

Semioticon Lecture Series Ruthrof 2012

Series Title: A Heterosemiotic Theory of Natural Language

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Lecture 1: Metasemantics and Imaginability

Introduction

If semantics of natural language (NL) asks what kind of signifieds are associated with specific strings of linguistic expressions, then metasemantics asks the foundational question how any such relation is possible in the first place. In other words, metasemantics poses the Kantian question of the necessary conditions without which linguistic meanings would not occur. (Ruthrof 2013) As such, metasemantics cannot afford to restrict itself to a description of what is going on in current languages such as Chinese, Navajo, Russian, or Raeto-Romanic, but must also venture a speculative glimpse into the likely origins of language in hominid society. Though there is now a growing body of literature daring to take such scholarly risks, (Bickerton 1981; 1987; 1990; 1995; Corballis 2002; Burling 2005; Hurford 2007) it is only to be expected that the speculative tenor of such studies will run up against serious criticism. (Botha 2003) If we take the broad semiotic perspective of biosemiotics from the writings of Thomas Sebeok to those of Jesper Hoffmeyer, (Sebeok 1972; Hoffmeyer 1996) the risky venture of raising questions about the evolution of language at least is not entirely without framing conditions. Support for adding an evolutionary angle to our inquiry finds support also in the literature addressing the relation between the phylogenesis and ontogenesis of NL, as for instance in the work of the psychologist Lev Vygotsky. (Vygotsky 1991; Ruthrof 2012a)

Whatever the difficulties in raising evolutionary questions about NL, the need to look to our linguistic past is the more pressing in light of formal descriptions from Montague grammar (Montague 1970; 1974) to its most recent and radical extension in hyperintensional semantics. (Duzi et al. 2010) For in such accounts we find that semiotic formality, that is, pure symbolicity in Peirce's sense, has been arrived at by crucial excisions: the removal of what language is about, or simply *aboutness*, and the reduction

to zero of *enunciative modalities*. Yet these two features of NL are indispensable if we are to describe what is going on when we use language as a tool of representational communication. Beyond traditional formal semantics, its hyperintensional variety has managed to capture in its purely symbolic orbit not just what is said (*aboutness*) and the manner of its speaking (*modality* in the broad sense) but also the world and time in which the language event is embedded. Since ‘logical analyses lead us to intensions [but] no logical analyses can lead us to references’, hyperintensional theorists have proposed an ‘alternative notion of reference’: ‘the reference of the expression in the world W at the time T is the value of the respective intension in W at T’. (Materna and Duzi 2005:161) Thus has the entire world within which NL takes place been captured by intensional logic.

Briefly, on the birth of language: catastrophism vs. gradualism

How, I ask, did NL semantics get there? To attempt an answer to this question let us look back, far back into the distant human past to what evolutionary theories of NL suppose must have occurred. Not that there is any unanimity amongst those who speculate about the origins of language. Broadly, the scholarship splits into two major camps. There are the *catastrophe* thinkers such as Derek Bickerton (from 1981 to 1995) who are committed to the view that language must have been born ‘at one stroke’, a position held by most structuralists and neatly formulated by Claude Levi- Strauss.

No matter what the moment and the circumstances of its appearance in the animal scale were, language could only have been born in a single stroke. Objects couldn’t just start to signify progressively. ... a passage was effected from the stage where nothing made sense to another where everything did. (quoted in Kristeva 1989: 46)

On the other side of the divide we find the *gradualists* (Burling 2005; Corballis 2002; Hurford 2007; Ruthrof 2000; 2007; 2009b; 2011a; 2012a) who prefer to think that NL, like anything else we associate with human pre-history and history, has emerged over a long period of social development.

Now let us step back even further to a vista of semiosis from electro-magnetic radiation, pressure, and chemical processes and their uptake by the biological organism. From this perspective, hominid bodies must have evolved by adapting to zoo-semiotic conditions which have continued to exert an influence on the way our ancient forebears were able to transform perceptual input into behaviour guaranteeing survival. If we take this kind of scenario as our starting point of semiosis we can project a vast trajectory of signification from nonconscious processing of physico-chemical information to the Boolean code, with the emergence of NL sandwiched somewhere in between. To illustrate this point I offer the following rough schema of what one could call the ‘information-control continuum’. (Cf. Ruthrof 2009a)

Information-Control Continuum

The Physical World

Subatomic events - electromagnetic radiation, molecules → ‘surface intensities’

The Organic World

Colours, objects, tastes, smells, temperature, pressure, etc. → perception

The Human World

Percepts, primitive concepts → ‘perceptual experience’

Natural Language

Metaphoricity; aboutness; explicit and implicit deixis, enunciative modalities

Technical languages

Specialized lexicon; circumscribed aboutness; neutralized deixis

Formal Languages

Symbolic Logic to Boolean code: reduction of both aboutness and deixis to zero

Feedback Relations

From perceptual experience onwards every stage feeds back into all previous stages. Note the inversion of the relation between information and its control from perceptual grasp to the Boolean code, from large input and minimal control to the maximization of control and minimization of information to bytes.

My justification for such speculative considerations is that our dominant theories have typically cast their nets too narrowly to be able to capture what is *salient* in the

description of NL. The fundamental message we can draw from this sketch is that NL as an emergent phenomenon must be located between perception and formalisation, between iconicity and symbolicity, to use Peirce's terms, between two *Vorstellungsarten*, two ways of imaginatively realizing the world. (Kant 1792) The complication Kant introduced into the cognitive process is known under the title 'The Myth of the Given': *Anschauung*, Peircean *iconicity* is never alone; its receptivity is always already contaminated by the spontaneity of concepts. In humans, percepts are largely nonconsciously transformed into concepts under social guidance. At the same time, and this is a crucial point to make about NL, perception, we now know, is always multiply transformed into *imaginable* scenarios, so much so that it is often regarded as an illusion. If perception is indeed an illusion, then we must focus on the relation between perceptual illusion and language since the latter emerged from the former. For whether illusory or not, perception remains the ground of NL that we can be aware of.

At this point in our biological journey from biological uptake of 'brute' information (electromagnetic radiation, etc.) on the way to Boolean formal abstraction, or digital binary tagging, we can turn to biophilosophy for assistance. In a groundbreaking paper, 'From Nano-Intentionality to Intrinsic Intentionality' Tecumseh Fitch (2008) paints the persuasive picture of the gradual transformation of the relation between perceptual input and its internal monitoring for survival value from amoebae to humans. On the long way towards their elaborate functions in the brains of higher animals, including humans, Fitch delineates the inexorable, rise of a staggering number of neurons over a relatively small number of perceptual input cells. The summary result of this evolutionary process is that the ration between input cells and monitoring neurons is likely to be one to a million, if not thousands more. Though Fitch is reluctant to overstep his biochemical boundaries, I find it difficult not to consider the consequences his insight must have for our central problem of *imaginability* and its role in NL.

Linguistic meaning and *imaginability*

What matters most here, I think, is that our *imagined* world outstrips our *perceptual* world both quantitatively and qualitatively. In short, our *Vorstellungswelt* is vastly more elaborate than our *Wahrnehmungswelt*. This relation applies to the way we process our natural environment as much as we make sense of our social situation. Applied to our imagined hominid scenario, this would suggest that it was perhaps a high degree of complexity of hominid social imagination which, among other things, made the emergence of NL inevitable. Whatever the precise circumstances of the early stages of NL, it must have offered advantages over its perceptual and gestural precursors. While it had already been a huge advantage to be able to *imagine* invisible dangers, such a leopard hidden in dense foliage, it must have proven a greater advantage to be able to abbreviate the complexities of imagined scenarios verbally. (Hurling 2007; Corballis 2002)

If we accept this rough brush overview at least in principle as indicating a plausible evolutionary sequence, then we cannot but place *imaginability* at the centre of the emergence of NL. And if we do so, we cannot avoid the question of what has happened to *imaginability* in the theorization of language. In the West, Aristotle had pointed us in two possible directions for the inquiry into how NL works. We shall later have occasion to return to this fork in the road of theory. Suffice it here to point to his two emphases, one on *homoiomata* or resemblance relations, the other on predication and the propositional route via truth and falsity. The former requires the consideration of *iconicity* in linguistic meaning; the latter favouring skeletal predication at the price of letting go of full mental, iconic scenarios. The Boolean code stands at the end (so far) of the propositional route, marking as it does the most elegant and radical realization of the truth-falsity paradigm.

A brief aside at this point may be instructive. Compared to the double trajectory of the theorization of NL in Western culture initiated by Aristotle, the route chosen by the philosophers of Chinese antiquity looks entirely different. From Confucius' *Analects* to Xunzi's 'Rectification of Names', and from then on to recent Chinese history, NL was

not treated as an object of inquiry in its own right. Instead, the prevailing attitude to language can be characterized as ‘normative nominalism’, according to which the main and only function of language is to perpetuate the existing social hierarchy by taking seriously, and behaving in agreement with, social and political rank, title, and name. De-referentialization and de-deictification characteristic of the transformation of NL into formal sign systems are entirely foreign to the Chinese tradition, where rich, iconic mental scenarios have never been excised from comprehension. As a result, and in conjunction with Confucian *obedience*, to this day official discourse is still broadly received as having a kind of authority it has long shed in Western societies. Nor has China, for the same reasons, developed a rhetorical toolkit of critical discourse characteristic of the West since the European enlightenment. (Chu and Ruthrof 2012)

Once we took the path towards formalization, imaginability as the playground of resemblance relations carried in linguistic expressions, that is, *iconicity*, had to give way to those two fundamental and radical reductions, the reduction of imaginable *aboutness* and the reduction of imaginable ways of uttering linguistic expressions. What is being gained is univocity; what is lost is the complexity of the social reality of human interaction carried in NL. However, a word of caution is in order here. Please do not misread this as saying that I am denouncing the formal path of NL explanation in favour of a theorization based on *imaginability*. The usefulness and power of formal sign systems is beyond question. My point is a quite different one. In creating semiotic instruments of a formal kind, the usefulness of which would be silly to deny, we appear to have let go of Aristotle’s second path of description, the investigation of NL via resemblance relations. As a consequence, our current dominant theoretical discourses about NL display a sterility which, I think, covers up the actual nature of language.

Consequences

If we run with the *hypothesis* of imaginability as the metasemantic ground of NL, a number of methodological consequences become binding. Most fundamentally, the commitment to *imaginability* forces us to define linguistic meaning as indicated in the

Course Description: ‘If I can *imagine* what you are talking about, then there is meaning; if not, not’. Easily said; not so easily defended. As I will argue in Lecture 4, this requires not only a re-definition of linguistic meaning, but also of a number of other crucial concepts in the critical armoury of semiotics, linguistics and the philosophy of language.

