to be called games or sports. There simply are no necessary and sufficient features of activities that can be applied to determine the proper uses of these words.

As a result of theorizing by Wittgenstein et al., some contemporary theorists have proposed the "Prototype Theory" in which "conceptual categories" are based on best exemplars, or prototypes, for the category, e.g. bridge is a very good exemplar of a game and wrestling is a very poor exemplar of a game. Thus, there are central and peripheral members of a category, i.e. varying degrees of membership in the category. The exemplars or prototypes such as bridge have 100% membership in the category *game* and wrestling has 5% (??) membership. However, there are many problems with this theory, not the least of which is: category boundaries are very fuzzy or non-existent. As linguist Alan Cruse put it:

> "One of the most serious shortcomings of the standard prototype view is that no category boundary is recognized… Yet a category without a boundary is virtually useless: a primary function of a category is to discriminate between things which are in it and things which are not in it." Cruse (2011: 65)

Another prominent problem appears once again. In Philosophical Investigations Wittgenstein claimed that "You learn the concept of pain when you learned language" (#384). Contrary to many contemporary theorists, he insisted that there is no concept of pain that can precede the

use of the sound "*pain*". According to Wittgenstien, without using language, you would not have the concept of pain.

Brand Blanshard responded:

> "There are philosophers of our day who discuss the problem of universals as if it were simply a problem of how words are used, or should be used, of whether abstract nouns, for example, are to be classified as proper names. But the problem is not one of how words are used, or might or should be used, for it has nothing essentially to do with words at all. You learned the *concept* of pain when you learned language,' says Wittgenstein. That is to exalt words absurdly. The use of universals both antedates the use of words and is presupposed by it; one could not use the word 'cat' in one's recognition of cats unless one already recognized the mark or the sound 'cat' as itself an instance of the word." Blanshard B. (1962: 391). ("The problem of universals" will be taken up in due course.)

Wittgenstein's and Blanshard's comments reflect the chicken and egg puzzle about concepts that has baffled philosophers for millennia. If you insist that spoken words express, encode, or represent concepts in the human mind, which come first in the speech acquisition process for individual speakers? Must we have concepts in order to use words or do concepts come into existence simultaneously with the first word sound use? Maybe the second word use? Maybe the hundredth? Did you have the "concept of pain" before you knew how to use the word "*pain*" or must you use the word sound "*pain*" many times to develop the concept of pain?[14]

Some contemporary philosophers still maintain that there is a complete language of concepts, etc., viz. mentalese or LOT (language of thought) that is represented or expressed by public languages. By their account, all languages are translatable, where identical non-symbolic concepts are clothed in the various symbols of public speech and, in effect, childhood language acquisition is learning a second language, the first language being mentalese, or LOT. These philosophers then subdivide the conceptual language into fully-fledged concepts, ad hoc concepts, lexicological concepts, concept templates, mini-concepts, complex concepts, proto-concepts etc., in a futile attempt to account for human vocal behavior within this representational concept/word model.

However, postulating a menagerie of mentalese concepts which can be represented by the thousands of different word sounds in thousands of different languages gets us no closer to understanding human language use. It simply hypothesizes a host of mental (non-physical) entities as accessories to verbal behavior. Contemporary philosopher Robyn Carston recognized the problem of the proliferation of concepts within linguistic analysis. She said: "the introduction of a whole additional population of mental entities... is not to be taken lightly." Carston (2002: 71) In fact, it begs the question at issue. Why do we need concepts or any other *mental* entities to explain human verbal behavior?[15]

The word "*concept*" has gained wide currency in philosophical speculation and linguistics without much agreement on its use. Of course, whatever concepts might be, there seems to be a consensus that we can't observe them in any empirical manner, and the way most philosophers try to explain their *concepts* is by analyzing verbal behavior or written transcripts of such verbal behavior. "Conceptual analysis" by utilizing and analyzing verbal behavior is taken to be the road to "conceptual clarity", though, once again, this begs the question. Why do they insist that there

are *mind or consciousness* dwelling correlates associated with human word usage when all they are able to observe and analyze is *speech behavior* or its derivative written text?

In Hilary Putnam's disquisition on "The Meaning of 'Meaning'" he tackles the issue of mental concepts. He reports on the attempts by Gottleb Frege and Rudolph Carnap to reject the mental interpretation of concepts:

> "Most traditional philosophers thought of concepts as something mental. Thus the doctrine that the meaning of a term (the meaning 'in the sense of intension,' that is) is a concept carried the implication that meanings are mental entities. Frege and more recently Carnap and his followers, however, rebelled against this 'psychologism,' as they termed it. Feeling that meanings are *public* property—that the *same* meaning can be 'grasped' by more than one person and by persons at different times—they identified concepts (and hence 'intensions' or meanings) with abstract entities rather than mental entities. However, grasping these abstract entities was still an individual psychological act. None of these philosophers doubted that understanding a word (knowing its intension) was just a matter of being in a certain psychological state…" Putnam via Chalmers (2002: 582)

As Putnam correctly points out, the contrived ploy used by Frege and Carnap to avoid "psychologism" was to create a third ontological status for concepts outside of the mind/body paradigm, just as they created *abstract* propositions as translational constants and stable meaning bearers for logical theory. Nevertheless, "grasping" the meaning of a word was considered by all of them to be a psychological (mental) act. They simply could not avoid the mind/body dualism inherent in their use of SAE languages.

When an English-speaking child learns to use the sound "*big*", is there any moment when they grasp the *concept* of the sound "*big*" or the meaning of the sound "*big*"? At what point? After they learn that a big dog is still smaller than a big house? You say big and small are relative terms. Well, how does a child learn that? They learn it by using the word sounds in context. This child learned that "*big*" and "*small*" have functional roles as comparative evaluators that are very much determined by the objects to which they are applied.

Linguists fully recognize that the use of proportional quantifiers such as "*big*" and "*small*" require discourse familiarity and are totally dependent upon presuppositions and the context in which they are deployed. English-speaking children have learned how to make the distinction between big and small in reference to dogs, more or less. They can point to the distinction with the word sounds "*big dog*" or "*small dog*". They remember their functional roles as comparative proportional quantifiers that must be used within a specific frame of reference. (See "frame semantics" in the glossary.)

However, you might say that the word sound "*dog*" is different. You say you cannot use "*big*" or "*small*" isolated from a specific context, but when someone says the word "*dog*" you can imagine a dog outside of context. To be sure, when someone says the word "*dog*", you can conjure up an image of a dog. But that is not what you do every time you use the word "*dog*". Your use of the acoustic device "*dog*" does not require an image any more than your use of pliers does.

And if you were to say: "*i would like to have a dog*", you may imagine a German

Shepherd. The hearer may conjure up an image of a poodle. In this case, how could you claim that both hearer's and speaker's minds have the same concept or the same meaning? You both have very different images. Nevertheless, you have made a linguistic connection and, in most cases, your task has been accomplished. You say the word "*dog*" and the hearer understands what you say, with or without images, because the hearer understands the functional role of the sounds "*i would like to have a dog*" in the English language. The speech is a performative act, not a representational act. It generates a response in a listener, not a train of meanings and concepts chugging through their noggins.

Moreover, if you imagine a dog, it is a specific dog. It has four legs, ears, eyes, a tail, etc. It may not be an identifiable breed. It may be rather generic but it must be a dog of some sort. However, you do not imagine the concept of dog. From the first-person perspective looking inward you will find nothing that might be considered *the concept of dog*. The point I am driving at is: there is no *introspective evidence* for the mental or psychological entities that are hypothesized as correlates for the words humans speak, and at no time in the process of child language acquisition does a child have access to *other speaker's* purported mental entities, mental processes or psychological states. At no time is a child able to observe the alleged thoughts, ideas, concepts, speaker meanings etc. that competent speakers are supposed to have.

What is publicly accessible to the child is the vocal behavior of competent speakers used in context with a host of other accompanying communicative behavior. That is what the infant adopts. The child can observe context and hear how a word sound is being utilized in that context with the encyclopedic knowledge they have so far gained. The child can thereby emulate this functional behavior. They can engage in observational learning. Language learners only need to observe how the sounds are being employed within an array of human communicative behaviors and context. There is nothing else for them to observe and learn from.

What's more, if spoken words are symbols that stand for, signify, represent or express mental entities, what does the sound "*it*" stand for? What is your concept of "*it*"? In fact, "*it*", the sound, stands for nothing. The sound "*it*" has a linguistic function; it is a deictic pronoun that is completely context-dependent and is often used to point to an anaphoric subject. There are many such officially recognized "non-content" words in any language. What semanticists fail to recognize is that no word sounds have content; they stand for, signify, represent or express nothing in the mind of the speaker or anywhere else. They are all elements of speech behavior that have utility and fall within a broader range of human communication behavior.

The sound "*infinity*" is no different from "*it*". What does "infinity" represent? What is your concept of infinity? In fact, that sound has a precise use for mathematicians and an imprecise use for the rest of us. We have learned how to use the sound "*infinity*" by transforming "*infinite*" into a noun and putting it in the subject slot within our English syntax. "*infinite*" is used in place of "*without end*" or some other such construction. "*without end*" grew out of "*with*" and "*out*" and "*end*", very basic sounds with very basic functions. The functional role of all these word sounds has evolved from more-primitive units of speech. We all have foundational word sounds upon which we build an array of useful verbal expressions. *Concepts* are not needed to explain such vocal behavior.

New words work their way, daily, into our speech behavior. We also get updated regularly on how to use old words by confronting new contexts at every turn. Novel contexts require novel

word use. Routine contexts produce routine word use. When we offer someone a drink, for example, we say: "*would you like a drink*". The words simply come out in response to social stimuli. So called "small talk" is riddled with mind- numbing-clichés that require little or no thinking. There is no evidence of a concatenation of mental entities parading through our heads before or during this speech behavior. We simply use the acoustic devices (a whole question in this case) as we have been conditioned to use them, in routine or novel circumstances.

The acquisition of these acoustic devices is an accretive process. Buzzwords enter language on a daily basis: "*downsizing*", "*digitizing*", "*offshoring*", "*delayering*". We are not developing new ideas, concepts or mental representations to correspond to each new word. We simply learn how to employ the new words in lieu of more complex linguistic expressions. In context, we can say "*delayering*" in place of "*managers are being fired*", just as we say "*potable*" instead of "*clean enough to drink*". In the process new neural connections are being made to guide future deployment of the new verbal devices. But to say that speakers have acquired new thoughts, ideas or concepts is as vestigial as our coccyx. It is outdated verbal behavior about verbal behavior.

David Crystal describes the process of word use acquisition:

> "When we acquire a new lexical item, we do not simply tack it on to the end of a list of already-learned items. Rather, the new item had to find its place within the lexicon we have already acquired. Let us imagine we encounter the item sponsorship for the first time: this becomes part of the set of items we already have for types of money-giving, such as *donation, award, grant, fee, endorsement, gift, scholarship, honorarium, subsidy,* and *annuity*. It does not become part of the items we already know for types of fruit or types of vehicle. And in joining the relevant set, it has to elbow its way in: we may have to change our mind about the sense of other items already there. *They're offering us a sponsorship*, we might say, then learn that what we have been offered is really a *donation*, because of the different tax implications, and thereafter the meaning of *donation* is narrower for us than it was before we learned *sponsorship*. When we learn a new lexeme we always make at least two gains in precision…
>
> "In the real, psycholinguistic world, a definition is not learned all at once; it is learned bit by bit, by adding features of meaning to the account. We must not expect total accuracy the first time." Crystal (2005: 198)

Despite Crystal's semantic orientation and his use of standard semantic terms such as "lexeme", "meaning", and "definition", his analysis is spot on. Learning how to employ words is a give-and-take process. We refine our *use* of a new word sound and other words related to it in our linguistic arsenal. Gradually we refine our use and become more precise about when and where the new word will be useful. Our verbal behavior changes as we adapt to the use of a new linguistic device.

This give-and-take process of word use refinement is a lifelong process. Speakers constantly adjust and modify their word usage. At no point can you say that a speaker has finally acquired the essential or complete *meaning* of the word. At no point in the process of speech acquisition and refinement can you say that a speaker has finally gotten the unadulterated complete *concept*. The use of "*sponsorship*" does not at some point become perfected. Speakers' uses for the word

sound "*sponsorship*" vary and grow.People who are dependent upon such things as sponsorships and grants make very fine distinctions that the rest of us do not. However, at no point is their use of any term final and invariant.

In his analysis of ostensive definitions and private symbols, H.H. Price laid out a hypothetical case of new word use. He describes someone who:

> "…suddenly begins to use the sound 'squongle' for objects with bristles on them, such as hairbrushes, tooth brushes and hedgehogs. He had never heard other people utter this sound in the presence of bristly objects; indeed he has never heard them utter this sound at all. Yet he proceeds to use this sound, understandingly in his own thought and discourse. It is what is sometimes called a 'private' symbol not because other people cannot hear him utter it, nor yet because they cannot discover what he means by it (they could, by noticing carefully the circumstances in which he utters it), but because he has *given* it the meaning which it has for him." Price, (1953: 225)

Let us assume that our hero begins to use this sound in discourse and others learn how to use it as well. They can use the phonetic device "*squongle*" in lieu of "*bristly objects*". They can make public acts of reference to bristly objects with that sound. They can focus their attention and that of others on squongles (bristly objects) by using the sound. That being said, Price's characters have gained no new cognitive ability. After they started using "*squongle*", there was no new distinction or *concept* that they gained. They had always been able to discern bristly objects from non-bristly objects, more or less. They have gained nothing other than a new sound with the equivalent functional value of "*bristly objects*" in their speech behavior. That behavior changed and nothing else.

Furthermore, if our hero wanted to make more distinctions, he could distinguish blue, green, red, and yellow bristly objects: "*squongles*", "*squingles*", "*squangles*" and "*squengles*". This would not require new concepts or cognitive abilities. It would require new sounds to use in his pointing behavior. He will have combined the use of "*blue*", "*bristly*" and "*objects*" into the use of one sound, "*squongles*". His new speaking would be more efficient than if he used "*blue bristly objects*". He gains a new sound to more efficiently point to an old distinction though he has gained no new concepts, and no new mental entities. That is my point.

Well then, what is the meaning of the word sound "*concept*"? What does the word "*concept*" represent? Does the spoken word "*concept*" stand for something? No doubt, a formal semanticist would insist that it does: the word sound "*concept*" stands for the concept of concept. This then brings us to Frege's paradox: if the word sound "*horse*" stands for the concept of horse, what does "*the concept of horse*" stand for? *Mutatis mutandis*, what does the concept of concept stand for? Concepts, as mental entities represented by word symbols, bring on such insoluble philosophical puzzles.

Regrettably, because of their symbolic characterization of language, Locke, Wittgenstein, Ryle, Blanshard, Putnam, Frege, Carnap, Carston and all other Western language theorists were driven by a perceived need to correlate mental or abstract entities with word sounds. On the other hand, if word sounds are characterized as conditioned vocal behavior generated in response to stimuli there is no need for the sounds that issue from human mouths to be correlated with

anything other than occurring stimuli, the previous operant conditioning of the organism and neurological events in the *brain* of the speaker.

