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Justifications for a Perceptually Oriented Theory of Language

Abstract:
The paper identifies three dominant traditions in the theorisation of language responsible for a 19th century bias towards formalisation. What is glaringly missing, the paper suggests, is iconicity in Peirce's sense. This is seen as the main reason why our existing paradigms have failed to address the crucial relation between language and perception. First, I offer a series of justifications in support of a perceptually oriented theory of natural language. Second, I present redefinitions of the linguistic sign, meaning, reference, deixis and other aspects of language as necessary preconditions for a reconciliation of percepts and verbal expressions. Such a theory hinges on the claim that culturally saturated discourse can function as it does only because the schematic skeleton of its signifiers is brought to life in each meaning event by a socially monitored process of activation by iconic, nonverbal semiosis.

Introduction

It seems scandalous, does it not, that the linguistic and philosophical paradigms that inform our dominant discourses on natural language should still be held hostage by a powerful late nineteenth century bias, which for a lack of a better term I call *mathematisation*. From Frege to Quine, Grice, Davidson and Searle in analytical philosophy, from Saussure to poststructuralist linguistics, as well as in the foundational texts of phenomenology, we face this longing for the crystalline clarity of a logos of natural language that would provide the key to a new science. Having chosen the double path of radical generalisation and formalisation, each of these enterprises, which are otherwise quite distinct from and often even hostile to one

another, has performed fundamental reductions on the nature of natural language with profound and not entirely innocent consequences. Not that many of the theories indebted to those founding fathers have failed to produce persuasive and often elegant explanatory schemata for language. Quite the contrary. If anything, they have been too successful as accepted bodies of knowledge if what we want is a 'thick' description of what actually goes on in natural languages. Especially when we ask how perceptual signification, which preceded the invention of language by a long shot and is still forcefully present in human semiosis, relates to and survives in language we look in vain for any serious attempt at providing an answer.

In Frege's case, what has not been captured by the critical radar are three fundamental interventions with massive consequences: (1) his conflation of two kinds of sense, the sense of arithmetic and geometrical relations with the sense of natural language; (2) his definition of meaning as 'pure' or definitionally governed thought; and (3) his elimination of iconicity from the notion of linguistic meaning. Undisturbed by the passage of time of more than a century since Frege's claims made in 1892, analytical philosophy is still working with these foundational tools. (Frege 1892; Ruthrof 1997:59-76)

The father of modern linguistics, Ferdinand de Saussure, cannot be held entirely responsible for the lecture notes that were later transformed into the *Cours de linguistique général*, the foundational text of structuralist linguistics. (Saussure 1916) And yet, the following observations are hardly undermined by what is available to us in his other writings. Of particular relevance here are (1) his radical arbitrariness thesis; (2) his argument that meaning is constituted by the differential relations of signifiers; and (3) his emphasis on syntax and the signifier at the expense of a merely minimal definition of the signified, a situation that, from the very outset, heralded its gradual demise to the point where the signified has disappeared altogether amongst some of his post-structuralist successors. This leaves the signifier to carry semantic load, which violates Saussure's insistence on the

necessary simultaneity of signifier and signified in the production of the meaningful linguistic sign.

In spite of the fruitful tension between the early mathematically oriented Husserl and his later exploration of the *Lebenswelt*, Husserl never quite abandoned his belief that the meaning of natural language terms was well described as *eidetic,* which the majority of Husserl scholars read as a formal notion. This is surprising if we remind ourselves that Husserl felt as early as in the *Ideas* that the noetic side of investigations in matters social and cultural, such as the process of modifications in the act of communication, were more important than its fleeting noematic results; (Husserl 1913) that he had the enormously fertile insight of *appresentations* as the habitual as well as creative filling of non-present aspects of reality; (Husserl 1931) in addition to his suspicion that the description of the *Lebenswelt* appeared more promising if approached by the tools of typifications than by the idea of an eidetic geometry of experiences. Such findings were later to be explored more fully especially by Roman Ingarden (1973a; 1973b) and Alfred Schütz (1959), without however being able to excise Husserl's eidetic starting point entirely from the study of natural language.

What is striking in our *tour de force* summary so far is that the three founders of the discourses about natural language we are dealing with today share the conviction that formal relations are at the heart of language itself and that therefore formal tools will yield the most appropriate characterisation of what goes on when we speak. What often happens with such enterprises is not so much that one cannot in principle reduce the richness of phenomena to the tightness of formal structures; rather, in any such attempt there always arise two fundamental dangers: one, that we have cast our net of inquiry too narrowly and, as a result, what we set out to describe turns out to have been only a part of a larger whole and, two, any process of formal reduction is a one way street: we can never reconstruct from its results the richness of its phenomenal starting point – natural language as social event.