Another methodological consequence of our hypothesis is that we are not able to follow the Saussurean account, nor those of his structuralist and post-structuralist successors, but instead have to embrace a Peircean conception of the sign, and especially of the hybrid linguistic sign. This implies a realist notion of the object world (Peirce’s object; missing in the Saussurean sign); the conventional character of linguistic expressions (Peirce’s representamen; Saussure’s signifier); and the mental event of meaning realization (Peirce’s interpretant; Saussure’s signified as ‘concept’ or ‘image’). A crucial difference between the position advocated here and that of Saussurean linguistics is that the linguistic sign as defined in the *Cours de linguistique général* absorbs both signifier and signified as *arbitrary*. I strongly reject the radical arbitrariness thesis as committing a *pars pro toto* fallacy and instead define the signified as *motivated*. Without this crucial repair, it would be impossible to argue for *iconicity* as a component of linguistic meaning, a claim at the heart of a *semantics of imaginability*.

A further methodological difference concerns the role language plays in Saussure’s *semiologie* in contrast with Peircean *semiotics* in that in the former language is the master, with nonverbal sign systems reflecting the structural relations of the linguistic sign. Peirce wisely offers a palette of verbal and nonverbal sign systems compete with one another and are translated into one another without language being granted preferential treatment. This has the important advantage that signifiatory dominance can be decided in actuality rather than being predetermined theoretically. Another differentiation from the Saussurean scheme is my rejection of Saussure’s assumption that without language we would be in a ‘nebulous’ world. (Ruthrof 2010b) No such thing can be postulated in a semiotic picture of the world. The precision hunt of tiger would not be possible if the animal had only a vague comprehension of the world. The tiger’s world must be

conceptually sharp, including schematized percept, to permit survival. That it is probably a smaller and very different world from ours is another matter. Whether Heidegger's confident characterization of animal life as *weltarm*, poor of world, must remain a moot point.

There is yet another methodological difference between Saussure's description and the present project in that the structuralist commitment to restriction of signification to communicative sign operations is unsustainable. Here once more the broader Peircean vista has a clear advantage. It allows for semiotics to describe any process of deciphering as a form of semiosis. In light of this distinction I have included both ROSS (read-only sign systems) and COSS (communicative signs systems) in my description. (Ruthrof 1997: 292; 289) Without this inclusive conceptualization, we would not be in a position to regard the reading of olfactory, gustatory, tactile, or visual information uptake as semiotic. In the case of arguing for a *semantics of imaginability*, this would prove a fatal restriction. Indeed, the broader approach is essential for the dismantling of the linguistic sign not only into signifiers and signifieds, but more importantly for further splitting the *motivated* signified into its components of iconic, mental materials and their conceptual regulation. For only once we are able to address the heterosemiotic sources the provide the mental material of the signified are we in a position to link our perceptual readings of the world (ROSS), as well as their imaginable variants, functionally with their conceptualization in the signified.

Given these methodological preferences, I conclude this introductory lecture by noting that most of our discourses on NL have avoided dealing with the relation between and perception, and its modification in and by *Vorstellung*, in short, imaginability. (*Vorstellung*, throughout this series is understood as mental, iconic variation of perception.) This neglect, I suggest, has had a detrimental effect on our commonly shared conception of what goes on when we employ language as a representational and communicative system of signs. In Lecture 2 I will attempt to demonstrate why I think this is so by offering a critical overview of a number of major approaches to NL. I want

to show where our existing language paradigms are flawed and how arguments based on the metasemantic foundation of *imaginability* are conducive to revealing those blind spot.

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SemioticonRuthrofLecture2

Lecture 2: A Critique of Existing NL Paradigms

Introduction

Some time ago Hilary Putnam surprised his readers with the attractive simile of NL as a ‘great balloon, anchored to the ground of non-linguistic facts only by a number of widely scattered and very thin (but all-important) ropes’. (Putnam 1979: 4f.) The balloon hovers above and would take off without being tethered. Thin but nevertheless indispensable ropes guarantee that earthly reality and the language that floats above stay connected. The balloon of such postmodern theorist like Jean Baudrillard has long drifted upwards out of sight, as well as out of use. But since meaning is not only dead in Baudrillard’s universe but even ‘fatal’, the now free-floating balloon is no great loss. (Baudrillard 1990) But who or what are the ropes in Putnam’s simile? His answer Putnam gives is, science and experts. One might object by saying that NL is by far too precious a commodity to left in the hands of those whose sense of security since Karl Popper has been demoted to ‘falsification’. (Popper 1975) Putnam’s scientists could of course be left in charge of technical vocabularies, but what would they do with such expressions as ‘I can’t believe he clagged his bag just a week before his eightieth birthday’ or ‘rattle your dags’. When it comes to idiomatic expressions, especially culture-specific phrasing, Putnam’s tidy picture looks inadequate. Much the same can be said about the powerful role played in NL by *implicit deixis*, the unstated but forcefully present manner of speaking that characterizes all cultures, a topic I will return to in Lecture 3. Before leaving Putnam’s balloon, I want to draw the reader’s attention to one more important aspect of NL missing in his analogy. The bulk of our linguistic practices deals with things *in absentia*. That we can use language in this way no doubt one of its great strengths and probably one of the reasons for its successful development. Memory of nonverbal situations, then, must play an important role in language. After all, in things remembered rather than seen or smelled,

the perceptual link between world and word is replaced by *Vorstellung* and *imaginability*. This is supported in Kant's *Critiques*, but denied in the later Wittgenstein, (*PI* §§ 59, 141, 168, 265ff., 280, 300ff., 338, 367, 370, 376ff., 386, 388f., 393, 443, 518, 572, etc.). Even if put to different uses by the two thinkers, *Vorstellung* plays a central role in the writings of both. Now if *Vorstellung*, understood as mental, iconic variation of perception, is indeed important for language how do we theorize its function? How do we repair Putnam's balloon simile do make room for this all-important complication of the way the balloon is tethered to objective reality?

All our explanatory paradigms of NL likewise have strengths and blind spots. In this second lecture my aim is to highlight, somewhat polemically, the shortcomings and fallacious reasoning which we can discover in a selection of influential theories of language. My first target is Saussure's radical arbitrariness thesis of the linguistic sign.

(1) Arbitrariness

The thesis of the radical arbitrariness of the linguistic sign can be dismissed in its Saussurean version as resting on *pars pro toto* reasoning and so fails the test of validity of argument. Because signifiers are arbitrary and the linguistic sign consists of the union of signifier and signified, therefore the sign in its entirety is arbitrary, simply does not go through. For those who agree that signifieds must be *motivated* by the bodily, semiotic commonality amongst humans, it could equally be claimed that since the signified is motivated, therefore the sign as a whole must be motivated, an assertion that would be equally false. Instead, we need to acknowledge the fact of the hybrid nature of the linguistic sign in that it combines symbolicity and iconicity, the latter being further complicated by the heterosemiotic resemblance relations and their sources on which the linguistic signified typically draws. This topic will loom large in Lecture 3. Suffice it here to point out that the inclusion within arbitrariness of the *signified* also flies in the face of massive evidence of conceptual agreement amongst different languages, such as Chinese and French at the level of natural kind terms and basic syntax dictated to us by biology. In its Fregean version, the assumption of arbitrariness is concealed behind the

untheorized equivocation of formal terms and their concepts with natural language equivalents. (see below)

While Saussure left the door open for iconic traces in his formulation of the concept (and its psychological image) as signified, many of his successors have since radicalised the sign further by dropping the signified altogether, illegitimately leaving the signifier to carry semantic load. (Laclau 1996; Hayles 1993) The resulting loss of iconicity is a serious handicap in the theorisation of language, for if we cannot address resemblance relations between language and world linguistic meaning collapses into syntactic circularity. My second target is the tendency to overemphasize the role of syntax in NL.

(2) Syntactocentrism

A major hurdle to a rich description of language is ‘syntactocentrism’, so aptly termed by the linguist Ray Jackendoff. (Jackendoff 1992:15) The strength of research on syntax lies in explicating the ordering principles we can abstract from living speech, as well semantic changes resulting from syntactic variation. But syntax cannot tell us how meanings come about; in natural language, the recognition of syntax presupposes meaning. Nor does syntax run quite as freely as its formalisations suggest. This criticism applies as much to Carnap’s semantics defined as an alignment of two kinds of syntax, (Carnap 1975) as it does to the syntactic picture painted by Jacques Lacan (Lacan 1985) and the generative principles in the work of Chomsky. (Chomsky 1957;1965; 1995; 2002; 2005)

We can formulate the ‘syntactic stranglehold’ in two versions, a weak and a strong form. In the weak version, language is regarded as a kind of *chess*; in its strong form, syntax rules language such that *semantics is a function of syntax*. The study of natural language in both its linguistic and philosophical guises has been seriously affected by the simile of language being like chess. (Saussure 1974: 22f.; 88f.; 110) Wittgenstein *PI* §§ 33, 108, 190, 563; Ryle 1957:248ff.; Sellars 1991:344ff.) To quote from Saussure’s *Cours*, ‘Of all

comparisons that might be imagined, the most fruitful is the one that might be drawn between the functioning of language and a game of chess. In both instances we are confronted with a system of values and their observable modifications. A game of chess is like an artificial realisation of what language offers in a natural form'. (Saussure 2005: 125) Yes, one could say, language is like chess but only at the level of syntax. And yes, the 'language' of chess, as Sellars observes, 'by virtue of its special vocabulary, has a certain autonomy with respect to the everyday language in which it becomes embedded'. (1991: 344) But what is fundamental to language is its *aboutness*. Chess is not *about* anything. This is why chess, contrary to language, can be perfectly well played by means of matrix mathematics; it is *monosemiotic* and *homosemiotic* and so pure *syntax*.