In the field of linguistics, the use of the term "idiolects" in recent years is evidence of a trend toward *meanings* as being personal rather than identical speaker-neutral correlates. In this idiolectic view, word meanings are personalized by individual speakers. These individual meanings are dependent upon the speech history of the speaker and the presuppositions that are produced by their entire life experience. This recognition of individualized learning and use of word sounds presents an alternative to the semanticist's theorizing about fixed semantic content that is consistent from speaker to speaker. It is a step in the right direction because it recognizes the personalized use of word sounds. However, it does not eliminate the dualism. It maintains the semantic fallacy of words as symbols that are somehow tethered to transcendental entities in the human mind, viz. *speaker meanings*.

The *existence* of speaker meanings, ideas, concepts and other such mental entities and states has been dogmatically assumed by generations of philosophers and linguists, and all attempts to explain these entities with the use of mental or psychological terminology beg the question. The conventional wisdom and theoretical talk about mental entities existing in the human mind or consciousness is pernicious and totally misguided. The alternative is to eliminate them and the entire semantic paradigm that philosophers and linguists have relied upon to explain human speech behavior for generations.

In an attempt to eliminate the "doctrine of ideas", behaviorist B. F. Skinner tried to explain away concepts by putting them in the world as observable phenomenon. "A concept is simply a feature of a set of contingencies which exist in the world." Skinner (1974: 105). However, there is no need for concepts, or any other correlate for a word, if we acknowledge that speaking is not symbolic representational activity; if we acknowledge that human speech is vocal behavior that is controlled by the contingencies of reinforcement to which the speaker has been previously exposed.

Unfortunately, dualism of one sort or another and the verbal behavior we English speakers utilize are inextricably linked. They form a symbiotic relationship. We cannot use a language which has evolved in a metaphysical milieu containing ethereal minds, thoughts, ideas, concepts and mental representations to explain language evolution, acquisition and use. "*if you think you can i hope to change your mind that thing that contains your thoughts ideas and concepts no not your brain you cant change your brain your mind that thing that endures through time but is not extended in space that thing in your head where the conscious ideas form before they are expressed in your speech*". This is how we English-speaking humans are conditioned to speak about ourselves and our vocal behavior. It is mistaken.

However, that mind/body dichotomy is firmly implanted in our vocal behavior and our cognitive processes. The embedded dualism accounts for our instinct or intuition about some uses of words. We do not sense that the use of a word is inappropriate because the *meaning* is inappropriate; we simply sense that its *use* is inappropriate. It is unacceptable behavior for us. We cannot use physical terms such as "*color*" and "*shape*" to describe minds, thoughts, ideas, concepts and mental representations. They are mental things. Nor can we ascribe concepts and thoughts to thermostats or amoeba. "*concepts*" and "*thoughts*" are mental terms, reserved for

people with minds.

As Benjamin Whorf implied, you think about language the way you do because you speak about language the way you do. Your thinking and your intuitions about word usage are governed by mind/body dualism. So, you cannot simply declare an end to dualism and go about using the same words you have been using. If you are to explain how language works, you must change your word usage as well as the theoretical foundations of linguistic analysis. To break the grip of semantics and dualism *you must change your verbal behavior about your verbal behavior*.

The neurological theory and science relating word sound use to brain function is still in its infancy. Nevertheless, there is considerable evidence that the *dualist* explanations laden with thoughts, ideas, concepts, speaker meanings, etc. which theorists now use to explain what humans do with word sounds, is in fact superfluous. I will take the liberty of quoting Antonio Damasio at length in his explanation of how word sound use is tied to brain function, as opposed to *mental correlates*:

> "The brain forms memories in a highly distributed manner. Take for instance, the memory of a hammer. There is no single place of our brain where we will find an entry with the word hammer followed by a neat dictionary definition of what a hammer is. Instead, as current evidence suggests, there are a number of records in our brain that correspond to different aspects of our past interaction with hammers: their shape, the typical movement with which we use them, the hand shape and the hand motion required to manipulate the hammer, the result of the action, the word that designated it in whatever many languages we know. These records are dormant dispositional, and implicit, and they are based on separate neural sites located in separate high-order cortices…
>
> "If I give you the word *hammer* and ask you to tell me what 'hammer' means, you come up with a workable definition of the thing, without any difficulty, in no time at all. One basis for the definition is the rapid deployment of a number of explicit mental patterns concerning these varied aspects. Although memory of separate aspects of our interaction with hammers are kept in separate parts of the brain, in dormant fashion, those different parts are coordinated in terms of their circuitries such that the dormant and implicit records can be turned explicit sketchy images, rapidly and in close temporal proximity. The availability of those images allows us, in turn, to create a verbal description of the entity and that serves as a base for the definition." Damasio (1999: 220)

Damasio's account is a precursor to a complete description of word sound function explained in neurological terms. When the account is complete, there will be no more need for all of the *mental* paraphernalia now invoked to explain the human use of noises to do work. Human interactions with hammers and the word sound "hammer" leave interdependent neurological patterns in the brain that can be used at a later date. Nothing needs to be said about ethereal entities inside your head, i.e. "explicit mental patterns."

Unfortunately, some contemporary writers in philosophy of language and linguistic theory have added another use for the word sound "representation" and its written derivative **'representation'**. They write about "mental representations", asserting that there are new non-physical correlates in the human mind or consciousness, not thoughts, ideas, concepts etc., but rather "mental representations". The mental representation for the word sound "dog", for

example, is DOG, an as of yet undescribed, undefined and unexplained non-physical entity. Theorists claim that these mental representations are useful posits in spite of the fact that they cannot be described, defined or explained. However, they present the same philosophical puzzles that *concepts* and *ideas* do, e.g. the chicken and egg puzzle. Which comes first, the word use, or the mental representation?

Other theorists have had the good sense to claim that words and/or phrases are correlated with representations in the brain.[16] The representations are described as neural states or neural events. For example, the word sound "*dog*" is "represented" by a certain neural condition in the brain. In what way these neural states or events "represent" the word or phrase is difficult to explain. Derek Bickerton attempts to do so:

> "All you have in there are trains of electrochemical impulses: they may *represent* other things, but they do not *constitute* those other things, yet they are all you have to think with." Bickerton, (1995: 24)

Do the "trains of electrochemical impulses" represent the word sound "*dog*" emitted from the speaker's mouth or the dog? How does an electrochemical impulse *represent* anything? Nevertheless, we must give credit where credit is due. These theorists have moved beyond the psychologism and dualism implicit in talk about *mental representations*. However, there is no need to talk about *representations of any kind* if theorists would jettison the semantic paradigm.

Without a doubt, there are networks of neurons firing when acoustic devices are being used, just as there are neurons firing when pliers and pianos are being used by humans. All these devices are used in context to achieve goals when humans are properly stimulated. In response to the stimuli the brain generates the behavior by means of neural activity, though there is no defensible point in saying that behavior of any kind is *represented* in the brain, much less the *mind*. That kind of talk simply muddles the fact that human verbal behavior, when correctly framed in a non-semantic paradigm, can be correlated with neural activity in *the brain. Representations* are not necessary to make this point.

In the non-representational paradigm I am proposing, there are no thoughts, ideas, concepts or mental representations of any kind correlated with word sounds, neither before nor after their introduction into the speaker's vocal behavior. That vocal behavior is determined by the functional roles that acoustic devices play when utilized by individual speakers in varied contexts. For instance, the word "*game*" plays many roles. Some roles are quite clear, "*the game of bridge*". Others are not so clear cut, Wittgenstein's own "*language games*", for example. Do we really want to talk about our speech behavior as a collection of games? We do not know if that use of "*game*" is appropriate, not because we have a fuzzy or unbounded *speaker meaning, idea* or *concept* of "*game*", but because we have never used the sound "*game*" in that way and our linguistic intuitions about its use in that way are not firm. We must be convinced that it is an appropriate use of "*game*". A person using "*game*" in this new way must show us how this use of "*game*" is similar or analogous to the other uses of "*game*". How does it *resemble* other uses of that word? If they succeed in convincing us that use is appropriate, our concept of game hasn't changed; we have added another functional role for the word sound "*game*" to one English language game.

Imagine a foreign national coming to America with little knowledge of our language habits,

an Englishman for example. He asks you what the difference is between a sport and a game. After all he says: "they are completely different concepts". If he tries to explain the difference between the concepts he will be doomed to failure. Ultimately, he will be forced to concede that we Americans call some activities sports, others we call games. Some we call either games or sports, and some activities can be called neither. The Englishman will just have to get used to how we use these word sounds here in America. Importantly however, he will not have to change any concepts. He has none. He will solely have to change his verbal behavior while here in America.[17]

An alternative line of questioning might be: When did the word sound "game" come into *use*? Answer: possibly when we needed to make the distinction between work and play and point to it with a sound. Nothing is different until it makes a difference. When we humans need to make a distinction, we do so and point to that new kind sortal with some sort of acoustic device. The fact is we learn a new use for "game" in the same way that we learn the uses for "dog". Someone else uses it a certain way. We adopt his behavior. For a child learning a language, the new sound "game"starts out as a relatively simple distinction and ultimately ends up being a word that cannot be precisely defined.

The overarching theme in this section is that thoughts, ideas, concepts, speaker meanings and mental representations are artifacts inherited from philosophers, grammarians and linguists. In fact, there is no empirical or introspective evidence of any kind that speakers have non-physical entities in their heads to pair up with the word sounds coming out of their mouths. These hypothesized mental and psychological correlates for the word sounds are unnecessary excursions into metaphysics. This way of speaking about speech is ultimately rooted in Greek mysticism. It is unacceptable vocal behavior about vocal behavior that has dire consequences.

Starting with Aristotle, the semantic template has been one of *representation*: grammatical units tethered to mental entities. With that template came the various forms of *dualism* and all the concomitant problems with linguistic analysis and theory. If you allow the semanticists this representational view of language you will be carried into their dualistic universe (another bad option is abstract entities that enjoy a third ontological status outside of mind/body dualism: subsistence, abstract space etc.).

Gottlob Frege and Bertrand Russell joined the parade down the primrose path, led by Aristotle, Augustine, Descartes, Locke, Berkeley and Kant. Wittgenstein, Austin, Strawson, Donnellan, Davidson, Searle, and Grice et al. followed in lockstep. Platonic dualism, Aristotelian dualism, Cartesian dualism, or more nuanced versions of contemporary dualisms are built into their analysis of language when they claim that spoken words represent, encode or express thoughts, ideas, concepts, speaker meanings or mental representations in the mind or consciousness of the speaker.

This implicit dualism in semantic theory cannot be reconciled with contemporary physiology or physics. Talk about thoughts, ideas, concepts, speaker meanings and psychological propositions cannot be reduced to talk about axons, dendrites and synapses. For physical scientists the question becomes: Can we explain language use without resorting to these ethereal entities, be they the metaphysical entities of Plato, the mental entities of Aristotle and Descartes, the psychological entities of Russell, Wittgenstein, Chomsky, Pinker or the abstract entities of Frege and Carnap, et al.? Yes, we can, but only if we do what B.F. Skinner did and say goodbye to the language we grew up in.

Universals

> "Seeing that nearly all the words to be found in the dictionary stand for universals, it is strange that hardly anybody except students of philosophy ever realizes that there are such entities as universals." Bertrand Russell (1912: 65)

The problem of *universals* is part and parcel of theory of language debates and the many philosophical perplexities surrounding these debates. Unfortunately, there are multiple uses for the term "*universals*" which confuse the matter. Linguists and laymen alike often use that word to discuss features that all languages might have, or features which all humans are capable of learning. They speak about so-called *language universals* such as nouns, questions, negative utterances, recursion etc.[18] These putative language universals have become contentious. As Jean Aitchison points out:

> "Many linguists hope to find language universals—features common to all languages.…Absolute linguistic universals, features common to all languages, are rare, unless one takes an over-broad view of the word 'universal'. Even when apparently found, they differ in details from language to language." Aitchison (1996: 185)

Nevertheless, the work of many descriptive linguists over the past half century has been directed at finding these language universals. Theoretically, when they are found and catalogued they will provide evidence for a *Universal Grammar*.

However, within philosophy, *universals* are taken to be something quite different. They have an extensive and distinguished pedigree. The philosophical use of "*universals*" comes from the Greeks.

Quoting H.H. Price:

> "Characteristics, we say, are of at least two different types, qualities and relations. What has been said so far then comes to this: there are *recurrent characteristics* in the world. Which repeat themselves over and over again in many different contexts… Now these recurrent characteristics have been called by some philosophers *universals*. And the line of thought we have been pursuing leads very naturally to the traditional Aristotelian doctrine of *universalia in rebus*, universals in things… the Platonic doctrine of *universalia ante rem*, 'universals anterior to (or independent of) things'." Price (1953: 10)

Plato believed that universals existed independently of things, *"ante rem"*. Aristotle believed that universals existed in things, *"in rebus"*. Regardless, within philosophy, universals became the general things which general words referred to, signified, designated, denoted or stood for within the semantic paradigm. As Bertrand Russell confidently proclaimed in the epigraph to this

section, "nearly all the words in the dictionary *stand for* universals", but only philosophers know that.

Historically, universals have been juxtaposed with *particulars*. Russell, in a critique of Plato, presents the contrast this way:

> "The absolute minimum of what remains, even in the view of those most hostile to Plato, is this: that we cannot express ourselves in a language composed wholly of proper names, but must have also general words such as 'man,' 'dog,' 'cat'; or, if not these, then relational words such as 'similar,' 'before,' and so on. Such words are not meaningless noises, and it is difficult to see how they can have meaning if the world consists entirely of particular things, such as are designated by proper names. There may be ways of getting round this argument, but at any rate it affords a *prima facie* case in favour of universals." Russell (1945: 126)

Universals were the wellspring of Platonism and have been a solid footing in semantic theory ever since. The semantic view of language requires universals as the referents for general words. For example, the word symbol "*dog*" does not stand for any specific dog such as Rover or Spot; it refers to or stands for a *universal* dog. This strain of talking about human cognition and human vocal behavior runs down through the history of philosophy and manifests itself in many variations. Contemporary philosophers Mark C. Baker and Stewart Goetz frame the distinction this way:

> "Particulars are things that can be identical to one another in all their properties without being the same thing. For example, there are different cars and different shades of red. But two cars could have all the same physical properties—size, shape, color, etc.—and still be different cars. In contrast, two shades of red could not be identical in every respect and still be two distinct shades of red. So a car is a particular, whereas a specific shade of red is a universal." Baker & Goetz (2011: 12)

Other philosophers have opposed universals with *simples, individuals* or *objects*. These "objects" were "primary elements" according to Wittgenstein (1958a#46). No matter what they were called, these simples, individuals or objects were things that could be individually identified and often named. They were the same as particulars and contrasted with *general things* that general words stood for, i.e. *universals*.