It does not come as a surprise then that perception, out of which natural language evolved in the dimness of our hominid past, finds no room in the various and quite different analyses spawned by those three branches of inquiry. For perception, made up as it is by such heterosemiotic sign systems as olfactory, tactile, gustatory, kinetic, proximic, thermal, gravitational, haptic, visual and other forms of readings of the *Umwelt* and ourselves, as well as their intersemiotic combinations into the constitution of the human world, does itself not readily invite any formal reduction. At the same time and given the available evolutionary picture of semiosis, from electromagnetic radiation out of which organisms construe their worlds in order to optimise survival, to perceptual experience, to language and, ultimately, to formal codes, the relation between language and perception remains a pressing concern. How then, I ask, can we get the question of the relation between the two sign systems, of verbal expressions and percepts, back into our theorisation of natural language? And how, given the obvious hostility in the dominant literature to such a question, can we justify any attempt at laying the foundations for a perceptually oriented theory of language?

Against this background the paper discusses a number of perspectives which I suggest can be used to shore up the perception and language project. The main encouragement for this undertaking comes from recent findings in neuroscience and neurolinguistics, which together indicate quite forcefully some form of linkage between the sensor-motor system in the human brain and culturally circumscribed natural language activities in the mind. (Lüdtke 2006; Lakoff and Gallese 2005; Fauconnier and Turner 2002; Johnson and Lakoff 1999; Fauconnier 1997; Varela, Thompson, and Rosch 1993; Turner 1991) It would seem that such naturalist challenges to existing explanatory paradigms, at least in their non-vulgar forms, can no longer be ignored in the theorisation of language. The task before us, then, is to inquire into the relation between language and perception to the extent that it affects the definition of the linguistic sign itself and the role signifier and signified

play in it, descriptions of linguistic meaning, reference and deixis (as well as their untheorised extensions such as *referential background* and *implicit deixis*), speech acts and presuppositions, and other language features. The second part of the paper sketches some of the consequences of the 'corporeal turn' (Ruthrof 1997) and its perceptual point of departure.

The theoretical debts to be acknowledged here are too numerous to list in detail. Foremost, though, I must mention Peircean semiotics and his insistence on the importance of iconicity for the human interpretant: "Every assertion must contain an icon or a set of icons, or else must contain signs whose meaning is only explicable by icons" (CP 1.158). I am indebted to Husserlian phenomenology and its extensions, especially in Ingarden and Schütz; Heidegger's elaboration of the meaning as an interpretive event in even its minimal *as-structure*; analytical philosophy for many of its tools even when this equipment is used to dislodge some of their favourite positions; a broad sweep of literature in neurolingusitics; Kant's *inferential realism*, which is grounded both in what he calls *objective reality* and the mechanisms of human understanding, as well as his analysis of complex judgments; and above all a Peirce inspired commitment to the sign, stretching from the minimal *alquid pro aliquo* to a sign notion as "something that stands as something to some organism in certain respects and under specific circumstances". Furthermore, I collapse Peirce's iconic and indexical signs into iconicity on the grounds that indexical signs typically rely on iconic traces to be realised and so can be regarded as *indirect iconic signs*. At the same time, both are sharply distinguished from symbolic signs in that the latter require of necessity the radical reduction to formal emptiness of all referential and deictic features. Given the short space of a paper, I will make no claims here beyond offering a compressed, programmatic overview of the project.

Justifications

Underlying the search for justification are a number of questions likely to shed light on the extent to which one could claim that perception or its traces play a role in natural language. Is language well described by Lev Vygotsky as a "generalised reflection of reality"? (Vygotsky 1962:153) If so, what sort of generalisation are we dealing with and what degrees of schematisation are operative in language? Are we dealing with *sensuous abstractions* and *schematised percepts* or are natural languages no more than systems of empty ideations? (Cassirer 1957:331) Or does each language perhaps form a continuum of meaning events stretching from highly iconic realisations to full formalisation? And if so, what role if any does perception play in the iconic portion of the continuum? To answer such queries, we first need to locate language in its broader evolutionary frame.

(1) *Natural language in the information-control continuum*

From its earliest beginnings and from an evolutionary and autopoietic perspective, human semiosis can be regarded as an *information- control* continuum. I am using the phrase to emphasize the difference between the way the human organism absorbed information from its *Umwelt* at an early stage and the way humans have learned to control information in advanced societies. This difference seems to me an indication of an extended spectrum from electromagnetic radiation, a tiny selection of which was able to be transformed by our distant hominid ancestors for survival in a non-conscious manner, to perceptual experience, perceptual proto-language, to language, and such language derivatives as technical and formal languages, up to the binary-digital code in the logic gates of our computing equipment. Using a very broad brush, such a continuum could be sketched thus.

The Physical World

    subatomic events   electromagnetic radiation

    particles   →   ‘surface intensities’   →

The Organic World

    ‘transducers’   neurological   colours

    (senses)   processes   objects, tastes, smells

                               temperature, pressure

The Human World – two kinds of perception

    →   perception – iconic readings   →   perceptual experience   →

       Vorstellung   iconic readings and concepts

       (non-conscious)   *Vorstellung* (conscious)

NATURAL LANGUAGE   →

    Linguistic sign = arbitrary signifier + motivated signified

    Signified = iconic readings + forms of schematisation (concept)

    (metaphoricity; denotation; full referring use; explicit and implicit deixis)

Technical Languages

    →   Technical languages   → formal languages → Boolean code

       (limited, definitional   (zero reference;   (zero reference;

       denotation; reference;   neutralised deixis)   zero deixis; mere

        neutralised deixis)   instantiation).