As to the more radical stranglehold thesis, according to which *meaning is a function of syntax*, it is not clear whether Saussure can be blamed. Some of the remarks in the *Course* would appear to support such a reading. In any syntagm, the *Course* says, 'a term acquires its value only because it stands in opposition to everything that precedes or follows it, or to both'. (Saussure 2005: 171) In other words, the syntactic arrangement of the signifiers of a language *alone* is responsible for their *semantic* value. This statement projects the picture of a closed circuit or network of signifiers which receive their signifieds from within the system by the position the signifiers occupy in relation to all other signifiers. But it is fallacious by definition of the sign in its original Saussurean shape that a syntactically arranged series of arbitrary signifiers produce *aboutness*, the most important feature of natural language which can only be argued via *signifieds*. Importantly, *syntax* does have semantic effects and so contributes to language as a refinement, but this is so only because even grammatically poorly phrased expressions indicate what they are about. Syntax lends precision, but cannot by itself create meaning. The radical syntactic thesis reveals itself as an extension of Saussure's *coherence semantics* I which everything to do with the world and its speakers is always already subsumed in the differential system of strings of arbitrary signifiers. Next I want to address what I call the 'sentential fallacy'.

(3) The sentential fallacy

By ‘sentential fallacy’ I mean the assumption that mental states are well characterized as sentential representations. (Devitt and Sterelny 1990: 116) This is not to suggest that we do not form sentences in the mind. Of course we do, but sentences in the mind form only a miniscule part of *imaginability*. The fallacy could also be levelled against Fodor’s ‘language of thought’ (LOT). It is fallacious because it falls foul of Gilbert Ryle’s ‘ghost in the machine’ criticism according to which the explanation of language via a language in the mind of necessity leads to an infinite regress of ever further languages being required to provide the basis for each precursor. (Ryle 1949) Language cannot function as an anchor for itself. This is where *imaginability*, as mental, iconic transformation of perception, comes to the rescue. Since it is rooted in perception, made up of tactile, olfactory, gustatory, thermal, visual and other readings, that is, perception in the objective, phenomenal world, linguistic infinite regress is avoided. It is at the level of *imaginability* and perception that the buck of meaning can be arrested for practical purposes, leaving intact Peirce’s argument of infinite semiosis, which clearly draws, as does Derrida’s version, on Kant’s observation of the open-ended analysis of empirical concepts. (*CPuR* A 727ff.) Another influential approach to NL and linguistic meaning has its roots in behaviourism, accordingly restricting their description to what can be observed. Externalism, then, is my next target.

(4) Reduction of meaning to observables

A great deal goes on in the minds of native speakers of a language in linguistic exchanges, some of which is incidental, but much of which is necessary for successful meaning events to occur. ‘See you at the party’ ... ‘See you then’ are sentences that we assume are perfectly comprehended by their speakers and yet contain lacunae which bar comprehension in bystanders without the required background information. Far from this being an exception, natural language use typically relies rather heavily on unspoken but relevant *aboutness*. Behaviourist stimulus-response approaches fail in the face of this

obstacle. But even the most sophisticated notions of ‘meaning as use’ in the wake of Wittgenstein’s *Philosophical Investigations* fall foul of the necessary condition of mental realisations, such as memory, as part of the process of meaning exchange. In order to be able to *use* a colour term (sepia, vermilion) in accordance with *sufficient semiosis* I have to be trained to master both a ‘paradigm’ of colours (*PI* §51) and the appropriate ‘lexicon’. Once mastered I do not have to pull out the colour scheme from my pocket each time I hear the term, but am able to *imagine* sepia instead of vermilion on the cue of the appropriate word sound. In this way ‘it is in language that an expectation and its fulfilment make contact’. (*PI* §445) Nor is the mental image a mere ‘private sensation’; (*PI* §274) it is socially controlled. Try to image your shoulder when you hear the signifier ‘kneecap’. We cannot escape the ‘rigidity’ of the link between word and *imaginability* which the speech community has dictated to us. I address this phenomenon in Lecture 6 under the title of the Linguistic Linkage Compulsion. I restrict my argument here to the claim that if we accept the definition of natural language as ‘a set of social instructions for imagining, and acting in, a world’ (see Lecture 3), then *observables* furnish *insufficient conditions* for meaningful linguistic exchanges. Now it is time to move from hard-headed observability to one of its opposites, the treatment of NL as if it could be well described as a formal sign system, a case of the ‘formal fallacy’.

(5) The formal fallacy

I call the ‘formal fallacy’ the confusion of natural language sense with formal sense. It is employed as a deliberate strategy by Gottlob Frege in the opening pages of ‘Sense and Reference’ of 1892, a move that has been continuously repeated in the philosophy of language to this day. (Frege 1970) Frege’s ‘error’ consists in proceeding from the formal sense of intersecting lines in a triangle to the sense of ‘morning star’ and ‘evening star’ as if the two kinds of sense were interchangeable without semantic damage. (Ruthrof 1993) Yet there are marked differences between the way we comprehend and know the meaning of ‘a’, ‘b’ and ‘c’ via definition within a formal Euclidian system and the way we know the meanings of ‘morning star’ or ‘evening star’ as part of our cultural

vocabulary. Without the community enforced linkage in the minds of language users of typical experiences of mornings and evenings as referential background the terms would be meaningless, nor would they allow us to secure reference. The difference between reference and referential background is essential to natural language. On the other hand, though essential in calculus, formal sense plays only a limited role in natural language. Here, referential background functions as part of cultural semiosis and is inseparable from meaning. Moreover, Frege's geometric sense is an *a priori* concept in contrast with natural language sense the dictionary entries for which are always the result of an *a posteriori* mapping of living speech. Not even Leibniz's *zureichender Grund* (sufficient reason) is able to wipe out that crucial difference. A little later in his paper Frege realizes that his initial collapse of two kinds of sense also requires the elimination of *imaginability* as *Vorstellung*. This is so because one person's *Vorstellung* associated with a term is not identical with that entertained by another, an instance of fuzziness unfit for a *Begriffsschrift*. Thus took 'iconic cleansing' root in the philosophy of language up to hyperintensional semantics, discussed briefly in Lecture 1. Related to the 'formal fallacy' is the mistaken comparison of NL with interpreted calculus. I call this the 'applied calculus fallacy'.

(6) The applied calculus fallacy

Rejecting the treatment of natural language as a formal system is one thing; it is quite another to show that language does not work like an applied, that is an interpreted, calculus. For it is tempting to see significant parallels between applying a measuring tape to objects and the use of linguistic signifiers. Given Saussure's conviction that language is all form with no substance (2005: 157), one might expect that structuralist linguists share the view of language as an 'interpreted formal sign system'. (Grewendorf *et al.* 1987: 377) The very idea that language can be equated with formal sign systems rests on a confusion of *a priori* and *a posteriori* relations. Employing an inch tape to check the length of a table can be called an application of a formal system to a portion of the phenomenal world. The tape can be regarded as formal in the sense that its subdivisions

are definitionally controlled and so can be translated into another similar formal system, such as a metric tape. And this would indeed be a valid analogy if natural languages were first designed as systems coherent in themselves and definitionally secured in the way our measuring tapes are.

Natural language has grown in relation to and as an economising reflection of our socio-perceptual world and its modifications in *Vorstellung*. As such, language takes the relation between its arbitrarily chosen *signifiers* not from a formal system of axioms, definitions and syntactic rules, but from the *translation* of nonverbal realisations of materials, events, and feelings. Language is therefore an *a posteriori* constituted sign system. First comes speech as social practice, and then comes its systemic formulation in lexicons and grammar books. This difference is driven home when we apply the formal notion of *recursivity*, an exercise which sooner or later runs into the wall of idiomatic expressions.

In natural language, a culture has chosen a verbal *signifier*, say 'tree', which evokes a *generalised* and *schematised* *Vorstellung* of a tree, derived from perceptual inputs and their mental transformations under social control. The fact that we can translate 'tree' by the terms 'shu' or 'arbre' or 'Baum' is often taken as the result of the self-evident possibility of relating different languages to one another as comparable lexica. Yet this is not the way it works. Rather, we can translate between Chinese and French strings of verbal *signifiers* because we share a basic *tertium comparationis*: our compatible, even if culturally differentiated, nonverbal worlds of perception and *Vorstellung*. Put simply, we are able to produce translations because we have the same kind of bodies and so generate comparable worlds out of what we cannot but assume is the same stuff out there. Importantly, this common baseline is realised by way of nonverbal, iconic signs refined by linguistic concepts. Higher level cultural concepts conceal this shared foundation.

Lastly, while a large part of the lexicon of NL is the result of social institutions requiring ever new concepts and so could be compared to the principles of the measuring tape, all

our natural kind terms draw their conceptual content from nature. In this respect too, NL is a heterosemiotic system. I now turn briefly to a powerful tradition in NL semantics, truth-conditional theory. Forceful and sophisticated as many of its versions are, their shortcomings should not go unnoticed.

(7) Truth fallacies

I suggest that there are two good reasons why *truth* is not a promising candidate for furnishing a basis for a theory of *meaning*. One is that no matter how clever our employment of *truth*, it very much looks like a sliding signifier, a shifter, whose signifieds change radically with each different discursive domain. Yet this shifter character of ‘truth’ is no Lacanian ‘glissement’ because its signifieds, its conceptually regulated iconic features of identity relations, are in each case determined fairly closely by the discursive domain in which the signifier is used. The easiest way of clarifying the role of truth in linguistic expressions is to locate it on a scale from formal signs to natural language and beyond to fictions. As such, it works best at the formal end of the scale where ‘true’ and ‘false’ can be replaced by ‘correct’ and ‘incorrect’ without loss of meaning. In fuzzy logic truth is still precisely locatable as a percentage relation (e.g. ‘71% true / 29% false’) between the fixed goal posts of 0 and 1. In technical language the success of truth depends on the degree to which the strict definition of terms applies. In most technical signification, truth is not only a useful but a necessary notion. However, the fuzzier the world projected by language, the less applicable ‘truth’ turns out to be. Take a sentence such as ‘Do you think that Mr Hooper was being fair to John in suggesting that John had intended to insult Mrs Beal when he apparently said that her jeans had a nice 1970s cut?’ In this sort of sentence we note that meaning construction outpaces truth considerations by a very long shot. We are able to fill the linguistic schema with sufficient nonverbal iconic materials quickly to secure meaning, whereas we ponder the question of truth and the identity relations it requires for quite a while until we realize the futility of the quest. This is why truth-conditional theory has retreated to the position of saying that for the sentence to have meaning we must ask under what conditions it

would be justified to ask whether something thinks something and whether someone might have intended something by saying something. Lastly, fictional contexts, especially of a non-realist kind, make truth-conditional arguments look like desperate rescue attempts in a misguided project.

The second reason why truth-considerations must be doubted to furnish a useful basis for *meaning* is that even in its most sophisticated versions, as in Davidson's proposal, we ultimately end up with a circular form of reasoning. (Davidson 2004) For in the end all we have done is *project*, once more via *imaginability*, a likely scenario in which truth questions are a language game played in an imagined world. Truth-conditional semantics, then, is parasitic on *imaginability*, and so is a possible but not a necessary procedure.