H. H. Price's position, however, differs from some assumptions about universals:

> "The doctrine of *universalia in rebus* may, of course, be mistaken, or gravely misleading. … But I cannot see that it is in the least absurd or silly, as the most approved thinkers nowadays seem to suppose. Nor can I see that it arises entirely from erroneous views about language, as the same thinkers seem to suppose; for example, from the superstition that all words are names, from which it would follow that general or abstract words must be names of general or abstract entities. On the contrary, this philosophy seems to me to be the result, and the very natural result, of certain *ontological* reflections. It seems to me to arise from reflections about the world; from consideration of what things are, and not—or certainly not merely—from consideration of the way we talk about them. On the contrary, it could be argued that we talk in the way we do, using general

> terms and abstract terms, because of what we find the world to be; because we find or notice *recurrences* in it." Price (1953: 10)

Price dismisses the Greek and medieval view that words are names for things. He then reiterates his critical point that "we find or notice recurrent characteristics in the world" and makes an ontological claim; these recurrences *exist* in some sense. More to the point here, he claims that this recognition process is extra-linguistic:

> "Recognition of recurrences is a *pre-verbal* process in the sense that it is not dependent on the use of words." Price (1953: 37)

It occurs in pre-speech infants and many non-human creatures that recognize recurrent characteristics and categorize them. They perform cognitive kind-sortals of many kinds… or sorts. For example, both you and your pet beagle can recognize dogs as dogs, as opposed to cats. In a widely reported story, a family dog, Chaser, was taught to perform kind-sortals on common objects such as balls and Frisbees:

> "The 1,022 words in Chaser's vocabulary are all proper nouns. Dr. Pilley also found that Chaser could be trained to recognize categories, in other words, common nouns. She correctly follows the command "Fetch a Frisbee" or "Fetch a ball." She can also learn by exclusion, as children do. If she is asked to fetch a new toy with a word she does not know, she will pick it out from ones that are familiar." NYT, Jan 17, 2011

Animals of many species recognize the sameness of two triangles when they are presented simultaneously. They recognize and categorize smells, sounds, colors, shapes and so on and so forth. Recognition of recurrent characteristics and categorizing them has been observed in many creatures.[19] Most non-human animals adjust their behavior based on this recognition and categorization. It is a survival mechanism widely observed in nature and most highly developed in humans.

The ability to recognize and categorize recurrent characteristics of objects, actions, events, properties and distinctions has also been observed and reported in pre-speech children:

> "Children's constructions of temporary object groupings serve to promote classificatory and logico-mathematical skills. Thus children may compose sets of like objects (as, for instance, placing blue objects in one grouping and red in another)… Multiple groupings can result in classificatory sorting of objects." Gibson and Ingold (1993: 254)

There is nothing controversial about these findings.[20] In humans this ability to sort and classify is demonstrably facilitated by mature language users. Caregivers can point out classifications or *sorts* for objects, etc. that they find salient. From Susan Carey:

> "There is striking evidence that language might play some role in the developments we see at the end of the first year of life. The emerging capacity to individuate objects on the basis of kind distinctions is closely tied to linguistic competence…

> "In a new set of studies, Xu (2002) has shown that labeling the objects during the trials themselves facilitates individuation in this paradigm… Infants were provided verbal labels for the objects… The negative finding with all of these nonlexical contrasts suggests that perhaps language in the form of labeling plays a specific role in signaling object kind-sortals for the infants." Carey (2009: 270)

In spite of Carey's use of the term "labeling" and "labels", her research and that of others indicates that the vocal behavior of mature speakers affects the sorting process of infants, and contrary to Price's assertion, we humans do not merely recognize what is already there. As Derek Bickerton put it:

> "But the categories into which we divide nature are not in nature, they emerge solely through the interactions between nature and ourselves." Bickerton (1990: 53)

The influence of mature speakers within any culture accounts for many of the differences in kind sortals made in different languages and cultures.

For example, James R. Hurford reports on a kind-sortal routinely made by Korean speakers that is not normally made by English speakers:

> "English has only one word for 'containment', namely in, whereas Korean distinguishes two different types of containment, tight (Korean *kkita*), and loose (*nehta*). In Korean these are verbs, meaning roughly put in; *kkita* would be used for putting a peg tightly into a hole, whereas *nehta* would be used for putting a knife in a drawer. By watching how the babies switched attention between different scenes presented on video, the experimenters were able to tell what differences between scenes were salient for the babies. The babies distinguished between scenes with tight insertion and those with loose insertion… Of course, English speakers can distinguish between tight insertion and loose insertion, but this distinction is not reflected in their habitual fast categorization of observed scenes. There is a growing consensus that although the Sapir-Whorf hypothesis does not hold in its strong form, vocabulary and other features of particular languages can influence the habitual processes of their speakers." Hurford (2012: 159)

Edward Munnich and Barbara Landau report another difference in routine spatial kind-sortals between Korean and English:

> "As is the case in Japanese, the Korean basic lexicon does not distinguish obligatorily between relationships of contact and noncontact along the reference object's axial extensions. Observing arrays such as a ball ON a table as opposed to a ball ABOVE a table would surely elicit the lexical distinction among English speakers, but not Korean speakers…
>
> "… All English speakers consistently invoked the *on/above* distinction. In contrast, only half of the Korean speakers ever mentioned contact in their descriptions of scenes that portrayed contact. In addition, those who used contact terms did so only occasionally. That is, the contact/noncontact

> distinction is not carried by the basic lexicon: although it can, of course, be encoded by Korean, it is not mandatory. In contrast, the distinction is mandatory in English: it would be ungrammatical to use the term *above* for a ball located ON a table, or the term *on* for a ball floating in the air ABOVE a table." Munnich and Landau via Gentner and Goldin-Meadow (2003: 132)

There can be little doubt that what English speakers habitually notice and think about is different than what Korean speakers habitually notice and think about. The language people are brought up in influences how they carve up their world. Many kind sortals become mandatory components of speech and force speakers to attend to different aspects of their physical and social environment, e.g. in English, a ball is either on or above the table. That is not the case for Korean speakers.

This phenomenon is widespread. For instance, the Matses tribe in the Amazon mandates that speakers distinguish different degrees of pastness with their tense devices. Guy Deutscher informs us:

> "…there are three degrees of pastness in Matses: you cannot just say that someone 'someone passed by there'; you have to specify with different verbal endings whether this action took place in the recent past (roughly up to a month), distant past (roughly from a month to fifty years), or remote past (more than fifty years ago). In addition, the verb has a system of distinctions that linguists call 'evidentiality,' and as it happens, the Matses system of evidentiality is the most elaborate that has ever been reported for any language. Whenever Matses speakers use a verb, they are obliged to specify—like the finickiest of lawyers—exactly how they came to know about the facts they are reporting." Deutscher (2010: 153)

For reasons that could be determined by further investigation, the Matses have found it to be of significant utility to make distinctions about degrees of pastness. Obligatory tense devices have evolved within their language to point out this distinction whenever they report an action or event. Thus, their vocal behavior habituates them to recognize these distinctions and point them out in their discourse.

Some languages lack a grammatical tense system altogether. Others have as many as seven. The Washo language spoken in Nevada has four past and three future tenses marked by the following suffixes:

-leg	**earlier today or last night**
-ay?	**yesterday or a little earlier**
-gul	**within the speaker's lifetime**
-lul	**before the speaker was born**
-asha?	**in the immediate future, for up to a few hours from now**
-ti?	**more than a few distant, but still within today**
-gab	**tomorrow or any time later**

This obligatory tense system forces speakers to make distinctions that we English speaker can make but are not obligated to make in our everyday speech. M.W. Dixon (2016: 87)

The same is true of evidentiality in the Matses language and the Parahã language. Both have an obligatory evidentiality distinction for declarative assertions of fact. Speakers *must* make a category distinction about the source of their information. Was the information a result of direct observation, hearsay or determined by means of evidence? This characteristic of verbal assertions has become habituated into the cognitive processes of these speakers. They *must* perform a kind-sortal about evidentiality and report this distinction by means of tense devices when making declarative speech claims. Everett (2012: 89)

In addition to degrees of pastness and evidentiality in John B Carroll's Language Thought and Reality he reports on another obligatory aspect of a language unfamiliar to English speakers:

> "…the Chichewa verb system, which is extremely sensitive to the causative aspects of acts. For example, there are several past tenses, use of which depends not only on the remoteness of the past time being referred to (before or since last night) but also on whether the act continues to have an influence on the present." Whorf (1956: 80)

Such verbal behavior results in obligatory cognitive behavior. Kind-sortals about the causative effects of past actions are required of Chichewa speakers. They must make distinctions about which past actions have effects on the current state of affairs they confront, and which don't.

Far ahead of his time, Benjamin Whorf documented distinctive kind-sortals in the native Shawnee and Coeur d'Alene languages of North America seventy-plus years ago. That research led him to his *principle of linguistic relativity*. For example:

> "Or take the Coeur d'Alene language, spoken by the small Indian tribe of that name in Idaho. Instead of our simple concept of 'cause,' founded on our simple 'makes him do so,' the Coeur d'Alene grammar requires its speakers to discriminate (which of course they do automatically) among three causal processes, denoted by three causal verb-forms: (1) growth, or maturation of an inherent cause, (2) addition or accretion from without, (3) secondary addition i.e., of something affected by process 2. Thus, to say 'it has been made sweet' they would use form 1 for a plum sweetened by ripening, form 2 for a cup of coffee sweetened by dissolving sugar in it, and form 3 for griddle cakes sweetened by syrup made by dissolving sugar." Whorf (1956: 266)

Speakers are forced to make a triadic distinction regarding causality that English speakers are not obligated to make. It is a habitual sorting of their causal interactions with the world engendered by their habitual speech behavior.

Language learning is an accretive two-way process. These obligatory language devices force speakers to attend to certain aspects of their physical and social environment. However, the physical and social environments also force cultures to develop linguistic devices such as tense, aspect, etc. to provide them with the ability to point out the salient features they find critical to cultural cohesion. The Matses and Parahã find the evidentiality aspect of knowledge claims critical to social cohesion; English-speaking cultures do not. Perhaps we English speakers have something to learn from the Matses and the Parahã.

The "aspectual" nature of the English language, although it is often not obligatory, is exhibited in many ways not relevant to other speech communities. With English verbs, for instance,

speakers are able to point out distinctions about activities, states of affairs, the duration of events, iterations of events, the homogeneity of events and more. From Steven Pinker:

> "Aspect, recall, is about the shape of an event, and one's *viewpoint* on it. By 'shape' I mean how an action unfolds in time. Linguists sort verbs into classes, each called an *Aktionsart*, German for 'action type,' based on their temporal contour. The deepest divide is between 'states,' in which nothing changes, like knowing the answer or being in Michigan, and 'events,' in which something happens. Events in turn divide into those that can go on indefinitely, like *running around* or *brushing your hair*, and those that culminate in an endpoint, like *winning a race* or *drawing a circle*." Pinker (2007: 197)

There are many other classes of verbs in English that are sorted along aspectual lines.[21] All of this so-called "aspectual" nature of Chichewa, English, Korean, Matses and Parahã is a result of different cultural evolutions. Aspectual semantics has become a broad field of study within the linguistics discipline and clearly shows culturally distinct linguistically conditioned ways of speaking about the same objects, activities, events, and states of affairs.

Whorf reported on another very different aspectual worldviews of some Native Americans created by their languages:

> "In the Hopi language, 'lightning, wave, flame, meteor, puff of smoke, pulsation' are verbs—events of necessarily brief duration cannot be anything but verbs. 'Cloud' and 'storm' are at about the lower limit of duration for nouns. Hopi, you see, actually has a classification of events (or linguistic isolates) by duration type, something strange to our mode of thought. On the other hand, in Nootka, a language of Vancouver Island, all words seem to us to be verbs, but really there are no classes 1 and 2; we have, as it were, a monistic view of nature that gives us only one class of words for all kinds of events. 'A house occurs' or 'it houses' is the way of saying 'house,' exactly like 'a flame occurs' or 'it burns.' These terms seem to us like verbs because they are inflected for duration and temporal nuances, so that the suffixes of the word for house event make it mean long-lasting house, temporary house, future house, house that used to be, what started out as a house, and so on." Whorf (1956) p. 215.

Contrary to English speakers, the Hopi view lightning, waves, flames etc. as events not objects. The Nootka view houses as events. This aspectual nature of human speech behavior reflects a classificatory sorting of physical and cultural phenomena that can vary considerably and produce widely diverging views of the same basic activities, events and states of affairs. Although the Sapir-Whorf principle of relativity is still controversial, it has recently enjoyed a noteworthy revival.

Whorf's theory had drawn much criticism. The most damning was that there was no non-linguistic evidence to support it. That is, critics claim that the only evidence for linguistic behavior having Whorfian effects is other linguistic behavior.[22] However, recent psycholinguistic research has provided much evidence in other cognitive domains according to people such as Elizabeth Bates, Lera Boroditsky and Stephen C. Levinson. According to a fact sheet issued by Boroditsky on the internet:

> "Beyond showing that speakers of different languages think differently, these results suggest that linguistic processes are pervasive in most fundamental domains of thought. That is, it appears that what we normally call 'thinking' is in fact a complex set of collaborations between linguistic and non-linguistic representations and processes. Unbeknownst to us, linguistic processes meddle in and subconsciously influence our thinking from the very basics of perception to the loftiest abstract notions and the most major life decisions. Language is central to our experience of being human and the languages we speak profoundly shape the way we think, the way we see the world, and the way we live our lives."

There has been extensive research into both verbal and non-verbal behavior of non-English speakers which clearly indicates that many kind-sortals are linguistically determined. Different languages force their speakers to carve the world up differently, resulting in cognitive processes different than speakers of Whorf's SAE languages.[23] Those cognitive verbal processes, in turn, influence non-verbal behaviors.

Many cross-cultural communication difficulties can be attributed to this principle of linguistic relativity. Many people do not speak or speech-think the way you do because they attend to different kind-sortals or aspects of their experience.[24] They have an inclination, if not an obligation, to point them out, and you do not. Matses and Parahã, for instance, must tell English speakers that their speech behavior requires a determination of evidentiality when making a declarative assertion of fact. English speakers can then become conditioned to speaking *and thinking* as the Matses and Parahã do.

Human cognitive growth is the story of more and more kind-sortals being recognized and referred to with language. For most inquisitive people, classificatory sorting is a life-long learning process. More and different *sorts* continue in an ever-expanding classificatory sorting of objects, actions, events, properties, distinctions etc. Eventually English speakers familiar with business can distinguish among different *sorts* of labor cost reductions: delayering, outsourcing and offshoring, for instance.