Feedback Relations

    From perceptual experience onwards every stage feeds back into

    all previous stages.

(2) *The semiotic location of natural language*

From this rough sketch it appears that natural language is sandwiched between perception and mathematisation. There is little doubt in the literature that this is indeed the case. Why then, we should ask, is it that the vast majority of language studies take its cues from the perspectives of its derivatives? Doesn't this mean that we will primarily find things in natural language that have already been derived from

it in the very construction of those reduced technical and formal languages? As I will argue, it should be obvious that if we view natural language primarily from the rear view mirror of semiotic evolution, the results are bound to be reductive.

(3) *Mathematisation comes at a price*.

It is of course a merit rather than flaw of mathematisation that it is reductive. That is, if it is applied to goals where reduction produces an advantage. But there are many areas of human endeavour where the application of formalisation results in losses rather than gains. Perhaps there is no deep DNA level to be found in natural language. Perhaps it is exactly at the rich surface of language where we need to concentrate our research. And indeed, a vast number of linguistic enterprises are fruitfully addressing themselves to that level. Yet if the most appropriate level at which language study can be pegged is its rich cultural, linguistic surface rather than any *deep structure*, then does not what we could observe get lost by the very application of techniques of formalisation? In any propositional reduction of the kind we find in generative grammar what gets lost is what for the pragmatist Foucault, for example, is the analysis of enunciative modalities, which play such a crucial role in the description of what is a statement (Foucault 1978). In full-blown formalisation, furthermore, we miss out not only reference but *referential background* and *implicit* or *cultural deixis*, essential forms of signification that I will address in the second half of the paper.

(4) *Syntactic circularity*

Imagine a situation in which an English native speaker has been given a Malay phrase book and a few basic pronunciation rules and has been asked to read aloud what she sees. A Malay student passing the room hears what she is saying and thinks, 'Wow, her command of Malay is excellent'. The student in the room is very much in the situation in which we would all find ourselves if the structuralist

definition of meaning as 'effect of the differential relations amongst signifiers' were indeed an appropriate description of semantic-pragmatic events. To illustrate the same point more starkly.

Assume this to be a natural language L: 'glob' unlike 'nin' unlike 'fon' unlike 'jidd' unlike 'reb' … And: 'glob' like 'fuddom' and like 'rike'. Do we now know what 'glob' means? Hardly. The main reason for the failure of meaning to take place here is that we have not been able to exit the syntactic system of signifiers in order to associate it systematically with a second order system called in some theories 'reference' and in the theory advocated here 'nonverbal signification'. In Peircean terms, if we were unable to translate the merely symbolic, that is, empty and 'arbitrary' signifiers into iconic signs, that is, signs that act as semiotic reference to our world, we would remain in a circle of formal symbolicity. This is precisely the point where structuralist linguistics needs the kind of assistance afforded by Peirce's insistence on iconicity. And if there is iconicity *in* natural language, where could it have come from? Where else than from perception.

What may surprise some readers is that even Michael Halliday's functional linguistics, in spite of its many and rich accomplishments, has not been able to free itself from the problematic of syntactic circularity. It seems to me that he commits himself too readily to saying that while the linkage between language and the nonverbal well describes what happens in childhood, adult language users behave fundamentally syntactically. (Halliday 1975:142) This leaves one wondering how adults can cope with the massive increase in linguistically coded knowledge about the world as an ongoing process. Without systemic access to nonverbal sign systems his 'social semiotic' remains semantically and pragmatically impoverished. (Halliday 1978)

(6) *Arbitrariness thesis*

Because linguistic signifiers are 'arbitrary', says Saussure, therefore the linguistic sign as a whole is likewise arbitrary. No doubt this kind of reasoning has been recognized by many readers as a *pars pro toto* fallacy. Clearly, the signified has not been shown to be arbitrary. And if it is not arbitrary, there is a very good chance that it is *motivated*. And indeed it is. When members of different semiotic communities, say, Chinese, French, German, and English meet and by ostension identify the same part of their bodies, say their big toes, the arbitrariness of the signifiers *'wode da muze'*, *'mon gross orteil'*, *'meine grosse Zehe'* and *'my big toe'* is obvious and hardly disputable. Not so with the signifieds. It would require an elaborate and hardly persuasive argument to make a case for saying that the signified, Saussure's 'image' or 'concept', in each case was likewise arbitrary. Not only are the four signifieds the same, barring the further cultural associations that each speaker would be able to add to his expression, this very sameness is the ground on which translation between different natural languages is possible at all. Because as human being we share a basic physiognomy, the sum of nonverbal signs that make up our physical appearance, we also share a *tertium comparationis* that permits the gradual construction of a functional 'translation manual'. Quine is quite wrong in his claim of 'untranslatability' and 'indeterminacy of reference', which turn out to be no more than a result of the narrowness of his linguistic frame of inquiry and the elimination of time. (Quine 1997:93; Ruthrof 2005:391) Had he chosen a broadly semiotic frame and the continuum of sign exchange, including nonverbal semiosis, his problem would not have arisen in the first place. To return to our four big toes, which provide the perceptual ground on which they are able to perform their compatible semantic-pragmatic acts of cognition, the signified is reasonably well secured as a result of perception and language having been associated. Expressed semiotically, a meaning event has occurred as the consequence of a successful realisation of a linguistic schema by way of iconic signs. I further suggest that in the absence of any actual perception, iconicity in *Vorstellung* replaces the perceptual starting point.