(8) The neural fallacy

Lastly, the neural fallacy consists in the ontological commitment to 'neural concepts' defined without reference to the social. Taking mark Johnson and George Lakoff's as the most prominent formulation, concepts are neural structures facilitating categorisation and reasoning. Our categories are conceptualised via *prototypes*. Such prototypes are neural structures for 'inferential or imaginative tasks relative to a category'. (1999: 19) In the *embodied concept*, they write, we encounter a neural structure associated with 'the sensorimotor system of our brains'. From this Lakoff and Johnson conclude that 'much of conceptual inference is, therefore, sensorimotor inference'. (1999: 20) We must distinguish here a weak and strong thesis. In its weak form, all that is being claimed is that whatever happens in our minds has a biological, neural foundation in the human brain. This is hardly disputable. It is the strong version of the neural claim that requires scrutiny. What is being asserted here is that concept formation is part of the human neural network itself. Two important dimensions of the concept are missing in this account: (1) the role of the social in the acquisition of concepts; and (2) social monitoring of concept use. While the weak version of the 'neural concept' can be reconciled with both (1) and (2), its strong variant cannot. If concepts are indeed necessarily social, the strong variant

fails. From the perspective advocated in this book, that concepts in natural language are social rules for regulating mental iconic materials, it is clear that this perspective is likewise incompatible with a strong formulation of ‘neural concepts’.

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SemioticonRuthrofLecture3

Lecture 3: Semantics of Imaginability

Introduction

Having highlighted a number of blind spots in our dominant discourses about natural language, such as in formal, syntactic, externalist and other accounts, in Lecture 2, I now want to argue why something like a *semantics of imaginability* is needed to redress the theoretical imbalance created by those descriptions. The sceptic may intervene at this very opening by objecting that when someone says ‘hello’ and I reply with a ‘G’day’ *imaginability* doesn’t come into it. The exchange, as it were, works as a purely public exchange of conventional sounds, much the same as waving one’s hand in reciprocal acknowledgment of a similar gesture by some acquaintance. And so it would seem in *habitual* speech. But as soon as the situation of greeting becomes problematic, as for instance when we suspect that the apparently innocuous ‘hello’ harbours some ulterior and perhaps even nasty speech intention. Our imaginative faculty leaps into overdrive to cope with the interpretive challenge. Nor do we have to have the neurotic mental constitution of a Woody Allen to respond in this way. More obviously, a sentence like ‘Jane and Susan were at it again at Paul’s party last night’ demands of the listener or reader the projection of an appropriate mental scenario as a matter of course in order to permit the *semantic ascent* from phonetics and syntax to meaning. The bulk of natural language is of this kind. What is at stake then in postulating a *semantics of imaginability* is to show that and in what way Peircean *iconicity* in its olfactory, gustatory, tactile, emotional, visual, and other perceptual modalities play an indispensable role *in* language.

From Corporeal Pragmatics to Semantics of Imaginability

Semantics of Imaginability stands for a conception of natural language that has grown out of my earlier writing on *corporeal pragmatics*, which foregrounded the presence of the

socialized human body not merely as a necessary carrier of linguistic meaning but as a constitutive *sine qua non* of natural language semantics. In other words, corporeal pragmatics insisted on the observation that social, perceptual human being was not only the instrument on which language can be played in all its cultural varieties, but that perceptual being has indeed survived *within* linguistic meaning from its hominid beginnings to the present. (Cf. also Ruthrof 2000; 1997) Because of the dependency of the *semantics of imaginability* on corporeal pragmatics, I want to return to a summary of its principles as presented in an earlier paper, upgrading my position as required. (Ruthrof 2000; 2007)

In *The Body in Language* (2000) I summed up a series of fundamental ‘semantic assumptions’ that underpin the corporeal enterprise. I repeat some of them here for the reader’s orientation.

- Language is empty syntactic grid.
- Language does not mean by itself.
- Language is parasitic on non-linguistic signs.
- The dictionary does not contain any meanings, only verbal substitutions.
- Meaning is not governed by definition.
- Meaning is not a relation between language and an unmediated world.
- Meaning is an event.
- Meaning events occur when language grids are activated by nonverbal signs.
- When meaning occurs, linguistic expressions act as directional schemata.
- This activation applies to both utterance situation and what is said.
- Nonverbal signs are made up of tactile, olfactory, gustatory, aural, visual and other perceptual readings as well as their fantasy variants.
- Nonverbal readings are intersemiotic and heterosemiotic.
- Intersemiotic relations characterize the interaction amongst different signs.
- Heterosemiotic relations refer to the discrepancies between different kinds of signs.
- Only the linguistic *signifier* is arbitrary.
- The arbitrary signifier is the result of a history of iconic disembodiment.
- *Signifieds* are not arbitrary.
- **At the level of the signified we are iconic beings.**
etc. (2000: 151f.)

Natural language, I have argued since, is fundamentally related to perception in the broadest sense of the term, both as to its *phylogenesis*, its hominid evolution, and *ontogenesis*, its emergence in the individual native speaker. If this is indeed so, then we must come to terms with the situation that both our dominant philosophical and linguistic discourses have fundamentally failed to address the relation between language and perception, as well as between language and *imaginability*. Inspiration for a perceptually and imaginatively grounded theory of natural language could have been developed out of Peircean principles. Unfortunately for linguistics, Saussurean *semiologie* usurped the place of Peirce's *semiotics*, resulting not only in a forgetting of their profound differences, but also of the role of *iconicity* in language both at the level of semantics (Ruthrof 2000; 1997) but also of syntax (Bouissac 1995). What has been lost sight of is Peirce's radical insistence on the presence of *iconicity* as the grounding principle of human understanding, most importantly including comprehension by means of natural language. (CP 1.158)

Other promising but neglected philosophical sources for a *semantics of imaginability* include a revised Lockean semantics, (Ruthrof 2013) cleansed of its *semantic privacy*, a re-theorization of Kant's *Vorstellung* and especially his *schematism*, as well as phenomenology. Sadly, in spite of Husserl's early insistence on meaning as a Platonic ideality phenomenology promised some avenues conducive to insights into the relation between language and perception. I am pointing here in particular to Husserl's introduction of such notions as *appresentation* and *as-if-modification*, as well as the principles of the *Lebenswelt*, (Ruthrof 2012) Roman Ingarden's elaboration of this notion in the specifics of literary concretisations, (Ingarden 1930;1959), Alfred Schutz's analysis of language as the dominant form of typification (Schutz 1967;1959a;1959b) or Adolf Reinach's speech act phenomenology of 1913, all of which provided fruitful insights into the role which perceptual ingredients play in natural languages. Unfortunately, they failed to inspire more recent philosophers, let alone linguists. Nor have Heidegger's *protolinguistic* gestures in the context of his remarks of language and interpretation produced a major rethinking relevant to the relation between language and perception. (Heidegger 1962) Perhaps the most promising path to perception in language was

announced in the work of Merleau-Ponty under the heading of the primacy of perception. But once again, the enterprise collapsed under the weight of Merleau-Ponty's own self-doubt, or a renewed interest in Husserl's eidetic convictions, or perhaps because of his religious leanings, when he reverted to the concession that language was after all a 'logic in contingency' (Merleau-Ponty 1964:87f.) and that 'there is an essence beneath us, a common nerve of the signifying and the signified'. (1968:118;my emphasis) Logos rules once more, 'the pre-existent Logos is the world itself'. (1962:xx) Thus the primacy of perception failed to fulfil its great promise.

A major impulse for a 'corporeal turn' in the theorisation of natural language has come from cognitive linguistics and its neurobiological and neuro-scientific research backup. (Fitch 2008; Barsalou 2012; 2009; Pulvermüller 2010) As a result, language philosophy and linguistics, amongst other branches of theorisation, have recently been jolted out of their dogmatic slumber by a number of significant findings in neurologically based research. (Gallese and Lakoff 2005; Verhagen 2005; Fauconnier and Turner 2002) Especially the Lakoff School has played a major, though by no means uncontroversial, role in this respect. Barring some of its more overbearing claims and especially its unsustainable anti-philosophical hype, *Philosophy in the Flesh: The Embodied Mind and Its Challenge to Western Thought* (Johnson and Lakoff 1999) is to be acknowledged as a pioneering case of this kind of research, which attempts to locate the roots of natural language meanings, concepts, and metaphor in the sensory-motor neural functions of the human brain. However successful this challenge will turn out to be, will have to be seen. One obvious weakness of this research is its reluctance to address the all-important social dimension of human conceptuality and its role in the linguistic sign. The 'neural concept' appears to stand on one leg only, its biological ground. Yet without addressing the speech community as control mechanism it is hard to see how perception and imaginability escape *semantic privacy*. We need an argument to show that linguistic meanings are neither *public* like signifiers in their syntactic sequencing, nor *private* in Locke's sense. What is needed is an argument for the *indirectly public* nature of signifieds. I will return

to this problematic in Lecture 4. Suffice it here to emphasize the all-important role of *pedagogy*, conceived in a broad sense.

Cognitive linguistics and neurolinguistics are of course newcomers in the domain of the theorization of natural language. The two most powerful traditions in the description of language are much older; they were launched by the mathematician Gottlob Frege at the end of the 19th century and Ferdinand de Saussure early in the 20th century. In spite of, or perhaps even because of, the great advances these two approaches meant for the philosophy of language and linguistics, they still loom large not only as major innovations but also as two great impediments to a rich description of language. For the two founders of theoretical discourses on language are arguably responsible for the elimination of perception and *Vorstellung* in their relation to language. From very different points of departure, the one from mathematical logic, the other from a critique of historical linguistics, Frege and Saussure have left in their wake two separate traditions equally hostile to the investigation of the presence of perceptual ingredients in natural language. In Frege's case, the barring of subjective images from sense marked the beginning of a history of semantics that took its cues increasingly from the domain of formal signification. Having started analytical semantics by analogical reasoning from geometry and arithmetic to a natural language (German in his case), Frege made a radical move: he conflated two kinds of sense, the formal sense of geometry and the kind of sense that characterises such natural language terms as *Morgenstern* and *Abendstern*. (Frege 1970) Thus he denied the fundamental difference between an a priori sign system for which we first define our terms before we play the formal game and a posteriori signification in natural language, which is spoken, usually for a very long time, before it is described at all. The difference between the two kinds of senses could not be any starker. Formal sense can be invented at any time; natural language sense, by contrast, has evolved over a million years, give or take a few, and so carries with it the semantic drift that cannot be separated out from perceptual indication. But perhaps Frege's most influential incision in the history of semantics was his ban of *Vorstellung* from the

description of language, on the grounds that the image which one person may associate with a linguistic expression cannot be identical with someone else's mental, quasi-perceptual associations. Frege's reasoning here rests on the assumption that identity of meaning is as essential to natural language as it is to formally empty propositions, a presupposition that is as erroneous as it is arbitrary. If, for instance, natural language is able to function efficiently on the principle of significant overlap of *imagined* portions of the world rather than on the principle of identity, Frege's ban of *Vorstellung* from sense loses much of its apparent cogency.