This life-long speech determined kind-sortal process for mature speakers is hierarchical. Derek Bickerton makes the argument:

> "…the lexicon is hierarchically structured, that is marked by levels of ascending generality, like *spaniel-dog-mammal*, with each term in it being superordinate to some terms and/or subordinate to others…
>
> "Note that this hierarchical structuring extends throughout the lexicon. Take any word, say *anger; anger* includes a range of other words like *fury, annoyance, rage, irritation*, and so on, but at the same time is itself a member of a set that includes *love, envy, gratitude*, and *disappointment*, all of which in turn fall under emotion. What this means is that any word in any language is not merely intertranslatable – that is to say, capable of being converted into a string of other words in the same language – but falls into its place in an intricately patterned structure of words that forms, as it were, a universal filing system allowing for rapid retrieval and comprehension…" Bickerton (1990: 43)

Bickerton goes on to describe this filing system and how language serves as a "classificatory mechanism". Language helps speakers make the kind-sortal distinctions and arrange them in a

useful hierarchy, starting with the most basic functional units such as "*dog*".[25]

> "This hierarchical organization is critical to the comprehension and use of the terms. For mature competent English speakers the utilization of the word "irritation", for example, can be optimized by understanding its relationship with other related terms such as "annoyance" or "anger". The relationships within the hierarchy determine whether the use of any term is appropriate or optimal. It should also be noted that the definitions of words are often given in terms of related words within the hierarchy. The definition of word sound "dog", for instance, is given by explaining that it is a species of mammal with certain features different from other mammals. And spaniels would be one type of dog. In fact, from within the semantic paradigm, some theorists claim that all word meanings "can be expressed in terms of the logical relationships with other words" Aitchison (1992: 86)

Some kind-sortals, although not mandatory, or even rational, become institutionalized in languages. For instance, many languages have the male/female gender distinction codified as a noun class marker, e.g. masculine, and feminine nouns. (In fact, 'gender' derives etymologically from Latin *genus*, via Old French *gendre*, and originally meant 'kind' or 'sort'.") Corbett (1991: 01) Others have the distinction between edible/inedible objects codified in their verbal behavior. Others have animate/inanimate distinction markers for the noun class. These distinctions become part of their habitual vocal behavior in spite of the fact that they may be inconsistent or even contradict the original *raison d'être*. For instance, the word for "bottle" is feminine in German and the word for "girl" is neuter.

The current point is that humans have the ability to do classificatory sorting of objects, actions, events and their features based on many criteria. Non-human animals can do so as well. However, non-humans cannot connect to a category such as tight containment because they cannot engage in a verbal referring act. Humans have that ability, but different people have a different verbal upbringing, which leads to different habitual cognitive processes. However, nowhere in acquisition of language, any language, do they acquire *universals*, abstractions, thoughts, ideas, concepts or mental representations that can be paired up with word sounds.

To behaviorist B.F. Skinner the verbally enhanced sorting process can be completely explained and described within his stimulus-response-reinforcement paradigm:

> "Any property of a stimulus present when a verbal response is reinforced acquires some degree of control over that response, and this control continues to be exerted when the property appears in other combinations. If this process of extension were unchecked, chaos would result, since every stimulus shares properties with many other stimuli and should therefore control a great variety of responses…
>
> "The verbal community deals with this problem by resorting to another behavioral process which sharpens stimulus control and opposes the process of extension. It reinforces responses in the presence of a chosen stimulus property and fails to reinforce, or perhaps even punishes, responses evoked by unspecified properties… Suppose, for example, that the community repeatedly reinforces a verbal response in the presence of a small red pyramid… If the response is to be

> of practical use, it must be pinned down to perhaps one property—let us say shape. The community refrains from reinforcing responses emitted in the presence of red or small objects which are not pyramidal. It continues to reinforce the response, however, whenever any pyramid is present regardless of color, size, or other property. The resulting verbal operant would traditionally be called 'the name of the shape of a pyramid' and classified as abstract." Skinner, (1957: 107)

Within the dualist paradigm, this process is said to give rise to a *mental* entity in the mind of a speaker who can competently use the word sound "pyramid": an abstraction, concept, idea, thought, mental representation, etc. That sound is also claimed by some, e.g. Russell, to refer to, stand for, signify, designate, or denote a universal, as did the Greeks. However, our recognition of recurrent characteristics and the process of making kind-sortals do not create universals, speaker meanings, abstractions, mental representations, thoughts, ideas, or concepts; philosophers and semanticists do. They continue to insist that these occult non-physical entities are created in their heads and paired up with the noises coming out of their mouths.

That way of speaking about our speech is linguistic behavior inherited from the Greeks, medieval meta-physicians and modern linguists. Unfortunately, that verbal conditioning shapes the speech-thinking of contemporary semantic theorists. English speakers are forced to slice the world into the mental and the physical when they speak. In consequence, this conditioned speech behavior has a profound influence upon how they speech-think about themselves and their linguistic behavior. They think and write about "thoughts", "thinking", "representations", "abstract notions" and "languages" the way they do because their speech conditioning compels them to do so. In fact, nothing more than verbal operants are created.

Children begin their linguistic odyssey by pointing to the kind-sortals they recognize in their experience. They then begin pointing to sorts about size: big, small, tiny; sorts about shape: round, square, straight; sorts about color: black, blue, red, green, sorts about texture and density: rough, smooth, liquid, solid, mushy and so on and so forth. Eventually, they will be able to make sorts about locations: below, in, at, next to; sorts about time; before, during, tense indicators; sorts about relative possibility: may, might, could: sorts about contingency: because, unless, until; sorts about necessity: must, may, have to, etc. They learn what culturally specific salient features of the world are important enough within their cultures to point out with sounds.

Eventually, we adult human speakers are able to connect with many features we recognize and *sort* from our environment by means of linguistic devices. Humans are able to draw the attention of other humans to kind-sortals about the time of an action, the place of an action, the stage of completion of an action, the direction of an action, the gender of the participants in an action, whether or not the speaker has personally witnessed an action or obtained the information about an action by hearsay. Many of these kind-sortals are connected to by means of specific word sounds, e.g. "run", "ran", "here", "there", "running", "to", "from", "he", "her" so on.

However, the words themselves are only one device among many by which humans can direct the attention of other humans to the kind-sortals they find salient or important. Speakers employ other linguistic devices to do some of their connecting to kind-sortals. In some languages, morphology such as word endings are used, as are tense indicators in English that reveal when the action occurred relative to the time of the utterance or from the point of view of the subject. In other languages, prosodic features such as pitch, tone or stress may be the devices used to point

out the same classifications about the time of the action. Whatever the means by which the connecting is done, the function and the results are the same: the attention of listeners is drawn to the features of an action or event that the speaker finds salient or important.

Moreover, the kind-sortal classification process is not precise. Speakers become more precise when the demands of a profession, hobby or the context require it. When English speakers learn to use "white" we do not put all things into the white or non-white categories. Some things are definitely white, and some are definitely not white, and some are neither. Our speaking, and therefore our thinking, is not bivalent. We learn how to use "*white*", "*adult*", and "*big*" in context. We find that the use of a word sound is appropriate at some time and at other times it is not. It is not that the *concepts or mental representations* are flexible or fuzzy. It is simply that our use of word sounds is situational and flexible depending upon speaker needs. Often, there are situations where we don't know if a word should be used or not. Is the paint actually white? Is that person an adult? Does that dog qualify as a big dog?

When forced to make a decision about word use, the criteria by which we categorize things are imprecise. Our word use reflects that. When we use a term we do not use it in a bivalent manner. We do not think everyone is either bald or not bald. When we use a word such as "*bald*", as Bertrand Russell famously did, how do we know whether someone is bald or not? Exactly how many hairs must one lose before becoming bald? There are all sorts of functional qualifiers we use: thinning, balding, somewhat bald, partially bald, receding hairline, male pattern baldness, etc. There is lot of wiggle room, not in the concept but in the deployment of the words. In everyday usage there is no need to determine precisely who is bald and who is not bald. If there was a need, we could not do it. "*the bald guy*" will work perfectly if every other person is the room has a full head of hair. At the hair loss clinic, that acoustic device will not be of much use.

The Greeks confronted the imprecision of kind-sortals such as *bald* with the paradox of the *sorites* or the paradox of the heap, "*heap*" being the English functional equivalent of the Greek word "*sorites*". Premise one of this logical argument states that 1,000,000 grains of wheat is a heap. Premise two says that 1,000,000 grains minus 1 grain is still a heap. Repeated reductions of the heap by 1 grain, eventually leads to 1 grain of wheat being called a heap. At no precise point during these reductions does the heap of wheat become not-a-heap. Yet surely, one must say that a single grain of wheat is not a heap of wheat. The paradox simply points out that word use is fuzzy and judgmental. When humans classify things as being bald, or a heap, they use judgment and skill in determining their choice of words depending on the circumstances.

In addition to sorting and classifying imprecisely, we humans reason imprecisely with words. Fuzzy logic attempts to quantify the imprecise reasoning we do with natural language. Fuzzy logic is reasoning with fuzzy sets. Instead of Aristotelian bivalent logic where every proposition is either true or false and word use is assumed to be precise, fuzzy logic tries to account for the fact that word use is never that clear cut. It mathematically represents fuzzy word use with fuzzy sets and multivalent logic. Propositions that are somewhat true can be digitized within that system.

Although fuzzy logicians still consider words to be symbols that stand for concepts, they recognize and try to account for the "vagueness of the concepts" by saying that words can be represented by fuzzy sets. They give mathematical "meanings" to words such as "*cool*", "*slow*" and "*bald*". They contend that they can represent our fuzzy concepts with fuzzy sets and thereby produce artificial intelligence which more closely approximates human reasoning processes. They

do so because they realize that human reasoning processes do not coincide with the bivalent logic of Aristotle. Traditional bivalent logic had polar opposites, true and false. However, natural language statements are rarely true or false with complete certainty because kind-sortals are never precise. Kosko (1993)

Some antonyms such as "*up*" and "*down*", "*male*" and "*female*", "*in*" and "*out*", "*alive*" and "*dead*" may appear to be polar opposites and thereby amenable to bivalent logical analysis, despite the fact there will always be situations in which it is not clear whether someone or something is up, male, out or alive. Truth value in natural language statements, when they are used in a straightforward manner, is fuzzy and totally dependent upon the context of use and the speaker needs. While fuzzy logicians would say that *the concept or the meaning* of "*bald*" is fuzzy or imprecise, they should say that the use of the word "*bald*" is clearly appropriate at times, clearly inappropriate at other times, and much of the time it is neither. The point is, all natural language *usage is fuzzy*. Any analysis of these word sounds in use will find variation, ambiguity and imprecision based on individual variations in kind-sortal categorization and the circumstantial need for precision.

In Brand Blandshard's stout defense of Reason and Analysis, he recounts the Aristotelian belief in man as the rational animal, and elaborates on the Greek beliefs about the differences between humans and other members of the animal kingdom. He attributes the difference to our ability to "abstract". Blanshard makes two crucial errors that others have made when he says:

> "Most words –'red', 'run', 'roof'—are tags for abstractions. If animals fail to invent them, it is not because they lack usable tags, but because they lack the baggage to tag them with. A man who does not have baggage in abundance is less than normal. 'I see a horse,' said Antisthenes to Plato, 'but not horseness.' 'That,' said Plato with more candor than tact, 'is because you have eyes but no intelligence.'" Blanshard (1962: 51)

Blanshard assumes that the process of abstracting creates a transcendental entity, an abstraction. He also assumes that some spoken words are "tags for abstractions", as did the Greeks. However, word sounds are not tags for abstractions. These sounds are *not tags, nor labels, nor names* for things (horseness). They are sounds that have a function in human behavior. Blanshard, Plato and Aristotle are all mistaken. There is nothing created or brought forth in the ideal heavens or human *minds* by the human use of sounds. Human brains, however, do change the verbal behavior of the organism.

Abstracting, if you insist on using the term, is the ability to make kind-sortal distinctions. Abstracting is a neurological process observed in many creatures. Many creatures can distinguish red things from blue things. They can distinguish running from walking. They can distinguish roofs from walls. Humans have the most advanced "abstracting" ability. We humans exercise that ability to detect similarities, differences and relationships with our limited perceptual tools. That does not entail that the word sounds "*red*", "*run*" or "*roof*" have abstractions associated with them anymore than "*hello*" or "*this*" have abstractions linked to them.

H.H. Price also goes off track when he claims that:

> "Finally, words themselves have to be recognized. If I am to speak or listen understandingly, to write or to read, I have to *recognize* the sounds or the black

> marks as being the words they are. I have to recognize this visible mark or noise as a sensible 'token' of a certain 'type'—word. Otherwise it will not function for me as a word at all; it will be a curious sound or mark and nothing more." Price (1953: 38)

Price claims that language learners must recognize the sounds as "words" or "tokens". Quite the contrary; humans need not recognize the sounds as "tokens" or "words". They only need to adopt acoustic units as functional implements, as a means to an end. Children need to know nothing about tokens, words, symbols, semantics or grammar. Children must be able to distinguish among the many combinations of phonemes available and apply each distinct combination in the functional role that it has within the communicative behavior of their linguistic community.

One functional role infants come to recognize and adopt is the referential value of connecting to the world with acoustic devices. Getting baby's blanky is of the utmost importance to the infant. They need to know how and when to say "*blanky*". They learn this by doing it and seeing what kind of response they get. Their use of these sounds is shaped by the feedback they receive.[26] The behavior of others is the arbiter of their linguistic competence. The child points to their blanket with the sound and gets the response they want. Their behavior is reinforced. They need not recognize the sound "*blanky*" as a token, a word, a symbol or a sign.

A concluding word about the Sapir-Whorf hypothesis is in order here. As we have discussed, the hypothesis asserts that how we perceive and categorize things in the world is influenced by our habitual linguistic behavior. A. P. Martinich objects:

> "The first view is sometimes called the Sapir-Whorf hypothesis, after Edward Sapir and Benjamin Whorf, sometimes the thesis of linguistic relativity, and sometimes that of linguistic determinism… The reason it is absent from standard philosophical handbooks is a combination of two things: either the explanation of it is self-contradictory or it is inconsequential. In its inconsequential form, the hypothesis asserts that the vocabulary for some languages divides the world differently from the way the vocabulary of some other languages does. So there is no exact single word equivalent in Spanish for 'brown' in English; and Eskimos have words for, say, seventeen kinds of snow, whereas English has only one. There is no doubt that each language has many words for which there is no existing word in some other language. It would be strange if this were not the case, given the diversity of histories accompanying the use of language. However, this thesis is inconsequential because it is consistent with the following two facts: all the distinctions that are made in one language can be made in another language either by using phrases, 'powdered snow', 'wet snow'… or by enriching the language with new words, often some form of the semantically elusive word. That's how words like 'espresso', 'mauve', 'taupe', and thousands of others got into English.
>
> "The contradictory version of the hypothesis is something to the effect that languages determine how people perceive reality. And because of this linguistic relativity or determinism, people of one language group or culture conceptualize the world so differently from people of another language group or culture that one cannot understand the other. The incoherence of this hypothesis emerges

> as soon as its proponent provides evidence for it. For the evidence consists of explaining in the proponent's own language the very differences that are supposed to be impossible for him and his audience to understand about the world." Martinich (1985: 23)

Many philosophers such as Martinich dismiss the principle of linguistic relativity because, however various human languages may be limited by vocabulary, people can make the same distinctions and exercise the same thought processes by utilizing the existing vocabulary in different ways. However, there is evidence that not everything expressed in any given language can be expressed in all other languages. People do, in fact, have cognitive limitations resulting from their habitual verbal behavior.

For instance, Douglas Hofstadter and Immanuel Sander recently (2013) gave us an insight into the effect that speaking Russian has on Russian cognition:

> "We might point out here that where English has two most basic conjunctions ('and' and 'but'), Russian has three—'H' ('and'), 'HO' ('but'), and 'a' (whose meaning floats somewhere between 'and' and 'but'). This means that Russian speakers and English speakers have slightly different category systems concerning very basic, extremely frequent phenomena that take place in discourse space. Picking up the subtleties of when to use 'a' instead of 'H' or 'HO' takes a long time." Hofstadter and Sander (2013: 74)

Simply put, how could this difference between Russian and English not have an effect on the cognitive processes of these speakers? Much of the time what one can sensibly think is dictated by what one can sensibly say.