(7) *Neurolinguistics*

A quite different and positive justification can be gleaned from neuroscience and neurolinguistics, especially the work that characterises the Lakoff School. If we leave aside their unnecessary and quite flawed critique of 'Western thought', we are able find valuable support for a perceptually oriented theory of language in the notion of 'neural concepts' and their well documented observations about the very likely linkages between conceptual metaphors and the sensori-motor system in the human brain. (Lakoff and Johnson 1999: 19). This is of considerable importance for any argument in favour of an alignment between the semiosis that exists between world and brain, on the one hand, and the semiotic relations between brain and mind or consciousness, on the other. Perception clearly straddles both relations, non-conscious perception providing the basic transformations for the survival of the organism and perceptual experience permitting conscious intervention in our *Umwelt*. Language as an economizing matrix superimposed on perceptual experience, then could be argued to draw substantially on its perceptual resources of necessity. What remains to be accomplished is the not so easy task of showing precisely how this could occur.

(8) *The percept-concept continuum*

We find in the literature what I regard as too sharp a distinction between the specificity of *percepts* and the generality of *concepts*. Derek Bickerton, in his two intriguing volumes on the evolution of language, *The Origins of Language* (Bickerton 1981) and *Species and Language* (Bickerton 1990), notes that "in the sense that perception in the frog is generalized, it is like conceptualization" (Bickerton 1981:222). But at the same time he hangs on to the idea that "until a percept – the image of a particular entity on a particular occasion – can be replaced at will by a concept – the image of a class of entities, divorced from all particular instantiations

of that class – then the power to predict is limited" (ibid.: 227). He also still assumes that "concepts are delimited in terms of one another; percepts only in terms of themselves" (ibid.: 231). More recent research into images and percepts however has shown that the assumed radical break between percepts and concepts, as far as it is based on specificity one the one hand and generality on the other, turns out to be a dubious belief. What in fact appears to be the case is that the reduction of the specificity of information has started long before the alleged, radical differentiation between specific percepts and generalised concepts could have developed.

A case in point is the kind of reduction of information the human organism performs in the process of vision. The 100 million or so light-sensing cells of the human eye are connected with the brain by only 1 million fibres, which means that "each incoming image must therefore be reduced in complexity by a factor of 100" (Lakoff and Johnson 1999:18). This means not only that long before the mind becomes conscious of visual semiosis a generalising reduction of visual information has already been performed by the human body, but also that all consequent operations in consciousness can only produce further generalising modifications. The percept, then, is anything but specific. Very much the same observations can be made about all other semiotic processes associated with our senses. In other words, nothing we experience is, strictly speaking, 'specific'. The exciting conclusion we must draw from this is that both percept and concept need to be located on the very same continuum of minimal to greater and greater generality, on which the formation of language is perhaps the most fascinating stage. This has implications for the kind of assumption Bickerton is forced to make that there must have been a 'mutational' break between the stage of a perceptual proto-language and the much more sophisticated syntax-determined languages of our more immediate ancestors. (Bickerton 1990) Such speculations become quite unnecessary if we stay with the more likely idea of an extended continuum in which a perceptual *proto-syntax*,

dictated by the semiotic processes of the human senses, gradually evolves into more and more complex syntactic constellations.

(9) *Moral justification*

My last choice of a justification for the legitimacy of proposing a perceptually oriented theory of language lacks the kind of scientific flavour of some of the previous arguments. It has no more to offer than a certain moral appeal in the sense that if we cannot account in our existing theories for the complexities of human perception and *Vorstellung*, but eliminate them as murky and unimportant side effects, we are not only forgetting our place in the general picture of evolution but produce a view of language that is less than human.

On the assumption that at least some of the above perspectives are persuasive in lieu of a justification for the legitimacy of an attempt at a theoretical reconciliation of natural language and perception, I now offer the paper's central hypothesis. 'Language is a set of rules for imagining and acting in the world'. But how, the reader will rightly question, does such a phrasing pave the way for an argument in favour of the claim that perception has somehow survived *in* language? The missing link here is *Vorstellung,* understood as modification of perception in consciousness rather than as 'mental representation'. In this sense *Vorstellung* replaces the English 'imagination' as less tied to visual signs, while at the same time encompassing the entire range of thought scenarios from the most realist mental replication to the wildest science fiction fantasies. In this modified guise, perception, the hypothesis claims, is a *sine qua non* of the semantic-pragmatic side of natural language. How this can be argued will be the task of the second part of the paper.