As to the pioneering work of the linguist Ferdinand de Saussure, his strong emphasis on differential, syntactic relations paved the way for an increasingly barren description of language as combinatory, as indeed a kind of chess. (Saussure 1974: 22f.; 88f.; 110) Even though Saussure had insisted that the signified and signifier played an equally important role, his minimal delineation of the signified as 'image' and 'concept' led to the gradual demise of the signified as indispensable for 'meaning'. Today, the literature not only in the humanities, but also in some social sciences is full of talk of 'signifiers', as if they themselves were able to be meaningful without signifieds. (Laclau 1996) This trend was strengthened by Saussure's definition of the linguistic sign as radically arbitrary, a move that increasingly favoured the signifier to the point where the signified is virtually abandoned, a position which however produces an embarrassing paradox: the arbitrary and empty signifier must now take on the semantic load of the signified, which its very definition does not permit. It is for this reason alone that Saussure's linguistic principle of arbitrariness needs to be revisited. Surprisingly, his generalisation of arbitrariness to cover the linguistic sign as a whole has hardly been challenged, even though, on closer inspection, it rests conspicuously on a fallacious *pars pro toto* form of reasoning. Because the signifier is arbitrary, Saussure says, therefore the linguistic sign as a whole is likewise arbitrary, which includes the signified as a vital part. Yet there is no argument for the signified to be rightly regarded as arbitrary in the same way as the signifier. The

vanishing signified in much contemporary literature is testimony to the diminishing role we now grant the perceptual ingredients of natural language and their modification in *Vorstellung*. And yet, without *Vorstellung*, understood throughout these Lectures as ‘modification of perception’, and its sedimentation in language we could not at all function as human beings.

A very different approach is needed to balance the formal and syntactic accounts. Sandwiched as it is between perception and its technical derivations, language cannot be adequately described if we forget its perceptual ground. The forgetting of perception and its modification in and by *Vorstellung* may indeed prove major obstacles in the search for a linguistics appropriate to its task. What we need to ask beyond the findings by formal and syntactic approaches is what perceptual ingredients have survived in language to this day and in what form and what role they still play. This has not been a popular tack to take. Even as socio-semiotic a linguist as Michael Halliday shares the structuralist belief that in adult language mastery our performance is essentially syntactic. (Halliday 1975:141) But perhaps the opposite is the case, as Eve Sweetser has persuasively argued, namely that every term, including function words, reflects perceptual experience. (Sweetser 1990) This does not mean that Saussure’s differential syntactic relations are not important, what it does mean is that logically prior to syntax language is fundamentally iconic, in the sense that resemblance relations of an aural, tactile, gustatory, olfactory, and visual kind co-determine linguistic meaning. Nor should we forget the emotional dimension of language as a complex nonverbal sign system in its own right. (Lüdtke 2006; Trevarthen 2005) In this respect, recent insights in neurological research concerning ‘mapping’ constitute a seminal moment in the history of language philosophy and linguistics. (Fauconnier 1997) No doubt, the corporeal turn in the theorization of natural language is now inevitable.

What then would a linguistics based on perceptual premises look like? At the moment we do not have a fully fledged, cognitive theorisation of language. In its absence, the

following offers a thumb nail sketch of corporeal pragmatics, an attempt at uniting the consequences of the cognitive emphasis on perception with insights from Peircean semiotics and phenomenological investigations into a coherent schematisation. In corporeal pragmatics, language is an empty syntactic matrix, with a meaning potential waiting to be activated. Language by itself does not 'mean'. Every natural language functions because its signifiers are typically paired, as Saussure rightly tells us, with signifieds. Beyond Saussure, this amounts to saying that mental materials, be they iconic or indexical, are ordered by concepts. The signifier-signified connection, however, is not stable nor, as it is in structural linguistics, reliant solely on intergrammatical relations. Rather, the linkage is fundamentally grounded in perceptual signification and so remains tentative, open to historical change, semantic drift, and other meaning transformations. This adds an important dimension to the Saussurean scenario: the differential relations within language are made meaningful by a nonverbal Other, the totality of nonverbal signs. In each meaning event, the language user, guided by the speech community, momentarily stabilises the signifier-signified relation by choosing a specific cluster of nonverbal signs with which to cash in a signifier by a signified. In corporeal pragmatics, then, language is always parasitic on nonverbal semiosis. The question to ask then is how this dependence relation can be made coherent.

To begin with, much of the standard vocabulary in the description of language needs to be revised. Both reference and deixis will have to be redefined as 'intersemiotic' relations. (Ruthrof 1997) Nor can there be anything like a semantics of natural language in any strict sense because for meaning to occur at all, that is, for language to function as language, it has to be used, which means it must be activated pragmatically. Even the most abstract 'semantics' handbook is always already a pragmatics. Ironically, and in spite of its misleading name, there cannot be any meaning in such a 'semantics'; it requires a reader to activate its terms by nonverbal means. Only when we fully formalise language, that is, replace each term by a place holder (x, y) can we avoid pragmatic meaning activation in the sense of meaning used here. Yet would we then still speak of a

semantics? As Rudolf Carnap has shown, it would make sense in such a case to speak of a 'formal semantics' only if we were to systematically, that is, homosemiotically, pair a fully formal Language 1 with a secondary formal system, Language 2. (Carnap 1975) This suggests that even in a fully fledged formal semantics, a singular language system does not suffice to warrant the term 'semantics'. One could argue that some such pairing also takes place in natural languages, except that here the two semiotic systems to be associated with one another are each of a different kind, they are heterosemiotic: one is verbal, the other nonverbal, iconic. In this sense and contrary to formal sign systems, natural language is in principle always already heterosemiotic.

As we have insisted, in corporeal pragmatics every instance of meaning relies on the practice of iconic realisation. This means that the notion of 'use' always involves mental states and so cannot be equated readily with Wittgenstein's definition. Nonetheless, the Wittgensteinian notion can be accommodated as a second-order public form of use. (Wittgenstein 1953) In corporeal pragmatics, 'use' refers specifically to the event of activation of empty schemata by nonverbal materials ordered into units of iconic signs. The signifier 'slab' is activated by nonverbal signs including a typical size, the memory of a weighty object, the tactile impression of a relatively smooth surface, as well as other visual, tactile, olfactory, proximal, and kinetic readings. These are regulated by a concept and so together constitute the signified of 'slab'. No truth-conditional acrobatics are required to secure meaning; once acquired, our concepts decide for us roughly when sufficient iconic, mental materials have been brought to bear on the empty signifier to render it meaningful. Iconicity is understood here in a broad sense. Peirce's indexical signs are included under the principle of semiotic resemblance relations in the present account on the grounds that they display indirect iconic relations. The fact that indexical signs require more reconstructive interpretive labour than iconic signs affects the principle of resemblance relation only insofar as they foreground *Vorstellung*, or perceptual modification. What sort of nonverbal iconic materials, then, do we typically engage in the processes of verbal meaning construction? The bulk of our nonverbal signs

are made up of olfactory, gustatory, thermal, gravitational, kinetic, aural, emotional, somatic, haptic (internal), tactile (external), and visual readings. In this scenario concepts are defined as social rules regulating linguistic directionality, the kinds of materials to be activated, the required quanta of iconic signs and their combinations, as well as the degree of schematisation to which we abstract iconic contents.

As a rule, in the process of meaning endowment, we do not proceed etymologically, but rather in terms of the current way a culture uses its language. We do not activate 'he is hot under the collar' by recourse to thermal signs, but rather by visual, kinetic, and emotional signs indicating anger. Both the degree of schematisation and the quantity of mental materials effected by the concept in the event of linguistic meaning is to be regarded as a function of sufficient semiosis, the communicative boundaries implicit in the specific circumstances of each meaning event. Another characteristic of corporeal pragmatics is the heterosemiotic nature of the activated linguistic signifier. Since the nonverbal materials by which we transform our signifiers are heterosemiotic (olfactory, tactile, auditory, emotive, somatic, etc.) the linguistic sign must have features that act as a regulator assimilating its heterogeneous components. This task cannot be accomplished at the level at which iconic contents are assembled, but rather at a more abstract level, at which different nonverbal sign contents are homogenised. In corporeal pragmatics this function is performed by the concept, not however in its current usage, (Margolis and Laurence 1999; Fodor 1998) but as defined below.

Central to corporeal pragmatics is the distinction between COSS (communicative sign systems) and ROSS (read-only sign systems). (Ruthrof 1997) Our perceptual grasp of the world tends to be both a combination of heterogeneous sign readings and a letting others know about our readings. In either case, we are activating various semiotic systems, invariably involving many steps of sign translation. In each case, however, we typically transform an aliquid into an aliquo, the minimal definition of signum. Accordingly, we can distinguish between read-only-signs and communicative signs. The social acts of

looking, smelling, tasting, touching and so on are always already potentially both readings and communicative events, which also raises the old question whether we are able to perform nonverbal semiosis without language. That we should be able to do so certainly flies in the face of structuralist accounts, as for instance Saussure's claim that "nothing is distinct before the appearance of language" (Saussure 1974:111). This, of course, is no more than a powerful prejudice. Our distant pre-linguistic ancestors would surely not have survived if their hunting skills had not involved a high degree of precision. Could a pre-linguistic hominid have procreated if it had lived in a 'foggy world'? At this point a certain degree of theoretical fudging comes into play: they may not have spoken a language but their gestures were already linguistic in the sense of a differentially related system of communication. Yet this is no more than a thinly disguised form of linguistic imperialism. Moreover, to call all human semiotic behaviour a 'language' defeats the very point of trying to distinguish natural language from other sign systems, as it does any attempt at trying to argue a significant relationship between verbal and nonverbal semiosis. Here the Peircean semiotic route is by far the better bet. In any case, the structuralist position shows its theoretical weakness also in its failure to account for the experience of not being able to find the appropriate words to describe subtle smell or taste distinctions, the nuances of sexuality, daydreaming, in extreme emotional domains and other areas of human life not well covered by linguistic signs. Cognitive science has shown us that there is indeed a deep chasm between the myriad distinctions even decadent humans are still able to draw in the olfactory, gustatory, and tactile domains and the paucity of the vocabulary relevant to those distinctions in English, as in other languages.