Also, recent reporting by anthropologist/linguist Daniel L. Everett suggests that the Pirahã people in Brazil are incapable of expressing some things that English speakers do with ease.

> "… Pirahã has no perfect tense… The Pirahãs lack this kind of tense because all their references to time are relative to the present, not to hypothetical events in the past or the future.
>
> "The absence of Pirahã perfect tense indicates not merely the absence of a special tense word or suffix, but a much deeper lacuna. There is no way to convey a perfect tense meaning ever in Pirahã. In fact, Pirahã has very few words for time, period… But there is no controversy to the assertion that the Pirahãs do not need a wide array of time words. These words have no work to do in a society in which members sleep, eat, hunt, fish, and gather, without regard for the time of day, day of the week, week of the month, or month of the year." Everett (2012: 269)

> "Can anything at all be translated from any language to any other language,' the answer seems to be, 'No'. Different languages might have different expressive powers for different kinds of information.'" (Everett 2012: 294)

The jury is still out for many. But recent research seems to confirm the principle of linguistic relativity, *not linguistic determinism*.[27] Habitual speech behavior has dramatic effects on human

cognition, both speech-thinking and non-speech-thinking alike. Although many languages may have enough flexibility to enable non-habitual speaking to interpret almost any foreign expression, the habitual verbal behavior is still very influential in determining habitual thinking about various matters.

Propositions

> "When two sentences have the same meaning that is because they express the same proposition. Words are not essential to propositions. The exact psychological definition of propositions is irrelevant to logic and theory of knowledge; the only thing essential to our inquiries is that sentences signify something other than themselves, which can be the same when the sentences differ." Russell (1940: 237)

Because of the prominence of *propositions* in analytic epistemology, logic, philosophy of language and truth conditional semantics I must return to them and present an alternative to the standard doctrine espoused by analytic philosophers, logicians and theoretical linguists. Certain assumptions about propositions are misleading and infect much contemporary linguistic theory. An alternative view of propositions is crucial to making any headway in philosophy of language, logic and linguistic theory. So, without further ado, let's take a look at propositions from a non-semantic perspective.

Various uses of language are recognized by philosophers. The use of language that is of particular importance to analytic philosophers is stating facts or making epistemic claims to knowledge in the form of declarative or indicative statements. These epistemic claims are often said to *represent or express* psychological propositions. Bertrand Russell, in the epigraph to this section, described propositions as the undefined psychological entities that the statements signify. Likewise, in much of epistemology, philosophy of language, theory of logic, and truth-conditional semantics, propositions are considered to be the identical underlying *language neutral thoughts* shared by speakers who make equivalent statements in different languages, active/passive etc.

According to this theory, when two speakers utter "the tree is tall" and "el arbol es alto", for example, they are expressing the *same proposition*. These verbal utterances are very different, but both utterances represent a language-neutral undefined psychological entity, a common thought in the mind of the speakers. This common psychological entity that is *sign*ified, de*sign*ated, represented, expressed or encoded by the two statements gives them the *same meaning* according to Russell and others. That shared meaning is a result of the shared proposition, the *same thought* in the minds of the speakers.

Philosophers such as Russell posit these psychological propositions because they have long regarded the use of spoken sentences as physical activity that signifies, designates, represents, expresses, encodes or stands for mental activity. Although the proposition underlying the sentential utterance might not have an "exact psychological definition", there is no doubt that it is psychological, that is *mental*, not physical. This psychological view of human speech entails some form of dualism, both at the individual word level and the sentential level. Without this mind/body dualist assumption, they cannot postulate mental or psychological correlates such as

propositions for sentences.

Not surprisingly, problems arise with this view. For instance, how can theorist be sure that the underlying psychological propositions in the minds of two speakers are identical, even if they speak the same language? If these propositions are not identical there can be variability in the meaning and thus the truth of the propositions in various speakers' minds. The identical statement out of one speaker's mouth could be true, and out of another speaker's mouth false if the underlying proposition is not a language-neutral, speaker-neutral, context-neutral entity.

Consequently, many theorists attempted to avoid the "psychologism" and the implicit truth variability in declarative statements that this view of propositions engenders. They hypothesized *abstract propositions*. In this theory, propositions are considered to be *speaker-neutral* abstract entities that are signified, designated, represented, expressed or encoded by the verbal symbols used in the statement. They are *what the words say*. These speaker-neutral abstract propositions give statements both the *same meaning* and thereby the same truth value, in spite of any language differences, different thought processes in the head of any individual speaker, or the context of the utterance.

This theoretical view also allows theorists to consider both the oral assertion: "*the tree is tall*" and the written assertion: **'The tree is tall'** to be semantically equivalent. Both statements represent an identical speaker-neutral abstract proposition that is encoded in the symbols, be they vocal or written. By eliminating the personalized psychological proposition and hypothesizing an *abstract proposition*, the same stable *literal meaning* can be carried by the written symbols as well as the vocal symbols. This, in turn, enabled grammarians and linguists to conduct static analyses of the written statements for semantic content, rather than dynamic analyses of vocal behavior with all its dynamic contextual elements of prosody, presuppositions, previous discourse, etc.

It is quite evident that these propositions, both the psychological and the abstract, were invented by philosophers to complete semantic theories of language and logic. They needed theoretical entities to account for a *common meaning* that was supposedly shared by different speakers who uttered the same statements in one language, or comparable statements in different languages. Common meaning would provide a common stable truth value to propositional statements no matter who uttered them or when and how they did so. However, few of these hypothetical speaker-neutral, context-neutral, timeless statements with unvarying propositional content have been found.

Linguists, philosophers and logicians continue the search for immutable declarative propositional statements that have fixed meanings that hold constant no matter what the circumstances or who uses them. They search for a stable independent meaning encoded in the symbols, both written and spoken, that can be ferreted out and exposed for all to see and agree upon. The literature in philosophy of language and linguistics is a constant back and forth between theorists with different "readings" of statements caused by different contextual and background considerations. Statement meanings that remain fixed regardless of context are difficult to find.

Let's start over. If we do not take spoken words to be symbols, saying "*the tree is tall*" (sound it out) is an act; it is vocal behavior; it is human sound production. The utterance "*the tree is tall*" signifies nothing. It designates nothing. It represents nothing. It expresses nothing. It encodes nothing. It stands for nothing. It signifies nothing. It is not composed of symbols. That utterance is vocal behavior which has different effects on different hearers based on context,

the hearer's speech history, the incident of use, etc.

If theorists are willing to jettison the semantic analysis of language, they can dispense both with the psychological propositions supposedly represented by the utterance of a declarative sentence and the fixed abstract propositions supposedly encoded in the symbols. Rather, what is common to both Spanish and English declarative sentential utterances is the functional value of the phonetic units, somewhat idiosyncratically learned through their repeated deployment. The spoken words are functional behavior performed in response to stimuli which produces feedback.

Each assertion is not a "constative utterance", in J.L. Austin's terminology; it is a performative utterance. It is not an expression of a psychological proposition or a speaker-neutral abstract proposition. The entire vocal effort is behavior, it is a performance. If it is a straightforward declarative utterance, it begs assent or dissent, depending upon a host of considerations, straight forward honesty being the most obvious. If the hearer recognizes the functional value of the sounds and assumes the speaker is being honest, they will make the same judgment and agree or disagree based on their construal of "tall" relative to trees and the context of the utterance, etc. Other utterances of that statement are similar performances, all relativized to context, speaker goals, prosodic features and other communicative clues which might lead listeners to believe that the speaker is being truthful, poetic, sarcastic, comedic, etc.

Consider a marriage proposal. In a romantic context, if a man proposes to a woman, is there a mental proposition that corresponds to the proposal? Is a marriage proposal a representation of some mental act that the suitor has performed (he may have rehearsed it, but we wouldn't call his fifty rehearsals "proposals")? No, his verbal action is the proposal. The man is not reporting a mental proposal by proposing verbally. The proposal is performed through the use of words. A marriage proposal is clearly a performative speech act, not a representational act. The speaker hopes to elicit certain behavior from the hearer.

Through parallel analysis, *a declarative proposition is the act*, not something signified, designated, represented, expressed, encoded by the act. The proposition is carried out with words, the sounds. To say that someone has stated or asserted a proposition is to say nothing more than that the person has performed a speech act. Assuming that the speech act is a straightforward honest assertion, the speaker is conditioned to expect a response of some sort (the response may be a neural connection in the listener's brain and a nod of agreement.) A declarative sentence is no less a performative utterance than is a marriage proposal. Neither form of vocal behavior signifies, designates, represents, expresses, encodes, or stands for a psychological or abstract proposition.

A proposition, a performative speech act, is done by formula. We have learned a method of doing it with the acoustic devices at our disposal, just as we learn a method of proposing marriage. We have learned *how* to do something and adjust the behavior to fit the circumstances; it is utilitarian like our other behaviors. In addition, there is nothing cognitively unique or distinctive about the productivity of propositional speech behavior. It is utilitarian combinatorial human behavior in response to stimuli that has consequences.

Spoken language is action. It is a sequence of phonemes and gaps. We hear the action instead of seeing it. However, we English speakers *think* it is unique because dualist philosophers, logicians, and theoretical linguists have informed us that it is representational symbolic activity. Theorists have concocted an alternative universe full of propositions, thoughts, ideas and concepts to pair up with words and sentences. As a result, English speakers have been thoroughly

conditioned to talk about words, sentences, phrases, idioms and all the other grammatical units as representing or expressing these *mental entities*. In our day to day talk about our talk we use expressions such as: "get your thoughts across better", "putting thoughts into someone's mind", "exchange ideas". It is impossible to avoid such talk. That semantic paradigm of words carrying mental entities from one human head to another, the conduit metaphor, has become enshrined in our speech about speech.

From the non-semantic perspective, when a speaker performs propositions such as "the tree is tall" they are making a judgment about the height of the tree. They are making a kind-sortal. They are categorizing the height of the tree relativized to the circumstances with many presuppositions. They then propose that categorization to the hearer in an effort to get his or her assent or acknowledgement. The proposition is a proposal, a straightforward declarative speech act, a judgmental act performed to elicit agreement or possibly inform someone who has come to rely on the speaker about the size of trees.

Consider the following. While gesturing toward a cloud, a speaker says only "that cloud" to another person. The hearer would probably respond: "yes what about that cloud" or "what are you trying to tell me". The hearer recognizes the speaker's act of reference but expects more. A referring act, no matter what the method, is a hollow gesture. Speakers are expected to say something about the subjects of their verbal referring acts. Even cavemen had to say "cloud black" to make much use of their limited acoustic devices.

Speakers going as far back as the Stone Age were able to refer and *connect*. They often made a connection with a basic propositional utterance; they would *predicate*. Reference and predication allow us to form a distinctive kind of knowledge. To predicate with words in modern English, we use the semantically vacuous copula "is", or another form of it adjusted for tense, person and plurality. The sound "is" functions as the verbal connector. Some languages, such as Russian, operate without a copula. The connection is implied by word order, e.g. "cloud black". In modern English we perform a propositional act of predication by utilizing the copula and saying: "that cloud is black".[28]

This linguistic predication is verbal behavior described by B. F. Skinner:

> "Predication is effected by a relational autoclitic to which has been added an autoclitic of assertion. Let us say that a single object evokes the two tacts *chocolate* and *good*… The common source of the two responses, the fact that they are made to the same object, can be indicated by the relational autoclitic of order. Good chocolate is appropriate only to a single type of situation; it is a response to good chocolate. It shows neither assertion nor predication. *The chocolate is good* shows a relational autoclitic of ordering and grouping and it contains an autoclitic of assertion. Taken together these make it a predication." Skinner (1957: 334-335)

When speakers make these statements, they stimulate listeners to perform the same propositional speech act consisting of the same functional units of verbal behavior. The hearer makes the same predication, more or less, depending upon their conditioned speech skills. They follow the speaker's direction. Their attention is directed to the same objects, actions, events, etc. The same sorting and connecting is performed though neither the speakers nor the listeners are connecting

concepts or ideas in their minds; they are attending to kind-sortals and making neural connections in their brains that are retained for future use.

These basic propositional acts, consisting of basic autoclitics become more and more complex as speakers develop their speaking skills. As they become more complex, multiple interpretations for propositional speech acts are possible, depending upon speaker conditioning and the usual considerations of context, prosody etc. That makes the analysis of any vocal behavior in isolation fruitless. Consequently, when the analysis is limited to a written recording of vocal behavior the functional value of that behavior often becomes even more opaque. As a result, the classic analysis of static textual verbal behavior within the semantic paradigm has thoroughly confounded linguists by creating paradoxes and puzzles that are insoluble.

For example, there has been much philosophical wrangling for the past forty years over the written statement: **'Water is H_20'**. Some philosophers claim that the word **'water'** and the word **'H_20'** de*sign*ate the same *referent*. They are often called "rigid designators". It is further claimed that that this written statement is an eternal sentence, one which *means* the same thing in all possible worlds, forever. On the contrary, these written words have no fixed meanings or referents, and the written statement **'Water is H_20'** can be construed many ways. It is the recording of a propositional speech act that depends upon all the contextual elements of speech for multiple interpretations.

For instance, a writer could be using that recorded speech act to make a claim about the chemical composition of the clear liquid substance we English speakers can refer to with the sound "water". Or, a writer could be using that the assertion to make a claim about the way he will use those terms. Speakers can be talking about their talk, not the substance water. Maybe they are just saying that's how they would define the word "water". They could also use that assertion to make a stipulative definition for certain purposes, i.e. while in the chemistry lab they will use both terms interchangeably. If we take the speech act to other possible worlds, as philosophers have done, the possible interpretations multiply.[29]

All of this confusion is exacerbated by the ambiguous use of "is" within English propositional speech acts. Russell clearly recognized the problem in Descriptions:

> "The *is* of "Socrates is human" expresses the relation of subject and predicate; the is of 'Socrates is a man' expresses identity. It is a disgrace to the human race that it has chosen to employ the same word *'is'* for these two entirely different ideas—a disgrace which a symbolic logical language of course remedies."

Correctly analyzed, "is" is an operator; it has two connecting functions. It connects the subject to the predicate when it is used by the speaker as a copula, as in: "the cloud is white". Alternatively, when the speaker intends to use "is" as the functional equivalent of "equals" it connects two subjects in an identity relationship. For example: "mark twain is samuel clemens". The word sound "is" has at least two roles to play in the verbal behavior of English speakers. In Russell's dualistic semiotic world, "is" is employed to "express" two entirely different "ideas". What could these "ideas" be?