Before we get there, I conclude this section by asking whether my hypothesis could in some way be accommodated by the three traditional approaches sketched in this paper. The summary answer is 'not without serious modification of some of their axioms'. In analytical language philosophy, meaning as definitionally governed

'pure thought' would result in having learned to cash in the Chinese signifier '*guanxi*' with a definitional description such as 'personal relations based on trust' or '*milk*' by a string of other signifiers of the kind we find in a dictionary. Not only is this a very unlikely mapping of what occurs in meaning events, we have also failed to get anywhere near the requirement of *Vorstellung*, the semiotic process of perceptual modification. The same problem dogs Husserl's meaning as *eidos.* Nor, as we have tried to show, can we retrieve a quasi-perceptually conceived meaning from Saussure's syntactic circularity. There lies a not so subtle irony in the fact that *Vorstellung*, in the iconic sense used here, is nowhere to be found in syntax on its own, while *Vorstellung* is implicitly stipulated in Saussure's minimal definition of the signified as 'concept' and 'image'.

As is to be expected, the semantic solutions offered in the three paradigms differ according to their foundational assumptions about language. In analytical language philosophy, meaning is cashed in by reference to the objective, 'external world'. (Devitt and Sterelny 1991: 28). Such a move conceals a serious semiotic confusion between a signification system, such as language, and the objectivities of a naturalistically conceived 'world'. What is missing in such accounts is a *tertium comparationis*. The analytically stipulated 'world' needs to be semiotised to permit any alignment with language. Structuralist linguistics suffers from the opposite, idealist flaw. The world is assumed to be always already incorporated into the circle of differential relations of the signifiers of a language. How it gets there, though, remains a mystery. In early phenomenology, meaning remains hardly affected by 'occasion meaning' and other noetic modifications. (Ruthrof 1992:65-77) Fortunately, amongst Husserl's successors, meaning is constituted by either filling the schematic nature of language by way of appresentations and according to the social purpose of texts, such as by 'concretisations' in Ingarden (Ingarden 1973a; 1973b) or by aligning language with other typifications systems. (Schütz 1959) With

these moves, Ingarden and Schütz opened promising pathways out of the definitional and syntactic maze.

Consequences

In order to account for perception *in* language in its modified form of *Vorstellung* stipulated in our hypothesis, a number of more or less radical redefinitions need to be undertaken. Viewing perception and its mental variant, *Vorstellung,* from a Peircean perspective we find ourselves directed to the central notion of *iconicity*. To repeat one of Peirce's core convictions, "every assertion must contain an icon or a set of icons, or else must contain signs whose meaning is only explicable by icons" (CP 1.158). In other words, for something to make human meaning, it must somehow be imaginable as a version of our world. We can test this claim by a modest thought experiment with the differences between our experience of speed, acceleration, and jerk, or accelerated acceleration. While their mathematical representation can be extended indefinitely, our ability to imagine such experiences ends fairly early in the series. Iconicity is fundamentally circumscribed by the human organism, while symbolicity is unencumbered by such perceptual constraints. Applied to the description of natural language, one could surmise then that every single language term, including function words, somehow still carries traces of their semiotic antecedents in perception (cf. Sweetser 1990). With this assumption as my point of departure, I propose the following redefinitions.

At the centre of a perceptually oriented theory of language must be placed an iconically redefined linguistic sign. A comparison with Saussure's original definition will show how this can be achieved.

Linguistic sign

de Saussure's schema

Linguistic sign (arbitrary)	Signifier (expression) -- Signified (meaning) (increasingly neglected)	Arbitrary -- Effect of differential, syntactic, arbitrary relations

Revised schema: iconic materials in the revised linguistic sign

Linguistic sign	Signifier (expression) -- Signified (meaning)	arbitrary: result of historical reduction -- Iconically motivated; refined by syntax
Components of the Signified (motivated)	content: nonverbal iconic materials modified in Vorstellung (perceptually motivated)	form: regulative concept (socially motivated)
Sources	Neural functions, perception	Speech community
Communication	sufficient semiosis	

We can now redefine the linguistic sign as follows.

The linguistic sign is partly conventional and partly motivated. It is a compound entity made up of an 'arbitrary' or *conventional signifier* and a *motivated signified* which consists of conceptually regulated iconic materials activated in *Vorstellung*. Such materials are available to us in terms of heterosemiotic, nonverbal signs, such as olfactory, auditory, kinetic, proximic, thermal, tactile, gustatory, visual and other 'readings' of the world.

Having redefined the signified as *motivated* and as a combination of iconic materials and regulative concepts, the next most important step is to sum up the way concepts do their work. Unlike perceptual concepts, which by now we can be pretty certain we share with non-languaging animals, and in contrast with the

standard literature on concepts, (Margolis and Laurence 1999; Fodor 1998) the concepts of language are regarded here as social rules for ordering iconic materials which we have learned to activate when we hear (or read) a specific linguistic sound sequence. Seen from this angle, one can distinguish the following regulating functions in the concept: *directionality*, which points our attention in a certain mental or physical direction; *quality*, which sums up the typical characteristics of a lexical item or linguistic expression; *quantity,* or the amount of iconic mental materials that suffices for identification; and the *degree of schematisation* to which the materials are to be abstracted in any given context. The concept of the 'black swan' is given as an example.