Linguistic expressions and terms by themselves are perceptually empty signifiers that belong strictly to the domain of the dictionary. This is why there are no meanings in dictionaries. It is the reader who carries meaning into the dictionary by activating its empty schemata with the help of appropriate clusters of nonverbal signs. Nor can the 'as-structures' that characterise dictionaries be called definitions proper, for two reasons. For

one, dictionary entries vary in length and detail, a fact that does not square with any strict notion of 'definition'. Second, dictionary entries are typically substitute signifiers, which are collected after the social event of speech. In other words, they are a posteriori descriptions. In formal systems this relation is reversed, where signifier relations function as a priori foundations. Third, the definitions of a formal system neither require nor permit additional mental materials for their activation. The definitions are their necessary and sufficient conditions. Furthermore, formal sign systems have neither reference nor deixis (unless we provide a system of reference as a definitional extra), let alone referential background, and certainly no implicit deixis. By contrast, in natural language, nonverbal ingredients are essential in all these respects. Language points, that is, it is directional and ostensive, a feature it has most likely inherited from its forerunners in gestural *protosemiosis*. If language is an economizing grid gradually superimposed on earlier forms of gestural communication, it is likely that the principle of nonverbal ostension has survived in language as directionality. In corporeal pragmatics, linguistic signs, that is, combinations of verbal signifiers and conceptually regulated nonverbal sign clusters are argued to act as directional schemata. The speakers of a natural language are trained to associate signifiers and signifieds in such a way that they point in a certain direction in the world as it is realised by a speech community. All linguistic expressions are learned as vehicles of cultural intentionality, the directional agreements shared by the speech community. This includes pragmatic scope, the right kind, size and quantity of the portion of the world selected, the degree of schematisation, as well as sufficiency of indication. If there is lack of clarity, further directional schemata are typically called upon. One could say that in formal sign systems directionality acts like an unambiguous vector, in technical language as a narrow beam, in ordinary social exchange directionality allows for a certain interpretive leeway and negotiation, while in the breakdown of communication directionality becomes ubiquitous or shrinks to zero and so fails.

Linguistics speaks of deixis as a feature marking spatial, temporal, personal and other features of the speech situation, a limited convention in the sense that it addresses only

explicit deixis, the tip of the iceberg of general deixis, which includes implicit deixis and also deictic background. The notion of ‘ego-centric particulars’ in philosophy is subject to the same kind of critique. In corporeal pragmatics every single term of a natural language is typically double-directional, pointing at the same time to its referential aspect and back to its deictic source. Even as simple a preposition as ‘on’ illustrates this point, indicating as it does simultaneously its referential ‘surface contact’ and its speaker and utterance position. In other words, language is not just fundamentally referential (as well as self-referential), but also essentially deictic. (Bühler 1965) The radical generalisation of the deictic nature of language has serious implications, especially for the description of culture and communication.

Following the advice of Chomsky in his recent return to matters linguistic, meaning in corporeal pragmatics is being described here in a noncontroversial mental sense. (Chomsky 2000) The fact of mental states is a *sine qua non*, one that cannot be separated out from the processes that turn signifiers into signifieds. Mental states are indispensable for the event of linguistic meaning. This would not even be denied by supporters of arguments in favour of reducing mental states to the meagre status of ‘propositional attitudes’, though such a position does little to enlighten us on the question of the relation between language and perception. Nevertheless, the charges of mentalism and subjectivism, to which corporeal pragmatics is even more vulnerable than cognitive linguistics, must be disarmed. Enter the speech community as a set of social constraints on individual linguistic performance. From the first stuttering ventures into the complex field of our mother tongue, every association between signifiers and the conceptually organised nonverbal materials that make up our signifieds is guided not only once but always. Error is thus possible, but is gradually reduced. (Trevarthen 1989; 2001) On the other hand, this does not mean that the activation of signifiers by iconic signs need be identical in similar speech situations; rather, it only has to be sufficiently similar to guarantee the social functioning of linguistic communication. Thus no two persons of a culture are likely ever to perform identical meaning operations; sufficient overlap is what

has to be stipulated. Differences in gender, class, age groups and professions, as well as ‘semantic drift’, neologisms, intellectual capacity and other factors all qualify as social constraints, as much as they are subject to them.

Nonetheless, communication rests on members of a speech community making recognisably similar kinds of connections between signifiers and signifieds. They do so on the reciprocal assumption that normally no crassly deviant associations are being formed, an assumption that is supported on the whole by linguistic practice. The relative freedom of experimental poetry only underlines rather than questions this observation. The ‘reality check’ which every speech community employs to guarantee a reasonable alignment between speech and perceptual reality can be called sufficient semiosis. (Ruthrof 1997: 48f.; 2000:140-150) Sufficient semiosis replaces truth-conditions by providing a negotiatory monitoring practice. Speech partners decide whether enough interpretation has occurred, whether there is sufficient promise of mutual understanding to continue a linguistic exchange, or whether it is advisable to terminate the exchange as fruitless. In this practice the question of whether something is the case or not does indeed occur, but has no effect on the problematic of meaning. Simply put: meaning precedes truth. Having said this, there is yet another level of constraint which affects all cultures: the deep constraints of the universe that every culture interested in survival has articulated. No pragmatics can ultimately avoid this metaphysical side of language. The preferred metaphysic of corporeal pragmatics could be described as an autopoietic, inferential realism. This suggests that human beings are organisms that bump into the world in such a way that their nonverbal and, over the last million years or so, also their linguistic responses, optimise survival. The way the human organism respects the deep constraints of the universe is by inferential response. Humans have learnt how to read those constraints as reflected in, or ‘shining through’, their own signifying practices, verbal as well as nonverbal. This is fundamental to the *Vorstellungswelt* of the most diverse cultures.

Vorstellung, though, has for some time had a very bad press in linguistics and language philosophy outside phenomenology and Peircean semiotics. Especially under the onslaught of theories of mental states as ‘propositional attitudes’, *Vorstellung* has widely given way to calculus thinking. And yet, *Vorstellung* as a spectrum of mental performance stretching from the most realist reconstructions of daily experience to the wildest fantasies demonstrably plays a vital role in linguistic practice. Again, it is cognitive research and such non-propositional notions as ‘cognitive maps’ (Finke 1989), ‘mapping’ (Fauconnier 1997) and ‘conceptual blending’ (Fauconnier and Turner 2002; Hutchins 2005) that have reopened the path to the question of what precisely this role could be. In the speculative programme of corporeal pragmatics, *Vorstellung* is foundational. In a *semantics of imaginability*, it finds its full justification. An embarrassment to post-Saussurean linguists and post-Fregean philosophers alike, the prominence of *Vorstellung* in natural language is difficult to deny. This is certainly so to the degree to which language draws on, reflects, and expresses typical mental activities. Perceptual modification functions as the *Vorstellung* of the actual (what we actually taste, smell, touch); in realist representation as the *Vorstellung* of the absent; in memory as the *Vorstellung* of the past (e.g. a painful emotion); in prediction as the *Vorstellung* of the future; in suggestion as the *Vorstellung* of the tentative; in certitude as the *Vorstellung* of what seems compelling; in hope as the *Vorstellung* of what we wish will be the case; in fantasy as the *Vorstellung* of the possible and impossible; in dream as the *Vorstellung* of the unconscious; in nightmares the *Vorstellung* of what is emotionally disturbing and unbearable; in hallucination as the *Vorstellung* of the counter-factual; in utopia as the *Vorstellung* of a desirable world; or in dystopia as the *Vorstellung* of a catastrophic world. (Ruthrof 2005) To the extent to which these activities are communicated verbally, *Vorstellung* is an indispensable, quasi-perceptual ingredient of natural language. It is the engine which puts at our disposal a vast repertoire of nonverbal signs for linguistic activation. To drive home the point of the centrality of *Vorstellung* as perceptual modification in language and its description in corporeal pragmatics one could

characterise language as being no more or less than *a set of social instructions for imagining, and acting in, a world.*

This, then, is at the heart of a *semantics of imaginability*: if you can understand what I am talking about, there is meaning; if not, there is not. Now *imaginability* is at the forefront of the description of natural language. How can we justify this in opposition to formal, syntactic, and externalist accounts? In the formal domain, there is nothing to be imagined, except the signifiers themselves in their syntactically defined relations. There is no *aboutness*. Yet *aboutness* is the soul of language. Not reference, nor syntax. We must be able to project a likely mental scenario in response to a sequence of word sounds. If we fail to do so, we do not *ascend* from phonetics and syntax to *semantics*. But why not stay with the relation between the word sounds and the perceptual world? The main reason for abandoning an *externalist* and purely *public* explanation is the reality natural language deals with is in very large measure *imagined* rather than seen, touched, and smelled. Linguistic meaning is largely about *absent* things, our absent friends, our distant and not so distant memories, possible situations, and future scenarios. And even the written instructions a MIG welder has in front of her, next to two pieces of aluminium to be connected by a ‘continuous weld’ would not mean if she did not have the ability to *imagine* what the procedure to be followed were all about and what the finished product would have to look like. *Imaginability* overrides even the most concrete relations between language and world. As such, imaginability functions as a summary term comprising all our perceptual modalities of olfaction, gustation, touch, sight, thermal, and gravitational sensations, as well as emotional nuances, which we have at our disposal for interpretation. As *imaginability*, these modalities cannot of course function in the same manner as they do in perception proper. They must be available instantaneously and in some abbreviated form. As we shall see in Lecture 7, this requires an answer to the question of what kind of abstraction we are dealing with when it comes to *Vorstellung*. To anticipate, *Vorstellung* must be saliently different from perception. I will argue this difference by way of *iconic schematization*.

As a consequence of the centrality of *Vorstellung* as mental modification of perception in a *semantics of imaginability*, a number of concepts central to natural language semantics will have to be revisited and re-defined. They include the Saussurean linguistic sign and in particular the *motivated signified*; the concept as social regulation of mental iconic content according to directionality, quality, quantity; degree of schematization; three kinds of concepts; meaning as aboutness and as *indirectly public*; and such applications of meaning as reference, as well as *implicit deixis*. This will be the task of Lecture 4.