The story of the English copula "is" provides revealing insights into language acquisition and use, along with the functional value of propositional speech acts. Guy Deutscher relates an interesting linguistic fact about the English copula "is":

> "But many languages, such as Russian, don't need such a copula, and simply say the equivalent of 'stone sharp'. (In fact, copulas like 'is' are usually of a secondary origin, and often ultimately come from some marker of emphasis which with time and frequent repetition loses its force and becomes obligatory.)" Deutscher (2005: 239)

This insight becomes highly significant in understanding the development of language. The connection we English speakers make with "*is*" probably originated with a simple juxtaposition of an object and a kind-sortal that we gleaned from our experience and pointed to with the word sounds "*stone*" and "*sharp*". The connection, made originally by means of word order (syntax) "*stone sharp*", was formally enshrined with the copula "*is*" because it clarifies the speaker's goal and makes the propositional act more obvious.

Unfortunately, the obligatory marker origins of "*is*" in English have since metamorphosed into an existential function within certain contexts:

> "It is clear that syntax will not be needed by symbol using creatures until their form of symbolic communication becomes complex enough to generate more than a single noun and a single verb. For example, consider the sequence, modifier –noun –verb. Does the modifier modify the noun or the verb? In most cases this is solved semantically, without recourse to rules of organization because the same type of things in the real world usually cannot modify both verbs and nouns. For example, a ball can be green, but 'pushes' are not green. However, this is not true for all nouns and verbs. 'Kicks can be up or down, for example, and trees can be up or down as well.
>
> "In this case the problem of ambiguity is typically solved by introducing the special verb, 'to be', as in 'The tree *is* down', so that 'down' becomes a comment on the state of the tree. Here, 'down' cannot be a comment on the state of the verb, because actions have no states, they are processes. Thus, whenever the 'to be' verb is used with a modifier, the modifier is directed to the noun simply because the 'to be' verb cannot be modified. The purpose of the copula is not one of semantic content, but rather to permit the typical noun-verb format to occur in expressions where the only action is one of existence. This is necessary because the act of formally noting existence cannot in and of itself be modified and still retain its status as a denotator (not semantic) of existence." Gibson and Ingold (1993: 105)

"*to be or not to be*" Let us not be fooled by this existential function of "*is*" into thinking that our use of that word sound has any impact on the nature of the universe and what *exists*. This existential function of "*is*" has been transformed into "being" and hideously abused by some philosophers of the existential tradition. When philosophers produce existential imperatives by declaring that something has "*being*", they are simply abusing a perfectly useful word.

"*is*" has functional origins and functional values. The sound "*is*" has no referent and no meaning. It *is* not a sign, a symbol or a semantic designator. It *is* a word sound with multiple functions that have gradually evolved over an extended history of its use. In that respect it *is* the same as any other word. It should also be noted that the use of "*is*" *is* context dependent. "*is*",

"*was*" and "*will be*" are all context dependent. They are time sensitive. The ordinary use of these word sounds in discourse cannot be taken out of a time context.

In any case, the overall thrust of this section is a claim that propositions are not mental or abstract entities; they are actions, they are human behavior. They are not psychological entities that can be represented or expressed by public languages. They are not psychological entities which serve as translational constants and truth bearers. They are not abstract entities with stable, independent, semantic content and stable truth values. Propositions are speech acts, and, as is the case with any speech act, they can be used and construed in many ways.

Proposing is one of the things we humans do with word sounds. The proposition, as a mental entity or an abstract speaker-neutral entity, are fictions created by philosophers for a variety of reasons. Do not be duped into thinking that your speech acts represent, signify, designate, denote, encode, or stand for anything. All speech is behavior in response to stimuli that has consequences which may, or may not reinforce the behavior.

The Use of the Word "comprehension"

> "Comprehension, the process of understanding an utterance, requires the ability to access the mental lexicon to match the words in the utterance we are listening to with their meanings." Fromkin and Rodman (1998: 389)

This quote exemplifies the "dictionary in the head" theory of semantics. It also exemplifies the use of the word sound "comprehension" and its derivative text version **'comprehension'** in modern linguistics. Listeners are said to match the meanings in their *"mental lexicon"* with the utterances that issue from speaker's mouths. *Comprehension* is claimed to be this mental feat of matching mental meanings with words. Although there is no evidence whatsoever for this peculiar explanation of human verbal behavior, it is accepted because philosophers, linguists and grammarians are working within the semantic frame and an implicit mind/body dualism which is embedded in their SAE verbal behavior. However, there is no warrant for talking this way about our talk. Philosophers, linguists and grammarians should simply say that speakers learn *how* to use various linguistic devices within language specific syntaxes. Thus, when speakers learn *how* to use these various linguistic devices, they also become listeners who know how the devices are being used by others.

That vocal behavior becomes structured as a result of the architecture of the human brain and other commonalities of human anatomy which produce common behavior, as well as the linguistic environment in which children are raised. Comprehension of anything is *knowing how* to perform, whether the performance is tying a bow knot, playing a musical instrument, or writing the next great American novel. There is no need to inject supernatural *mental* entities and processes into the analysis if you do not start by assuming the dualistic semantic paradigm.

Chapter Two

Summary & Notes

With the advent of the written word, the semantic theory of human sound production and utilization began its ascent. Functional units of sound were recorded graphically and parsed into words, phrases, sentences, etc. The individual word symbols were then said to have meanings that could be associated with them, whether they were vocal symbols or written symbols. Literal or lexical meanings were said to be carried by both the written symbols and the vocal symbols as they were transmitted from person to person. These fixed, independent meanings were said to be encoded in the symbols and stable across all speakers and for every occasion of use. The pairing of words and these stable meanings became the paradigmatic model for the human acquisition and use of speech.

Along with this stable, independent, semantic content, semanticists put stable, independent reference into the words and other units of grammar. The words and phrases, as symbols, were said to refer to, signify, designate, or denote their referents. *Reference* became a relation between the symbols and things in the world that held regardless of the verbal upbringing of the speaker or the context of their verbal behavior. Three millennia of philosophers and linguists have worked within this erroneous paradigm of words and phrases with meanings and referents.

Additionally, word symbols were said to *represent* or express other activity, mental activity. Spoken symbols were said to express speaker meanings, thoughts, ideas, concepts, *mental representations* and propositions in the minds of speakers. This is the third of the semantic fallacies: *representation*.

To make these claims, theorists had to embrace *dualism* of one kind or another. The mind/body dichotomy which is now embedded in our SAE verbal behavior and our derivative thought processes, is a prerequisite for this explanation for human speech behavior. Unfortunately, mind/body dualism, mainly in the form of folk psychology, is conditioned into contemporary English verbal behavior about that verbal behavior. All explanations for human speech currently on offer, other than behaviorism, are couched in dualistic psychological or mental terms.

The way we humans currently talk about our talk is a product of ancient metaphysics and three millennia of misguided philosophy. The presumed mind/body dichotomy and the symbolic nature of sounds that are emitted from our mouths are outgrowths of ancient philosophical speculation and the advent of writing systems that record the sounds. That talk about our talk, based on thousands of years of philosophical speculation, obfuscates the proper analysis of human verbal behavior.

Theorists must eliminate their presuppositions and assumptions about the nature of language and the nature of humans if they wish to correctly analyze human speech behavior. We do not need the metaphysics of Plato, or the mentalism of Aristotle and Descartes, or the psychologism of much contemporary theory, to explain how language works. The empirical and introspective evidence supporting such semantic theorizing about human speech is non-existent. In fact, the data (verbal behavior) indicate quite the contrary. Those data indicate that humans use acoustic devices and syntax in coordination with other conditioned, communicative behavior in response

to various stimuli. All of that verbal behavior is performative action, including asserting or proposing by means of declarative statements.

Linguists and philosophers have been whittling away at semantics and dualism for the last century, freeing many word sounds from their semantic constraints, e.g. grammatical elements. Yet, semantic theorizing about what word symbols *mean, stand for, signify, designate, denote, encode, refer to, represent,* or *express*, persists. It is time to entirely dispose of the semantic paradigm. It is time to recognize that human speech is S-R-R conditioned behavior that can be explained within the behaviorist paradigm. B. F. Skinner gave a broad account of speech in behaviorist terms. A fine-grained behaviorist account can be had if the current semantic paradigm is jettisoned. Human speech behavior can then be reduced to physiology, acoustics, molecular biology and, ultimately, to physics and chemistry.

Theorists must reject talk about words as signs, symbols and semantic designators. They must reject talk about humans with minds and mental phenomena. Theorists must change their speech behavior about themselves and their speech, eliminating the idealism, the mentalism, the psychologism, and the semantics. Because every time speakers use these mental or psychological terms, they reinforce the dualism implicit in their use. When philosophers, scientists, and linguists change their speech about themselves and their speech behavior, others will as well. The bad behavior must stop. Theorists must lead the way.

Adapting to this new approach will require a complete reorientation in analysis. Semantics in all its manifestations must go. Theorists must view speech in the same way that we view other human behaviors. It is a different type of behavior, but behavior none the less. Human verbal behavior can be explained by observing it and the physiology of the body emitting it. Moreover, we must observe the action, not the impoverished representations of the action. We simply cannot analyze the static representations of vocal behavior, i.e. written symbols. All linguistic analysis must be based on discourse function. Theorists must *listen* to the data.

Should we not use the word sounds "sunrise" or "sunset"? As we all know, the sun does not actually rise up in the morning nor set at night. The earth rotates in a solar orbit which creates the illusions of sunrise and sunset. Yet, "sunrise" and "sunset", although misleading, are perfectly useful word sounds. In the same vein, we can utilize word sounds such as "mind", "concept", "idea", and their derivative symbols. However, we must realize that these words, and others like them, must be used with provisos. They are shorthand methods of explaining complex human behavior and its origins. They are part of our linguistic heritage and folk psychology that has, for millennia, played a role in explaining human speech, but they are unsupported by any evidence.

The philosophical perplexities and the poor science that come from the wobbly foundations of semantics and dualism are manifold. I hope to expose them in the following chapters of this book. First though, I will confront the mind/body problem head on. Then, I will present evidence for the acceptance of a non-semantic approach to linguistic analysis and theory, starting with solutions to traditional puzzles in linguistic theory. From there I will proceed to a new look at the philosophy of mathematics from a behaviorist standpoint. Following that I will review traditional problems in epistemology from the same non-semantic perspective. I will then take a look at physics and philosophy of science from the non-semantic perspective. Gordian knots will be untied.

1. Empirical evidence for the functional autonomy of written text for literate humans appears as phonological dyslexia. David Crystal reports that: "…people lose their ability to convert isolated letters into sounds; they are unable to pronounce even simple nonsense words, e.g. *pob*). But they are able to read real words, showing a non-phonological route from print to meaning must exist." Crystal (1997: 213)

The route does not take them to *meaning*; it takes them to *function*. Mature readers are able to independently glean the functional value of the symbols without going through the intermediate sounds. They know the functional value of the sounds "*is*", "*sun*" and "*he*" and adopt that function for the written symbols for those sounds as well.

2. No doubt semanticists will object to this characterization of this behavior because the relation between the sounds and the items pointed at has not been explained. However, B. F. Skinner went to great pains to show how phonetic units are associated with objects, actions, events, etc. through operant conditioning. Novice speakers learn to associate the sound "*blanky*" with the object, and the sound "*blue*" with the color of the object. This association was called a "tact" by Skinner for reasons to be explained later. Until then, I will continue to use the word "point".

3. Languages vary dramatically in the use of such polysemous words. In Mandarin, for example, speakers have four distinct verbs to indicate "*playing*" four broad types of musical instruments: stringed instruments, wind instruments, plucked instruments, banged instruments. There is no generic form of the English word sound as in; "*playing a musical instrument*". Speakers must use distinct words for "*playing*" different types of instruments. Each group of instruments is a different frame of reference using different terms for the generic "*play*" in English. Hofstadter and Sander (2013: 12)

M.W. Dixon reports on the same lack of generic terms in other languages: "…shared (One might say, universal) concepts can—most of the time---fairly easily be translated between languages. However things can get a little tricky when two languages differ in specificity. Language A may have a general verb 'carry', to which can be added an optional specification such as 'in the hand'. In contrast, language B lacks a general verb 'carry', having instead an array of (unanalysable) specific verbs: 'carry on the head', 'carry over the shoulder', 'carry against the belly', 'carry on the hip', 'carry in the hand', and perhaps more. In order to translate into language B a sentence from language A such as 'Father carried the consignments into the house', more information is required—how did he carry it?" Dixon (2016: 147)

4. The difficulty with neatly categorizing our experience is hereby acknowledged. I might add that it is one more indication of the futility of using grammatical categories of nouns and verbs to categorize things humans perceive as objects, actions, events, kind-sortals and the state of affairs. Benjamin Whorf laid out the problem: "Let us consider a few examples. In English we divide most of our words into two classes, which have different grammatical and logical properties. Class 1 we call nouns, e.g., 'house, man'; class 2, verbs, e.g., 'hit, run.' Many words of one class can act secondarily as of the other class e.g., 'a hit, a run,' or 'to man (the boat),' but, on the primary level the division between the classes is absolute. Our language thus gives us a bipolar division of nature. But nature herself is not thus polarized. If it be said that 'strike, turn, run,' are verbs because they denote temporary short-lasting events, i.e. actions, why then is 'fist' a noun? It is also a temporary event. Why are 'lightning, spark, wave, eddy, pulsation, flame, storm, phase, cycle spasm, noise, emotion' nouns? They are temporary events. …It will be found that an "event" to us means "what our language classes

as a verb" or something analogized therefrom. And it will be found that it is not possible to define 'event, thing, object, relationship,' and so on, from nature, but that to define them always involves a circuitous return to the grammatical categories of the definer's language.

In the Hopi language, 'lightning, wave, flame, meteor, puff of smoke, pulsation' are verbs—events of necessarily brief duration cannot be anything but verbs. 'Cloud' and 'storm' are at about the lower limit of duration for nouns. Hopi you see has a classification of events (or linguistic isolates) by duration type, something strange to our modes of thought. On the other hand, in Nootka, a language of Vancouver Island, all words seem to us to be verbs, but really there are no classes 1 and 2; we have, as it were, a monistic view of nature that gives us only one class of words for all kinds of events. 'A house occurs' or 'it houses' is the way of saying 'house,' exactly like 'a flame occurs' or 'it burns.' These terms seem to us like verbs because they are inflected for duration and temporal nuances, so that the suffixes of the word for house event make it mean long-lasting home, temporary house, future house, house that used to be, what started out to be a house, and so on." Whorf (1956: 215)

5. Skinner's take on meanings: "To say that the behaviors have different "meanings" is only another way of saying that they are controlled by different variables" Skinner (1969:156)

6. "A well-known set of reinforcing contingencies is a language. For thousands of years men spoke without benefit of codified rules. Some sequences of words were effective; others were less so or not at all. The discovery of grammar was the discovery of the fairly stable properties of the contingencies maintained by a community. The discovery may have been made first in a kind of personal problem solving, but a description of the contingencies in the form of rules of grammar permitted men to speak correctly by applying rules rather than through long exposure to the contingencies. The same rules became helpful in instruction and in maintaining verbal behavior in conformity with the usages of the community." Skinner (1969: 141)

7. Because they lack the encyclopedic knowledge required for the proper construal of "open" in English, first language learners often make errors in the application of the word: "Typical are examples from a child who used open between about 16 and 21 months not only for canonical actions on doors, windows, boxes, and the like, but also for separating two Frisbees, unscrewing a plastic stake from a block, spreading the handles of nail scissors apart, taking the stem off an apple, a piece out of a jigsaw puzzle, a handle off a riding toy, and a shoe off a foot, and also for turning on an electric typewriter, a light, and a water faucet. Bowerman and Choi (2003: 113) Space Under Construction: Language-Specific Spatial Categorization in First Language Acquisition.