Concept

Black swan (Chenopsis atratus)

Concept: Interiorized regulatory principle of iconic perceptual materials controlled by the speech community via pedagogy
Concepts regulate iconic materials in 4 distinct ways:
(1) Directionality: 'this swan, not the duck over there'.
(2) Quality (qualia), characteristic properties 'This black, white and red swan'.
(3) Quantity (quanta), dimensions of properties: 'This swan with lots of black, a little white under the wings, and a red beak'.
(4) Degree of schematisation: from detailed, realist iconic Vorstellung of an Australian swan to genus and species abstraction and full formalisation '*x*'.

Natural kind concepts cannot of course stand in for all concepts available in language. We need to distinguish at least between formal concepts arrived at by a series of reductions of their natural language ingredients. I call them 'hard-edged' concepts because they are governed by definition and behave like members of a fully defined, formal set. On their own, they enter into purely formal relations in various formal systems, such as in chemical codes, symbolic logic, various systems of mathematics, and such formal languages as FORTRAN or PASCAL. I distinguish them

from 'soft-edged' concepts of the kind we find in philosophical and other theoretical discourses. Although, they can be presented in the context of definitional descriptions, such descriptions remain open to interpretation; hence the metaphor of a soft descriptive boundary. Lastly, I suggest the term 'soft-core' concepts as typical for the vast bulk of natural language signifieds. (Cf. CP 5.251) This phrasing accounts for historical semantic drift and the shifting conceptuality of natural language as an effect of differences of class, gender, as well as religious, political or ideological leanings. I sum up the three types of concepts as follows.

Types of concepts

Concept as rule for mental material contents: from formal to iconic perceptual concepts

Type	Definition and examples	Explicit reference	explicit deixis	Implicit reference	implicit deixis
'hard-edged'	Formal concepts strictly determined by definition: $x=y^n$; $270\circ$; $C_6H_{12}O_6$; $x=y\rightarrow(y=z \rightarrow x=z)$; $\leq$; $\equiv$; $€$. Also includes fully defined technical terms: 'hydroxiapatite'	Nil	neutralised	Nil	Nil
'soft-edged'	Theoretical concepts which are dependent on natural language: 'body without organs' (Deleuze, Guattari); 'ontic-ontological difference' (Heidegger); 'atomistic concept' (Fodor); 'Anschauung' (Kant).	in need of interpretation	reduced	background of philosophical paradigm	Philosophical enunciative position
'soft-core'	concepts of natural languages which order iconic perceptual contents of Vorstellung: 'run', 'sing', 'strong', 'blue', 'interesting'; 'home' 'democracy',	Essential	essential	essential	Essential

	'difficulty', 'belief', 'hope'.

Next I address metaphor which, I suggest, plays an exceptionally important role in natural language, partly for the reasons explored by Jacques Derrida in 'The Retreat of Metaphor' (Derrida 1978) and partly for the way metaphor lays bare the iconic mechanisms which I am claiming are an essential process in the event of meaning making in natural language in general. A schematic analysis of the following well-canvassed metaphor is given to shore up my claim.

Metaphor

Verbal metaphor: 'my husband is a pig'

Phases of the meaning process

Phase 1	Transformation of the speech sounds into Vorstellung: verbal to nonverbal Husband – pig -------> auditory, visual, olfactory, kinetic transformations
Phase 2	Unfolding of distinct contents of Vorstellung: heterosemiotically iconic specific husband behaviours, duties, household performance, etc. specific smells, looks, sounds, behaviour of pigs Separate qualitative und quantitative contents of Vorstellung and emotive responses
Phase 3	Mixing of contents of Vorstellung: intersemiotic, nonverbal combination of two separately imagined worlds into a unified new world in which imagined husband and pig behaviour are inextricably linked. Qualitative und quantitative contents of Vorstellung und emotive responses are combined into a coherent, negative, contemptible overall mental scenario and emotional stance.
Phase 4	Transformation of nonverbal overall Vorstellung (phase 3) into language expressions (paraphrase): 'My husband is a despicable person whose behaviour can only be described as swinish'.
	(Note: What occurs in the generation of meaning in metaphor is no more or less than a protracted and more elaborate version of the typical meaning processes in natural language in general. The dictionary consists of a verbal starting point (phase 1) and the final result (phase 4) and so cannot contain any meanings at all.