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SemioticonRuthrofLecture4

Lecture 4: Re-definitions

Ce n'est pas la mer à boire

Introduction: the linguistic sign

The *semantics of imaginability* as outlined in the last lecture would be incomplete without a thoroughgoing reassessment and, consequently, a re-definition of a number of terms and concepts at the heart of natural language. For a summary overview of this theorization of natural language I refer the reader to ‘Semantics of Imaginability – *Vorstellungsemantik*: 13 Theses. (Ruthrof 2011) Foremost among the terms to be revisited is the Saussurean notion of the linguistic sign, which has to be seriously modified to do its job in a theory of meaning in which *Vorstellung* plays a prominent role. In contrast to Saussure’s radical arbitrariness of the linguistic sign, the *linguistic sign* is argued here to be made up of an *unmotivated (arbitrary, conventional) verbal signifier and a motivated (non-arbitrary) nonverbal signified*. In this revised form, the *signifier* remains the same as in Saussure, except that its arbitrariness is now understood as the result of a long history of ‘iconic disembodiment’. (Ruthrof 2000: 85-97) The *signified*, however, requires substantial renovation. It now consists of two elements, a regulative concept and a cluster of quasi-perceptual, iconic materials, whereby the concept acts as a social rule which circumscribes what kind of nonverbal materials are to be activated for each contextually located signifier and how they are to be employed. Meaning occurs when signifiers are activated by signifieds. In habitual meaning performance, the process of activation happens at synaptic speed; in consciously interpretive meaning events we tend to survey a number of possible signifieds before completing the meaning event or fail to proceed to meaning altogether. The linguistic sign then is a *semiotic hybrid*, part verbal and conventional and part nonverbal and motivated. It is a compound entity made up of an ‘arbitrary’ component and conceptually regulated iconic materials activated in *Vorstellung*. Such materials are available to us in terms of heterosemiotic, nonverbal

realizations, such as olfactory, auditory, kinetic, proximic, thermal, tactile, gustatory, visual and other ‘readings’ of the world.

The motivated signified

Saussure’s signified which, though described as *idée* and *concept*, is declared in the *Cours* as *arbitrary* by virtue of being a component of the *arbitrary* linguistic sign. In the *semantics of imaginability* the signified has to be argued to be *motivated*. This is the most important, though by no means the only, difference to the Saussurean scheme. As such, the *motivated signified* is defined as consisting of two components, *nonverbal, iconic mental materials* on the one hand and, on the other, *a regulatory concept*. In this definition, the signified is a homogenizing unit combining a quasi-perceptual content and its formal regulation. What is being so homogenized are the *heterosemiotic, iconic* mental materials that together constitute our imaginative stock of perceptual modalities. This stock of imaginable entities, contrary to perceptual reality, is both quantitatively and qualitatively superior to its perceptual ground. Accordingly, any percept can be varied *imaginatively* as much and as long as we please; theoretically, *ad infinitum*. This amounts to a transformation of heterosemiotic contents into *intersemiotic* compatibility, a transformation made possible, I suggest, by their neurally steered conceptual regulation, to be specified a little later. As such, the signified faces the threat of *semantic privacy*, a charge I will meet by arguing for linguistic meaning to be *indirectly public*. I will address this issue in some detail in Lectures 6 and 8. Having so redefined the signified as motivated and as a combination of iconic materials and regulative concepts, we need to specify what is meant by iconic mental materials.

Iconic mental materials

The quasi-perceptual ingredients of the signified can be analysed as *nonverbal, iconic resemblance relations*, all imaginative variants of percepts and non-linguistically conceptualized perceptions. The kinds of readings collected under the heading of

iconicity comprise all the resemblance relations necessary for the translation of general semiosis into semiotic units able to generate comprehension of the perceptual world prior to, outside, as well as inside language. Language is thus understood as *conceptual refinement*. Iconicity, though, is extended beyond the Peircean definition to subsume *indexicality* as a reading of indirect resemblance relations. Contrary to *symbolic* semiosis, which is entirely conventional, both Peirce's icon and index retain links with perceptual reality, the former directly, the latter indirectly so. This only consolidates the Peircean rule, fundamental to the *semantics of imaginability*, that human-scale grasp is irrevocably *iconic*. Without the transformation of information (electro-magnetic radiation, pressure, molecules) into iconic readings there is no human scale comprehension. The range of iconic signs can be characterised as follows. *Iconic signs typically regulated by concepts in the linguistic sign are olfactory, gustatory, aural, kinetic, proximic, thermal, gravitational, haptic (internal), tactile (external), emotional, somatic, visual and other nonverbal readings of the world, including ourselves. With this characterization of the content of the motivated signified we can now address the nature and function of the concept in corporeal pragmatics.*

The regulatory concept

Unlike perceptual concepts, which prior to language we shared with non-linguaging 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 delimitation of an object or a relation; *quantity*, or the amount of iconic mental materials that suffices for identification; and the *degree of schematization* to which the mental materials are to be abstracted in any given context. In light of this assemblage the concept can be defined as a *social, directional rule which determines the kind and quantity of*

nonverbal, quasi-perceptual materials to be activated in the constitution of the linguistic sign, as well as the degree of schematisation to which those materials are to be transformed. Here the question arises how such a complex process can occur at such high speeds in such short spans of time as the event of comprehension which, according to some neural research estimates to be in the order of >250ms for the semantic uptake of short expressions. I will attempt an answer to this question in Lecture 6.

Types of concepts

Natural kind concepts (water, cat, run, tall) cannot of course stand in for all concepts available in language. Nevertheless, they demonstrate that there is a broad base of agreement at the level of the *motivated signified* amongst natural languages. The signifiers ‘nose’, ‘bize’, ‘Nase’, ‘nez’ in English, Chinese, German, and French all produce in the various native speakers *sufficiently similar* signifieds. They are biologically *motivated*. Physiognomy here fundamentally constrains what can and is *imagined* no matter how profound the cultural differences. Although this situation gets increasingly more complicated as we climb the hierarchy towards more and more culturally specific terms, the linguistic basis in *human, social corporeality* never fades completely. The following tripartition of concepts, then, may help distinguish the work perception concepts and their imaginative variants do inside the motivated signified. Because of their relative vagueness I have termed such regulative schemata *soft-core concepts* (1). The term *soft-core concept*, I suggest, appropriately characterizes the vast bulk of natural language signifieds. (Cf. CP 5.251) Their ‘bull’s-eye’ character within horizons of diminishing semantic relevance (Russell 1923) accounts for historical semantic drift and the shifting conceptuality of natural language terms as an effect of differences of class, gender, as well as religious, political or ideological leanings. When we are dealing with philosophical and other theoretical concepts, such as ‘*Seinsvergessenheit*’, ‘*differend*’, ‘dualism’, ‘metaphysics’, ‘*Anschauung*’, and so on, the term *soft-edged concepts* (2) may prove useful. Although they can be presented in the

context of definitional descriptions, such descriptions remain open to interpretation; hence the metaphor of a soft, definitionally permeable boundary. The most abstract of concepts and all fully formalized concepts we could call *hard-edged concepts* (3) on the grounds that they are governed by axiomatic constraints, definition, and strictly circumscribed syntactic rules, and so 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. In the simplest case, as in the formula $x = y^2$, we are dealing with a set of calculus relations in which the value of each term is determined by fixed syntactic relations.

To return to *soft-core concepts*, their first regulatory function was identified as *directional*. The concept is regulative in the sense that it directs our attention in a certain way. The signifier 'ascorbic acid' can represent two different kinds of signs, one by being associated with a chemical formula in the hard-core concept, evoking its formal relation in a system of chemical substances, or by being activated by olfactory, iconic memories, expressible as 'lemon-like' or 'strongly astringent' in the linguistic sign. This second form, the term's iconic activation could be called a signified in the sense of 'knowledge of acquaintance'. In this case, the soft-core concept is directional in several ways, by directing our *Vorstellung* towards an iconic, olfactory sign cluster, 'lemon-like taste', as well as towards the quality and quantity of memory required for quasi-perceptual schematisation. Yet the iconic content regulated by concepts in terms of *kind or quality* is by no means in itself suitable for the smooth integration into a uniform signified. Iconic materials are distinguishable by the kind of biological, perceptual heritage they carry, depending on which of our senses they translate into semiotic units. In other words, the character of different iconic contents reflects the differences between our neurologically distinguishable perceptual realisations. Olfactory materials, for example, are fundamentally heterogeneous if compared with visual signification. Likewise, aural readings, or what we hear, are heterogeneous if compared with gustatory signs, such as

specific taste recognitions. This amounts to a semiotic picture of the production of an overall intersemiotic iconic representation by the assembly of *heterosemiotic* ingredients. Accordingly, we can specify the regulatory task of concepts further. *Concepts regulate heterosemiotic iconic materials into intersemiotic schematizations.* This regulatory function of heterosemiotic materials by the concept becomes visible in meaning events when the signifiers require activation by iconic content that belongs to perceptual domains normally regarded as incommensurable, as is the case typically in metaphor. As we shall argue below, in metaphor the meaning event is retarded as a result of the non-linguistic, quasi-perceptual interpretive labour required before the heterosemiotic ingredients can be assembled under a compatible series of signifieds. In contrast, in habitual speech, the heterosemiotic aspects regulated by concepts under the umbrella of the signified are concealed by *conceptual homogenization* at high speed.