8. As Derek Bickerton writes: "Syntax is not serially but hierarchically arranged, with structures nesting inside other structures." Bickerton (1990: 139). The much-ballyhooed recursion in human vocal behavior is employed routinely by inserting functional units such as phrases into larger constructions. Recursion is widely evidenced in sentences such as: "jimmy told the teacher that he heard mary say give it to me". Functional units from individual words to complete sentences are nested within larger constructions.

9. Although he is entirely misled by the semantic fallacies, Michael Tomasello provides an account of the ontogenetic origins of triadic acts of reference: "… Six-month-old infants interact dyadically with objects, grasping and manipulating them, and they interact dyadically with other people, expressing emotions back-and-forth in a turn-taking sequence. If people are around when they are

manipulating objects, the infants mostly ignore the objects. If objects are around when they are interacting with people, they mostly ignore them. But at around 9-12 months of age a new set of behaviours, begins to emerge that are not dyadic, like these early behaviours, but triadic in the sense that they involve infants coordinating their interactions with objects and people, resulting in a referential triangle of child, adult, and the object or event to which they share attention. Most often the term 'joint attention' has been used to characterize this whole complex of social skills and interactions (see Moore and Dunham 1995). Most prototypically, it is at this age that infants for the first time begin flexibly and reliably to look where adults are looking (gaze following), to engage with them in relatively extended bouts of social interaction mediated by an object (joint engagement), to use adults as social reference points (social referencing), and to act on objects in the way adults are acting on them (imitative learning). In short, it is at this age than infants for the first time begin to 'tune in' to the attention and behaviour of adults on outside entities.

Not unrelated, at around this same age infants also begin actively to direct adult attention and behaviour to outside entities using deictic gestures such as pointing or holding up an object to show it to someone. These communicative behaviours represent infants' attempts to get adults to tune in to their attention and interest to some outside entity. Also important is the fact that among these early deictic gestures are both imperatives, attempts to get the adult to do something with respect to an object or event, and declaratives, attempts to get adults simply to share attention to some object or event." Tomasello via Christianson, Morten & , Kirby, Simon (2003: 95)

10. Taking his clues from Tarski, Russell established a hierarchy of languages: "Tarski… has shown that the words 'true' and 'false,' as applied to the sentences of a given language, always require another language, of higher order, for their adequate definition….The arguments for the necessity of a hierarchy of languages are overwhelming, and I shall henceforth assume their validity." Russell (1940: 75)

From Russell's standpoint, logical operators such as "and" and "or" are constituents of a higher order language of logic which also happens to bear truth and falsity in the form of propositions. The indelible stamp of logicians and their search for truth was applied to linguistic analysis. It generated a hypothetical hierarchy of languages.

11. Jean Aitchison writes in The Seeds of Speech: "The class of adjectives is a notorious swing-category in languages', it has been said. The border-line between nouns and adjectives, and between adjectives and verbs, often seem arbitrary. Some adjectives seem more like nouns, *as in a* **gold** *watch, a* **tin** *tray*, others more like verbs, as in *a* **lasting** *peace*, *a* **whistling** *kettle*. As one researcher notes: 'It is, of course, no accident that the lexical class 'adjective' has remained problematic, exhibiting even within the same language some 'more noun-like' properties and some 'more verb-like' ones.[I]

I. Givon 1979: 14. Aitchison (1996: 133)

Once again, the speech data should give grammarians pause about the whole enterprise of parsing language into grammatical parts-of-speech.

12. Consider these examples of affective speech, (authors unknown): "he was indifferent" "he didnt mind" "he didnt care at all" "he didnt give a hoot" "he didnt give a darn" "he didnt give a damn" "he didnt give a tinkers damn" "he didnt give a good god damn" "he didnt give a flying fuck"

13. B.F Skinner defended behaviorisms use of intuitions: "It has been said that 'under behaviorist

assumptions, which insisted that language was behavior, such concepts as intuition were regarded as being as unfit for scientific study as ghosts or dreams,' but behaving intuitively, in the sense of behaving as the effect of unanalyzed contingencies, is the very starting point of a behavioristic analysis. A person is said to behave intuitively when he does not use reason. Instinct is sometimes a synonym: it is said to be a mistake to 'attribute to logical design what is a result of blind instinct,' but the reference is simply to behavior shaped by unanalyzed contingencies of reinforcement." Skinner (1974: 146)

Intuitions, instincts or what many contemporary writers refer to as "common sense notions" are a result of conditioned verbal behavior. These "common sense notions", instincts or intuitions about language use are a consequence of previous verbal behavior and the contingencies of reinforcement to which that behavior was exposed.

14. The chicken and egg enigma is also realized in the ongoing debate amongst theorists about the origins of language. Nativists such as Steven Pinker believe that human thought of a rudimentary kind with limited concepts precedes the human use of words. Bickerton et al., hold the opposing position that rudimentary language preceded the human ability to think the way that we do: "Eventually, language and human cognition did coevolve. But first, the first words had to trigger the first concepts and the brain had to provide those concepts with permanent neural addresses. Only then could the creation of concepts enable the mind to roam freely over past and future, the real and the imaginary, just as we can do nowadays in our talking and writing. In other words, before typically human ways of thinking could grow, language itself had to grow." Bickerton (2009:210)

15. A proliferation of concepts plagued Bertrand Russell as well: "It is not hard to see why Russell might have found these consequences of the theory of denoting concepts implausible. To begin with, the infinite hierarchy of denoting concepts is completely *ad hoc*: apart from the exigencies of the theory of denoting concepts, there is no reason at all to accept it. The existence of such an infinite hierarchy may seem, at the least, implausible… Worse, the infinite regress which generates the hierarchy appears to be vicious." Hylton, (1990: 251)

Russell's problem derives from the same source that Carston's does: the semantic theory of language and the belief that spoken words *represent* something in a "human mind".

16. James R. Hurford, for instance: "A problem that lurks behind quarrels over the term 'representation' is that in ordinary language usage, representations are static and relatively permanent, like pictures in an art gallery (which are iconic) or letters in a printed book (which are symbolic). The formulae to be developed in Chapter 5 are intended as snapshots of partial transient states of a dynamic neural system at some point in time. The formulae above bear the same general kind of relation to neural activity in the animal's brain as the chemical formula H2SO4 bears to the state of some liquid in a flask at a particular time…

In the notation to be developed, the capitalized terms are more like theoretical, and so far non-explanatory, place-holders: ROCK stands for whatever goes on in an animal's brain when it recognizes, or thinks about, things roughly coextensive with what we would call a rock." Hurford (2007: 14). For Hurford, as is the case for most theorists, human speakers are simply the latest and greatest in a long line of hominids.

17. From the Wall Street Journal: "Brighton, England—There is little doubt that bridge is a mentally challenging card game known to generate fierce passions—and even end in acrimony.

But does that make it a sport? A British judge is set to rule on the question this week, a decision

that English bridge aficionados hope will finally accord them the same respect given to snooker and darts, both which are recognized as sports in the U.K.

Leading the charge is Ian Payn, vice chairman of the English Bridge Union and a serial contestant on some of the U.K.'s more cerebral television quiz shows. His group has taken the U.K.'s main sports administration body to court after it refused to accept bridge as a legitimate sport. …The international Olympic committee has long recognized the card game as a sport, even if it hasn't yet admitted it to the Olympic Games…"

18. "Languages may or may not have morphology, that is, inflection or derivation. Languages may or may not use constituent structure (as in the familiar tree-diagrams) to encode fundamental grammatical relations (Austin and Bresnan 1996; Levinson 1987). Thus, they may or may not have syntactic constraints on word or phrase order. Languages may or may not make use of such basic word class distinctions as adjective, adverb, or even arguably, noun and verb (Mithun 1999, 60-67). If they do, the kind of denotation assigned to each may be alien from an English point of view. Languages force quite different sets of conceptual distinctions in almost every sentence: some languages express aspect, others don't; some have seven tenses, some have none; some force marking of visibility or honorific status of each noun phrase in a sentence, others don't; and so on and so forth. Linguists talk so often about universals that nonlinguists may be forgiven for thinking that they have a huge list of absolute universals in the bag; but in fact they have hardly any that have even been tested against all of the 5%-10% of languages for which we have good descriptions. Almost every new language that is studied falsifies some existing generalization—the serious comparative study of languages, and especially their semantic structures, is unfortunately still in its infancy." Levinson (2003: 29)

19. James R. Hurford outlines some of the scientific literature on animal recognition in The Origins of Meaning, pp.49-60. He quotes studies by Damasio (1989), Kemmerer (2006), Bickerton (1995), Barsalou (1999), et al. There is much scientific evidence that animal recognition (including humans) is correlated with neural patterns in the brain. Unfortunately, because of the dualism they inherited in their verbal behavior, these theorists often get caught up in talk about ideas, concepts, mental representations, conceptual representations and so forth. There is no need to do so. A great example would be: "Bickerton (1995) also mentions Damasio's convergence zones, in particular cross-modal ones. He discusses the idea of a *mental* 'holistic cat', unifying all the auditory, visual, olfactory, and tactile properties of cats into a single *concept*. Bickerton suggests, however, that it is only with the advent of linguistic labels that such cross-modal 'holistic' *concepts* get built: 'there are at least a few reasons for thinking that the only holistic cat is the linguistic cat—or in other words that it takes some kind of arbitrary symbol to tie together all the representations of all the attributes that make up our *idea* of 'cat'' (p. 24). Bickerton is correct that the advent of public linguistic labels influences *private representations*; but unified cross-modal *concepts* do exist before language, in animals and in babies." Hurford (2007: 55)

There is no empirical evidence whatsoever for universals, abstractions, ideas, concepts, mental representations, conceptual representations, private representations etc. It is totally unscientific to discuss anything other than the neural activities in the brain. Much of what is written and said about the use of such word sounds is metaphysical speculation, nothing more.

20. It should also be noted, as did Michael Tomasello: "Classical views of categorization focus on the perceptual features of items in the world, but Nelson (1974, 1985, 1996; see also Mandler, 2000) has shown that early in development categories are formed on the basis of function. Thus, for a young

child a ball is something one can act on in certain ways and that does certain things; its function derives from the role it plays in activities and events." Tomasello (2003: 124)

As was the case with Tomasello's description of the neural connections made when the word "hammer" is used, the use of the word "ball" is based on some neural connections made because of the way the balls are used, not just their observable features.

21. For a brief sample of aspectual semantics pertaining to English verbs, I will further quote Steven Pinker: "…why can an English speaker *throw someone a box* ('cause him to have it by throwing it to him') but not *lift him the box* ('cause him to have it by lifting it to him')? Why can you *tell him the news* but not *mutter him the news*?

"Verbs of giving go both ways, logically enough: feed, give, hand, lend, loan, pay, sell serve, trade. So do verbs that indicate imparting force to and object instantaneously, sending in on a trajectory to a recipient, as in *Lafleur slapped him the puck*: bash, bat, bounce, bunt, chuck, flick, fling, flip, heave, hit, hurl, kick, lob, pass, pitch, punt, roll, shoot, shove, slam, slap, slide, sling, throw, tip, toss. But with locative alteration, physics matters. Verbs that indicate the continuous application of force to an object to keep it moving, rather than one quick fillip to send it on its way, don't like the double-object construction nearly as much. That's why it's odd to talk about lifting him the crate, and other drawn-out maneuvers: carry, drag, haul, hoist, lift, lower, lug, pull, push, schlep, tote, tow, tug…

"The distinction between events that are construed as instantaneous, like throwing, and events that are construed as protracted in time, like lugging, matters a lot in language. Linguists call this general realm of meaning---how states and events are distributed in time----'aspect' (not to be confused with the other timekeeper in language, tense)." Pinker (2007: 60)

The key point is that "physics matters". Languages reflect many *aspects* of our physical and cultural environment. However, they do not reflect all the same aspects.

22. Paradoxically, the claim that there are no non-linguistic behaviors that can be shown to be a result of the Whorfian effect is itself a result of the Whorfian effect: "Second, comparing studies conducted in different languages poses a deeper problem: there is simply no way to be certain that the stimuli and instructions are truly the same in both languages. This problem remains even if the verbal instructions are minimal. For example, even if the task is nonlinguistic, and participants are asked simply their language's equivalent of 'which one is the same?', one cannot be sure that the words used for 'same' mean the same thing in both languages. If in one language the word for 'same' is closer in meaning to 'identical,' while in the other language it is closer to 'relationally similar,' speakers of different languages may behave differently, but only because of the difference in instructions, not because of any interesting difference in thought. There is no sure way to guard against this possibility when tasks are translated into different languages. Since there is no way to know that participants tested in different languages are performing the same task, it is difficult to deem the comparisons meaningful." Boroditsky via Gentner and Goldin-Meadow --Language and Mind (2003: 67)

These researchers appear to be asserting that because cross-language verbal instructions may result in different behavior, all such studies looking for such different behavior as a result of differences in language, must be disregarded. However, if the difference in behavior is a result of the differences in the interpretation of verbal instructions, is that not evidence in favor of Whorf's principle of linguistic relativity?

23. I use the term SAE languages in this book although it was coined by Whorf and is an inexact term. I use it for lack of a better term. Indo-European is too broad and West Germanic is too narrow. I leave it to linguists to decide which languages are related to one another and which ones incorporate

the same distinctions embedded in the English language.

24. I use the term "speech-think" here although it is not detailed until Chapter Three. Language is a necessary component of our speech-thinking. No doubt we do non-linguistic thinking as well, but language expands our thinking ability. When we do much of our thinking, we are necessarily doing it with words. Speech-thinking makes us unique. However, there is no reason to interject mental entities into the analysis, e.g. naked thoughts that are translated into public language. We do our speech-thinking with public words. People who have no language skills are cognitively limited. Moreover, speech-thinking is not mental activity conducted in *the mind*; it is physical activity produced by neural connections in the brain.