Turning now to the highly contested notion of linguistic meaning, I first want to provide a list of definitions of meaning as it can be gleaned from the literature. I do so in order to sharpen the contrast between traditional approaches to natural language semantics, pragmatics and the kind of perspective advocated in this paper. Given the brevity of the 'definitions' offered in the list below, they should be regarded as no more than rough indications of the semantic positions actually held by the writers with which I associate them. Meaning has been understood as essence divorced from the referent and wedded to the word (Aristotle); as an organising, social rule (Kant), as the designation of an object (Mill), the pure thought of definitional sense (Frege), as iconic interpretant (Peirce), an effect of differential syntactic relations (Saussure), eidos (Husserl), typification (Schutz), reference (Russell), use (Wittgenstein), interpretation (Heidegger), definite ideality (Cassirer), a constant amongst diverging intentional objects (Carnap), tacit agreement (Polanyi), as synonymy and significance (Quine); an effect of non-linguistic contextual relations (Bateson), as link between language and world (Devitt and Sterelny), enunciatively modalised 'statement' (Foucault), deferral as the dissolution of signifieds into endless chains of signifiers (Derrida), association of propositions and states of affairs at infinite speed (Deleuze), strictly literal sense of a sentence (Davidson), truth-condition (Wiggins), a result of mutual perspective-taking (Habermas), discursive injustice (Lyotard), and as simulacrum (Baudrillard).

By contrast, in a perceptually oriented theory of natural language meaning can be redefined thus.

Linguistic meaning is the event of the activation of an empty, verbal expression (linguistic signifier) by a motivated signified made up of a concept and a cluster of iconic readings regulated by the concept in terms of *directionality, kind, quantity,* and *degree of schematisation*, under community guidance.

Extending this redefinition to the level of general language use, we could say that linguistic performance is the culture sanctioned way in which schematised, nonverbal iconic materials are typically associated with linguistic signifiers for the purpose of meaning.

A similar attempt at redefining reference likewise yields a quite different notion from those available in the various traditions of linguistic descriptions. Again I start with a rough summary of competing definitions. Reference has been described as the designation by a general term of an empirical object (Frege), the semiotic, iconic identification of an object (Peirce), an intersyntactic relation (Saussure), identification of an actual object by a referring expression (Russell), an indicated intentional object (Husserl), referring use (Strawson), a relation involving naming, truth, and denotation (Quine), naming of an intended salient object (Evans), baptisement of an object by way of a rigid designator (Kripke), the relation between language and what it stands for (Lyons), an effect of a network of names (Lyotard), and as a matching of language and a socially agreed upon object (Fauconnier).

From a perceptual, iconic perspective, reference can now be redefined as the linguistic designation of a specific, intersemiotically and heterosemiotically, nonverbally overdetermined and so constituted object.

In light of the strong significatory emphasis in this formulation, it is important to add the caution that this in no way denies a mind-independent 'reality'. Expressed positively, the redefinition of reference in this manner permits a post-Kantian position according to which universal constraints 'shine through' our descriptions of necessity. Error is always possible, but appears to be exposed sooner or later by universal 'deep' constraints. This version of semiotic fallibility also allows for non-error, rather than 'truth', as exemplified by descriptions which have not so far fallen foul of inferable universal limits.

Reference, as discussed widely in the philosophical and linguistic literature, however fails to tell the richer story of the kind of referring acts we perform when

we use natural language. What is starkly absent is what I have termed '*referential background*'. It shows itself in the bulk of expressions of natural languages but cannot be captured if we describe language in the manner initiated by Frege, Saussure or Husserl. While Frege convincingly identified the reference of 'morning star' and 'evening star' as the planet Venus, he failed to notice that we wouldn't understand either 'morning star' or 'evening star' if we did not have access, by way of perception and *Vorstellung*, to typical mornings, typical evenings and the kind of lights we see in the night sky. The reason why it never occurred to him that such considerations might be important for the characterisation of language was probably the fact that in his opening examples of geometrical and arithmetic signs, *referential background* played no role whatsoever. Yet, the transference of this absence to the analysis of natural language can be identified as a fundamental flaw in his approach. Here *referential background* is of the essence. The consequences of this specific oversight have been as little noticed as they have been devastating for a rich description of natural language.

Much the same can be said about standard accounts of deixis, reference to the speaker and speech situation, in philosophical parlance sometimes addressed under the topic of 'egocentric particulars' (Russell) or 'occasion meaning' (Husserl). The major drawback of such standard descriptions is that they only deal with *explicit deixis*, that is, with deixis that is actually spelt out in a sentence, such as by temporal and spatial markers, pronouns referring back to the speaker and other such devices. What fails to be addressed in this kind of surface description of deixis is what I have called *implicit* or *cultural deixis*, or the manner in which a culture typically speaks its signifiers. To illustrate the point, let me return to my earlier example of '*guanxi*'. If we accept my rough translation of 'connections' with the implication of 'the cultivation of personal relationships based on trust', its *implicit deixis* differs noticeably depending on whether it is viewed from a Chinese or Western perspective. Whereas the signifier is typically imbued in Chinese with a positive

tinge as part of its meaning, from a Western perspective *'guanxi'* tends to invoke such negative aspects as deviance and corruption. Nor can one brush this difference aside by pointing to 'connotations' or other modifications of a central meaning. *Implicit deixis* in this case, as in the totality of any natural language, accompanies all expressions as the modal shadow of their propositional contents. The members of a language community have simply learned the appropriate manner of speaking its terms, as part of their semantic-pragmatic traing.