25. According to Bickerton and Aitchison: "Moreover, there is considerable structural, cross-linguistic, and historical evidence that even in languages that exist today, what are claimed to be the oldest nouns among those referring to other life-forms, do so at the approximate level of the species (that is, words like dog were used earlier than words like spaniel or mammal). Bickerton (1990: 44)

It should be noted that the definitions of words are often given in terms of related words. The definition of word sound "*dog*", for instance, is given by explaining that it is a species of mammal with certain features different from other mammals and spaniels would be one type of dog." Aitchison (1992: 86)

26. Overt direct feedback utilized to shape verbal behavior is limited. However, as Terrence Deacon put it: "Children's language experiences are embedded in a rich and intricate social context, which provides them with multiple routes to pragmatic social feedback. Moreover, the language interactions that young children engage in are often simplified by the adults, and certain features are exaggerated to make them more salient." Deacon (1997: 105)

27. "Since Pinker's (1994) 'obituary,' Whorfian research has experienced a renaissance. Experimental evidence has reopened debate about the extent to which language influences nonlinguistic cognition in domains such as space (Levinson, 1996; Li & Gleitman, 2002; Majid, Bowermand, Kita, Haun, & Levinson (2004). color (Gilbert, Regier, Kay, & Ivry, 2006; Kay & Kempton, 1984; Roberson, Davies, & Davidoff, 2000; Witthoft, et al., 2003), number (Casasanto, 2005a; Gordon, 2004; Gelman & Gallistel, 2004; Miller, Major, Shu, & Zhang, 2000; Pica, Lemer, Izard, & Dehaene, 2004; Spelke & Tsivkin, 2001), and time (Boroditsky, 2001; Casasanto et al., 2004; Chen, 2007; January & Kako, 2007; Nunez & Sweester, 2006). One obstacle to resolving this controversy has been devising truly nonlinguistic tests to evaluate how speakers of different languages perceive or remember their experiences, particularly in the more abstract conceptual domains such as time.

Across languages, people use the same words to talk about time that they use to talk about space (Alverson, 1994; Clark, 1973; Gruber, 1965; Haspelmath, 1997; Jackendoff, 1983; Lakoff & Johnson, 1980; Traugott, 1978). For example. English speakers might talk about a *long* vacation or a *long* line and moving *forward* or moving a truck *forward*. Evidence from, behavioral experiments suggests that people not only talk about time using spatial language, they also think about time using mental representations of space (Boroditsky, 2000, 2001; Boroditsky & Ramscar, 2002, Casasanto, 2005b, in press; Casasanto & Boroditsky, 2003, 2008; Casasanto et al., 2004; Cohen, 1967; Gentner, 2001; Nunez & Sweester, 2006; piaget, 1927/1969: Torralbo, Santiago, & Lupianez, 2006: Tversky, Kugelmass, & Winter, 1991). Although using spatial metaphors for time may be universal (Alverson,

1994; cf. Silva, Sinha, Zinken, Sampaio, 2008), the particular mapping from space to time vary across languages. For instance, depending on the language, speakers might talk about the future as if it lies ahead of us (in English), behind us (in Aymara), or below us (in Mandarin Chinese). Behavioral studies suggest that speakers of the languages that use different spatiotemporal metaphors may indeed think about time differently (Boroditsky, 2001: Nunez & Sweester, 2006)." Daniel Casasanto, Language Learning 58: Suppl. 1, December 2008 pp. 63-79.

28. There are indications that during our "inner speech", as Lev Vigotsky called it, the propositional form may be abbreviated to pure predication because the subject of the predication is already in the speaker's crosshairs. "Our experiments convinced us that inner speech must be regarded, not as speech minus sound, but as an entirely separate speech function. Compare with external speech, inner speech appears disconnected and incomplete…

"We applied this method and found that as egocentric speech develops it shows a tendency toward an altogether specific form of abbreviation: namely, omitting the subject of a sentence and all words connected with it, while preserving the predicate. This tendency toward predication appears in all our experiments with such regularity that we must assume it to be the basic syntactic form of inner speech." Vigotsky (1962:139)

Inner speaking may often be condensed, and thus, seem to be different from and independent of the external speech behavior. Surprisingly:

"Our Indian languages show that with a suitable grammar we may have intelligent sentences that cannot be broken into subjects and predicates. Any attempted breakup is a breakup of some English translation or paraphrase of the sentence, not of the Indian sentence itself… When we come to Nootka, the sentence without subject or predicate is the only type. The term "predication" is used, but it means "sentence". Nootka has no parts of speech: the simplest utterance is a sentence, treating of some event or event-complex." Whorf (1956: 242)

29. Hilary Putnam does so in his paper entitle: "Meaning and Reference". "For the purposes of the following science-fiction examples, we shall suppose that somewhere there is a planet we shall call Twin Earth… One of the peculiarities of Twin Earth is that the liquid called "water" is not H_20 but a different liquid whose chemical formula is very long and complicated… If a space ship from Earth ever visits Twin Earth…etc." Martinich (1985: 289).

My point is simply that by utilizing different possible world scenarios, as Putnam did, theorists can concoct quite a number of uses for the written declarative statement **'Water is H_2O'**.

CHAPTER 3

DUALISM

Introduction

> "It is assumed that there are two different kinds of existence or status. What exists or happens may have the status of physical existence, or it may have the status of mental existence… It is a necessary feature of what has physical existence that it is in space and time, it is a necessary feature of what has mental existence that it is in time but not in space. What has physical existence is composed of matter, or else is a function of matter; what has mental existence consists of consciousness, or else is a function of consciousness." Ryle (1949:13)

This dualism in its many forms has been a critical component of European American (EA)[1] speech and thinking for centuries. The human *body* has been variously juxtaposed with the spirit, the soul, the mind, the self, the psyche, or subtle variations of these immaterial entities which reside in human bodies yet are distinct from the bodies. They are distinct and separate components of humans which enjoy a different type of existence; mental existence. The prominence of this mind/body dualism or one of its permutations in Western thought over the past centuries is undeniable. It has been a source of controversy and puzzlement for philosophers of every generation since its inauguration. Of course other non-EA cultures have their own versions of this mind/body distinction. The distinction is pervasive and corruptive.

The mind/body distinction in the West derives from the soul/body distinction:

> "The distinction between mind and matter, which has become a commonplace in philosophy and science and popular thought, has a religious origin, and began as a distinction of soul and body. The Orphic, as we saw, proclaims himself the child of the earth and of the starry heaven: from earth comes the body, from heaven the soul. It is this theory that Plato seeks to express in the language of philosophy." Russell (1945: 134)

Minds, in their modern guise, entered the world via the Greeks. However, as Bertrand Russell noted about Anaxagoras:

> "He differed from his predecessors in regarding mind (nous) as a substance which enters into the composition of living things, and distinguishes them from dead matter…..Both Aristotle and the Platonic Socrates complain that Anaxagoras, after introducing mind, makes very little use of it" Russell(1945: 62)

Future generations of Christians reverted back to souls or spirits as accompaniments to the physical body:

> "The dualism of the kingdom of God and the kingdoms of this world is found

CHAPTER FOUR
LINGUISTIC PUZZLES

Introduction

The fundamental challenge faced by today's philosophers is accounting for the human animal's use of sounds. Thus far, the puzzles in philosophy of language and linguistic theory have precluded any consensus about how this system of sounds works, let alone consensus in other fields of philosophy, e.g. philosophy of mind. So, let us investigate some of the traditional puzzles posed by the conventional semantic analysis of language and look at them in a new light, the non-semantic perspective. Please keep in mind that the author is attempting to pull himself up by the bootstraps. I must use the English language as it was given to me.

The purpose in recording this sub-vocal speech in this chapter is to make comparisons between conventional philosophical thinking about word use as symbolic representational activity, and an alternative way of looking at word use as non-semantic functional behavior with acoustic devices, action with consequences. The hope is that the contrast will persuade you that the orthodox semantic views are not adequate to the task of explaining what humans do with word sounds and their derivative symbols. With that in mind, let's take a look at some the traditional problems in philosophy of language and compare the semantic theory with the non-semantic behaviorist theory.

CHAPTER 5
MATHEMATICS

Introduction

What we humans do with numbers may appear to have little relevance to my previous thesis about the semantic fallacies. However, what B. F. Skinner called "the doctrine of ideas" permeates our speech about mathematics, just as it does our speech about speech. The same dualistic representational paradigm that corrupts the current explanations for human vocal behavior corrupts the explanations for the human use of numbers. Like the non-semantic view of verbal behavior, the use of number word sounds and their derivative number symbols can be explained in behaviorist terms. There is no need or justification for couching the explanations for human mathematical skills in the usual dualistic representational terms.

In this chapter I hope to persuade you that the way you speak and think about mathematics is fundamentally misguided. It is misguided by the same assumptions that theorists make about what we humans do with word sounds and symbols. I hope to persuade you that all of mathematics, from counting to calculus, is conditioned behavior with acoustic devices. Because of the natural selection process, individual humans and whole societies have been conditioned to utilize number sounds and symbols for those sounds in very productive ways. Humans have survived and prospered because of our conditioned ability to do mathematics.

CHAPTER VI

EPISTEMOLOGY

Introduction

We humans have claimed to *know* many things about ourselves and our world. This *knowledge* has been at the forefront of human progress. Knowledge has helped us succeed and prosper as a species. The human quest for knowledge has led us out of the caves and into the cosmos. At the same time, we humans have sacrificed, suffered and died because of various claims to knowledge. Armies have been mustered and battles have been fought because people claimed to know many things. Knowledge has been a double-edged sword. Consequently, questions about what can be considered indisputably true knowledge have plagued mankind for millennia.

Philosophical questions about knowledge abound. What is the nature of knowledge? How can we distinguish knowledge from speculation, fact from fiction? On what grounds can someone make a legitimate claim to knowledge? Is knowledge a peculiar state of awareness or cognition? Is knowledge a matter of having a true belief? How do people distinguish knowledge from belief? Did our ancestors know that the earth was the center of the Universe? Can someone know something, and yet not be able to state or demonstrate that knowledge? Such questions have confronted philosophers since antiquity. Philosophers have asked these, and many more questions within the philosophical field of *epistemology*, the study of knowledge.

CHAPTER 00000111

THE UNIVERSE

Introduction

What is "the nature of the Universe"? Of what does the Universe consist? These questions, it would appear to many, have straightforward answers. Yet they are questions that have befuddled and beguiled philosophers since antiquity. At first glance, the answers seem apparent. The Universe consists of stuff: birds, trees, coffee cups, stars, planets, human beings et cetera. These things *exist*. These are all things that we humans somehow sense or perceive. These are physical things, substantial things, material things, i.e. things composed of *matter*.

In addition to things composed of matter, physicists have told us that there are forces of *energy*. Various forms of energy are observed and measured: electromagnetic energy, kinetic energy, potential energy, etc. Currently, we are told by physicists that the Universe is composed of matter and energy in various manifestations and that matter and energy are interrelated; both matter and energy can be transformed into each other. Although earlier philosophers did not reach such conclusions, contemporary *physicists* have told us that the universe consists of matter and energy, *physical* things. That is the nature of the Universe.

Contemporary physicists also tell us that there are numerous interactions between these forces of energy and matter which follow *laws*, e.g. the universal law of gravitation. Physicists have discovered and described many physical laws, laws that tell us what we can expect when matter and energy, in their various manifestations, interact. Without non-physical spirits, souls, minds or divine entities interfering in physicist's equations, they have informed us that the Universe is incredibly intricate yet an ultimately predictable law-governed clockwork machine.

However, during the last century physicists suggested that the laws which govern the interaction of subatomic particles were not always predictable, not even in principle. For most practical purposes, the laws of physics still worked. On the basis of such laws, we humans could go on producing nuclear power plants and space shuttles. We could go on with our research on sub-atomic particles and space exploration. But at the quantum level of discrimination, the predictability, the models, the analogies and the language broke down. At the quantum level of the new physics, words such as "*matter*", "*energy*" and "*law*" simply did not apply. They could not be used to describe or explain what the physicists observed at that level of discrimination.

So what is the nature of the Universe? Of what does the Universe consist? Philosophers and physicists continue to speculate, much the same as the ancient Greeks did. They not only speculate about the nature of the Universe, they speculate about the nature of matter and energy, things that make up the physical Universe.

Index of Names

Glossary

Abbreviations used in this Glossary are: The Oxford Dictionary of Philosophy (ODP), The Oxford Concise Dictionary of Linguistics (OCDL), The Cambridge Encyclopedia of Language, second edition (CEL)

Abductive reasoning: "…it extrapolates backward to infer the hypothesis that gives the most plausible explanation of all known facts. Koch, Christof (2019: 12)

Absent qualia argument: pp.166, 343 203, 414

Abstracting: p.125

Ambiguous: Having two or more meanings. Defined as a property of sentences or utterances: I filled the pen is thus ambiguous, as a whole, in that *the pen* might refer to a writing instrument or to an enclosure for animals. Most accounts distinguish **lexical ambiguity**, due as in this example to the different meanings of lexical units, from **grammatical** or **syntactic** ambiguity. For the latter compare e.g. *I like good food and wine*, where good could relate syntactically to either *food* alone or to both *food and wine*: what is liked would correspondingly be good food and any wine whatever, or good food and wine that is also good.

Many linguists will talk of ambiguity only when it can be seen as in these examples, as inherent in a language system. It can thus be defined as a property of sentences, independent of the contexts in which they are uttered on specific occasions. Other linguists will distinguish semantic ambiguity, as ambiguity inherent in a language, from pragmatic ambiguity. But what exactly is inherent in a language is as problematic here as elsewhere. (OCL: 17) pp. 246-248, 297

Analogy: "A respect in which one thing is similar to another. The analogical extension of terms is the way in which a term covers similar things: people, bottles, and rivers have mouths. Shops, boxes, verdicts, ports, strings of a violin, questions, roads, and books may all be open, but in analogical senses. Analogy butts upon literal meaning, but also upon metaphor, and thus forms a perplexing phenomenon in the philosophy of language. Arguing by analogy is arguing that since things are alike in some way, they will probably be alike in others. Its famous uses in philosophy include the argument to design and the argument by analogy to the existence of other minds: if you behave like me, and I have such and such mental states when I so behave, then by analogy you probably do too. But: 'How can I generalize the one case so irresponsibly?' (Wittgenstein). In medieval philosophy an important question was whether we can make statements about God only by analogy." (ODP:14) pp.171, 251, 291, 306

Analytic philosophy: The philosophy that takes the process of analysis to be central to philosophical method and progress. The common idea of analytic philosophers was that the surface form of a language may conceal hidden logical structure, and may mislead us as to that structure. This could be revealed by a process that would itself solve philosophical problems, or alternatively show them to be offspring of the delusive surface forms of ordinary language. Confidence in the method of analysis was fostered by the early successes of Frege and Russell in reducing mathematics to logic, and by the insights afforded by the theory of definite descriptions. The practitioners of analytic philosophy also included Moore and Carnap. (ODP: 14) pp. I, 11,

A Word from the Author

I have had a love for analytic philosophy since I was first introduced to it as a young man attending the University of Wisconsin many years ago. At that point, career concerns forced me to focus on money-making options rather than pursue a career in academia. In spite of my career choices I continued to read and write philosophy.

After retiring in 2001 I returned to school as an independent scholar, taking classes at UW Madison and UT Austin. This book was begun in 2006 as an attempt to synthesize what I had learned independently with what I was learning in the classroom, and produce a coherent Weltanschauung. I believe that I have done so. However, you will be the ultimate judge of my success. We may agree or disagree upon many things in this book. In either case, I trust that your experience reading it will prove to be a worthwhile endeavor.

R.J. Mott Jr., August 2020
www.soundingoutsemantics.com

See back page for names.

R.J. Mott's extensive research has been influenced by many philosophers and scientists. The cover shows the twenty figures who influenced him the most; but this work references many more as the author tests, or 'sounds out', the limits of linguistic philosophies. Mott offers a convincing argument of his own, making *Sounding Out Semantics, the Limits of Philosophy* a valuable contribution to modern linguistic research.