Without the activation of signifiers by quasi-perceptual, iconic materials under conceptual constraints of the kind described earlier, the realisation of *implicit deixis*, the 'enunciative shadow' of language, could not occur. While native language users perform these meaning making acts habitually, in problematic speech situations, poetry, and especially translation, when the semantic-pragmatic process is slowed down, the hypothesis of language as 'a set of rules for imagining and acting in the world' is borne out. For without playing with various quasi-perceptual scenarios in *Vorstellung* it would not be possible to arrive at satisfying meaning results.

Lastly, any attempt at reviving the theorisation of natural language by recourse to perception and its variations in *Vorstellung* must be wary of the traps of mentalism and subjectivism. If, as has been argued, mental iconic materials and their transformations are a necessary part of linguistic meaning, then does the argument not fall foul of the traditional demand that meaning must be public? And in what way can a theory of language and meaning that advocates so emphatically the role of iconicity in consciousness reconcile its necessary mental operations with public meanings? The answer is that in this case we can have our cake and eat it by introducing the notion of *sufficient semiosis* as part of the public pedagogy of language acquisition. In other words, the kinds of mental operations or acts of *Vorstellung* we perform in the event of meaning making are public in the sense that the speech community has taught us the rules of engagement. Meanings are typically constituted in more or less the same manner. Identity of meaning is neither

needed nor possible. Having acquired the constraints of *sufficient semiosis* means that a native language speaker knows when an exchange of linguistic signs has been successful, should be continued for clarification, or terminated as unpromising. Accordingly, *sufficient semiosis* operates as the broad brush monitoring system by which a speech community regulates its ongoing language use. With respect to analytical theories of language, *sufficient semiosis* replaces 'truth-conditions'. (Wiggins 1992) While truth-conditional semantics still hankers after the regulative role of 'truth', in a perceptually oriented theory 'truth' does have its reduced place, but not as a measure of meaning. In socially and culturally complex semiosis, truth-conditions fail to deliver the promised goods. In contrast, *sufficient semiosis* is designed to handle all language use, simple, complex, realist, fictional, technical and formal.

Conclusion

At this point in the paper, it will not come as a surprise to the reader when I say that these redefinitions cannot be accepted without serious consequences for linguistics and the philosophy of language, as well as for disciplines that rely on their findings. By way of conclusion, let me indicate the sort of implications the perceptual language programme has for some influential theories of language. If the iconic operations canvassed here are indeed necessary acts for the constitution of linguistic meaning, then the various speech act observations made by the phenomenologist Adolf Reinach in 1913, Ludwig Wittgenstein in 1953 and soon afterwards in John Austin's full blown speech act theory, (1962) in its extension in John Searle's *Speech Acts* (1977) and illocutionary acts (1976), as well as later work on 'whimperatives', need to be reviewed. Austin's notion of 'locution' could not get to first base if the iconic, step-by-step activation of its signifiers by nonverbal signs had not already facilitated its constitution, while 'illocution' and 'perlocution' can only be the result of additional and more elaborate inferential nonverbal semiosis.

Likewise, *Vorstellung* is a necessary precondition of Paul Grice's arguments on *presuppositions* and *implicature*. (Grice 1989) Presuppositions can indeed be construed along the lines of propositional abstraction, but before we can do so, we have to be able to imagine the kind of human social scenario that is encoded in linguistic expressions. And if such acts of *Vorstellung* are indeed a necessary condition for the construction of meaning as interpretive event, then the procedures proposed so elegantly by Grice turn out to be can-rules rather than must-rules in the theorisation of natural language. In any case, the iconic work of meaning construction has both logical and chronological priority.

It would be churlish not to applaud Jacques Derrida for having extended two of Kant's profound insights about the empirical concepts of natural language: 'the limits of the concept are never assured' and 'the analysis of my concept is always in doubt'. (CPR 728) Much of Derrida's early work and especially his contribution of such 'infrastructures' as 'differance', 'metaphoricity', 'supplementarity', etc. can be read as an elaboration of the reasons why Kant's observations are still cogent. However, in spite of this and other achievements, as well as Derrida's avowed admiration for Peirce, his own writings can quite rightly be accused of the sin of 'verbocentrism', because they fail to account for iconicity *in* language. Unfortunately, Derrida was not able to distance himself sufficiently from his Saussurean heritage. One might add, that much the same can be said of French feminist writings desperately trying to get the body back into language, but failing to do so because they remain trapped in a post-Saussurean conception of the linguistic sign. (Irigaray 1977; Cixous 1997) The exception here is Julia Kristeva who, in her non-linguistic writings, has embraced corporeality as an essential feature of human semiosis. (Kristeva 1989) In Ernesto Laclau's work, the idea of 'empty signifiers' have led him to the boundaries of language, which in true structuralist fashion he equates with the much broader boundaries of human semiosis in general. Not only would 'empty signifiers' be dysfunctional in natural language, they would not even be

recognized as language in the non-technical sense. (Laclau 1996:36-46) Last, and least, I need to mention Jean Baudrillard whose fatality of meaning has little to contribute to the theorisation of language except a certain rhetorical force. (Baudrillard 1983) Unfortunately for Baudrillard, his very own political goals of 'resistance' are terminated before they can get off the ground by his denial of the kind of iconic acts we perform of necessity when we make meaning by way of language.

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