Having addressed the *kind* of mental materials regulated by concepts, we also need to say something about the *quantity* of iconic mental materials so governed. The quantity of iconic content limited by the concept of a signified can be described as a function of meaning negotiation in social context. As such, *the quantity of iconic materials regulated by concepts is a function of sufficient semiosis. In habitual speech, sufficient semiosis is automated and minimal and so the quantity of materials required is likewise made available 'in a flash'. In interpretive use and problematic meaning negotiation, quantity increases as communication requires if each case.*

Lastly, the regulatory functions of the concept also include the *degree of schematisation* to which mental material iconic contents are to be transformed. This, we have argued, occurs along the axes of specificity/generality and materialisation/formalisation which intersect one another. The degree of schematization is at the heart of the question of how we can reconcile perception and natural language. In the scenario sketched here, the relation between the two varies according to the kind and degree of schematisation of quasi-perceptual materials effected in the linguistic sign as a result of the regulatory work performed by the concept. Depending on the degree of generality and formalisation, we

can distinguish concepts according to whether they are *hard-edged*, *soft-edged*, or *soft-core*. Hard-edged concepts are formal concepts in which deixis and reference are reduced to zero. They also include numerical concepts which still display traces of social iconicity (counting). Soft-edged concepts comprise all theoretical concepts governed by definitional descriptions; they have deixis (theoretical perspective) and reference (the kind of world to which they apply), that is, they display *curtailed iconicity*. The bulk of natural languages is made up of soft-core concepts which organise iconic materials according to Russell's principle of 'vagueness'. (Russell 1923) This, I suggest, applies uncontroversially to such signifiers as 'house', 'home', 'family', 'tree', 'love', 'freedom'; 'run', 'dance'; 'smile'; 'pretty', 'pernicious', 'pompous' and thousands of other terms. But even more abstract and linguistically generated signifiers of a natural language such as 'family court' are meaningful only when they are activated by a signified consisting of a concept regulating a cluster of iconic materials such as legal persons, the need to protect of children, the physical location of a court, a series of forms, signatures, the occurrence of verbal clarifications and declarations, the fact of legal language, and interaction between parents. I distinguish these as *mental materials* from their conceptualized form in their own *signifieds* on the grounds that here they are mere indications of what is needed for comprehension. Here, the imagined juridical discourse does not primarily function as a series of linguistic signs but rather as a cluster of iconic realisations, a mental reconstruction of physical documents rather than combinations of signifiers and signifieds. The notion of *schematization* is crucial to a *semantics of imaginability* and deserves special treatment, something I will attempt in Lecture 7. All four functions of the concept regulating the motivated signified are typically performed by speakers of a language under the monitoring effects of a semiotic community, to be discussed in detail under the term *sufficient semiosis* in Lecture 8.

Imaginability

Since our perceptual contact with the actual world is quantitatively as well as qualitatively dwarfed by its mental transformations, summed up under *Vorstellung*, that is,

what we are able to imagine or simply *imaginability*, it would be wrong to insist that the typical way we understand language is direct, via perception. Though perception remains the deep ground for all everything imaginable, what is immediately available in the process of meaning making are mental variants of perception rather than perception itself. Observation sentences and language use in technical practice at first blush look like exceptions to this claim. On closer inspection it would seem that *imaginability* intervenes even in practical circumstances, both in interpretively problematic contexts and in all cases ruled by where *habituality*. To reiterate, then, imaginability is a *sine qua non* of linguistic meaning. Only if I can imagine what you are talking about, is there *semantic ascent*.

Linguistic meaning

Turning now to the highly contested notion of linguistic meaning itself, 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 here. 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), as reference (Frege’s *Bedeutung* vs. *Sinn*), as iconic interpretant (Peirce), an effect of differential syntactic relations (Saussure), reference (Russell), eidos (Husserl), typification (Schutz), use (Wittgenstein), interpretation (Heidegger), definite ideality (Cassirer), a constant amongst diverging intentional objects (Carnap), tacit agreement (Polanyi), as synonymy in analytic contexts and approximation in ‘domestic’ meanings (Quine); an effect of non-linguistic contextual relations (Bateson), as link between language and world (Devitt and Sterelny), enunciatively modalised ‘statement’ (Foucault), 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; Davidson), a result of mutual perspective-taking (Habermas), discursive injustice (Lyotard), and as simulacrum (Baudrillard).

Some of the positions summed up above run with the assumption of meaning identity in the sense of strict synonymy, a notion borrowed from formal signs systems. On closer scrutiny it turns out that synonymy in natural language at best plays a very minor role. Hardly any of the bulk of the left and right entries in dictionaries meet any precise criteria for synonymy. This is why Quine convincingly argues that we should give up on synonymy as meaning identity in ordinary or ‘domestic’ language use. (Quine 1993: 53-59) He saw no way that the notion of identity could serve a useful purpose in the description of natural language. In this, Quine is supported by Hilary Putnam to the extent that ‘there is no criterion for sameness of meaning except actual interpretive practice’. (Putnam 1988: xiii) Meanings as they are generated in ‘practice’ may indeed have some sort of ‘identity though time’, Putnam concedes, ‘but no essence’. (Putnam 1988:11) Certainly, in a *semantics of imaginability*, any strict notion of synonymy is an unlikely candidate for a comprehensive theorisation of meaning. In light of these remarks and in contrast with the rough summary of positions in semantics listed above, the notion of meaning in a *semantics of imaginability* can now be redefined thus. *Linguistic meaning as aboutness is the event of the activation of an empty, verbal expression (linguistic signifier) by a motivated signified made up a cluster of iconic readings regulated by the concept in terms of directionality, kind, quantity, and degree of schematization, under community guidance.*

Reference

Since meaning has been abbreviated as *aboutness*, reference has to be regarded as one of its possible *applications*. It follows that the event of meaning must precede reference; without *aboutness* we cannot use an expression in a *referring manner*. Meaning, then, is logically as well as chronologically prior to reference. Whereas reference requires

meaning, meaning does not necessitate reference. The difference lies in the use of the directional nature of the linguistic sign. In the act of referring, we are pointing beyond the general deictic background of language to a specific object which we must have identified at the same time by a nonverbal process. Apart from linguistic self-reference, then, reference is always an intersemiotic dynamic between different sign systems, with one, that is language, pointing towards another, that is, a non-verbal cluster of signs. From a very different perspective, Quine argued neatly that the two domains of meaning and reference are ‘fundamentally distinct’, the former having to do with sameness of meaning, possession of meaning and truth by virtue of meaning, the latter with naming, truth, denotation and extension. (Quine 1963: 130) Quine, though, could not go along with the kind of overall picture advocated here.

As with the description of linguistic meaning, from the angle of corporeality and *imaginability* the revision of reference yields a notion that is quite different from those available in the various traditions. Again I start with a very 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), baptism 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). In contrast, in a *semantics of imaginability* reference can now be redefined as *the linguistic designation of a specific, intersemiotically and heterosemiotically, nonverbally overdetermined object*. I will resume my non-Fregean description of reference once more and briefly in Lecture 5 under the heading of *heterosemiosis*.

Implicit Deixis

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 anaphoric 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’ in the popular sense 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 training. Beyond culturally programmed deixis, there still remains the *general manner of speaking* linguistic expression by which speakers of a language are able to modalize meanings to fine-grained nuances. As argued earlier, literal meaning, as a stipulated limiting case, and ironic speech, as the reversal of propositional content by speech modality, are only the remote polarities between which a myriad of nuanced inflections produce *actual meanings*.

Without the activation of signifiers by quasi-perceptual, iconic materials under conceptual constraints in *Vorstellung*, 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 instructions for imagining, and acting in, a world’ is borne out. Without playing with various quasi-perceptual scenarios in *Vorstellung* nuanced meaning results could not be produced.

Metaphor

Next I redefine 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.

Verbal metaphor can now be redefined as *a linguistic expression coding heterosemiotic iconic mental materials which require four kinds of transformation to produce meaning*: (1) a transformation of the linguistic signs into quasi-perceptual *Vorstellung*; (2) the differentiation of the heterogeneous element of the mental projection into its heterogeneous components and their distinct mental realization; (3) the intersemiotic mixing of the heterosemiotic elements; and (4) the transformation of (3) into an explanatory paraphrase or the verbal repetition of the metaphor from the new perspective gained in (1), (2), and (3). As such, metaphor is one way by which natural language reveals its character of *semiotic hybrid*.

Linguistic Performance

If we extend the revised notion of linguistic meaning and associated notions to the level of general language use, we can say that *linguistic performance is the culture sanctioned way in which schematized, nonverbal iconic materials are associated with linguistic signifiers for the purpose of meaning*. When meaning occurs, language functions as an invitation to the language user to *imagine* a portion of the world. *Vorstellung* is the

domain where this invitation can be accepted and acted upon. Likewise, physical action in response to language presupposes *Vorstellung*, that is, the forum for mental states. In habitual and automated language use, the speed of the performance of the meaning act conceals that process. The event of meaning is normally framed, as well as monitored, by cultural constraints which speakers of a language have internalised as rules for acceptable linguistic performance. The cultural monitoring of linguistic performance follows the principle of *sufficient semiosis* rather than those of truth-conditions. Linguistic innovation and deviance are the stochastic elements by which natural language constantly renews itself. In this way, language both reflects and constitutes new perceptual worlds. I conclude, then, by repeating the definition of natural language as it follows from the tenets of a *semantics of imaginability*. Language is *a set of social instructions for imagining, and acting in, a world*.

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SemioticonRuthrofLecture5

Lecture 5: The Heterosemiotic Character of Natural Language

A couple of meat pies
short of a grand final ...

Introduction

Language is often called a ‘symbolic system’. However, this is so only if we refer to signifiers on their own, which would be a deficient characterization of ‘language’. If we understand the term ‘symbolic’ strictly in the Peircean sense, as we should in order to avoid confusion, we would be treating natural language as if it were well characterized by a formula such as $x = y^2$. But is it? I think not. Like with any term in any calculus, the semantic value of ‘x’ (if we want to describe its formal sense in this manner) is fully determined by its syntactic relation with ‘y’, such that ‘x’ is equal to ‘y’ multiplied by itself. Without further specifying what is going on in the sign systems of calculus, we can rest assured there is no more to be specified to secure the semantic value of ‘x’. If this is indeed the case, then we cannot but notice that the semantic values of Frege’s ‘*Morgenstern*’ and ‘*Abendstern*’ require quite a bit more than their syntactic relationship between themselves as signifiers and their referent ‘*Venus*’. For without an acquaintance, either actual or merely imagined, with typical mornings, typical evenings, bright lights in the sky, and so on, we would not be able to proceed from hearing (or imagining while reading) the word sounds in any linguistic context to their standard meaning. *Semantic ascent* from word sounds combined in syntactically ordered strings (phrases, sentences) would not occur.

So it is the more surprising that we should find right at the beginning of Frege’s seminal paper *Sinn und Bedeutung* of 1892 an untheorized conflation of formal, geometrical sense with the sense of natural language terms, a philosophical move with consequences of the utmost importance. While the entire literature has focussed on his famous distinction between sense (*Sinn*) and reference (*Bedeutung*), Frege’s initial equivocation has barely

raised an eyebrow. Nor has it caused any ripples in the philosophical debate about language that later in the same paper Frege carefully mopped up something that had not been addressed in his opening moves. He realized that in ordinary use native speakers entertain certain *Vorstellungen* which typically accompany linguistic performance. As part of a general tendency that came to be known as the removal of *psychologism* from a scientific description of language, Frege now eliminated nonverbal *Vorstellung* from natural language sense. He did so on the grounds that any one person's *Vorstellung* was 'subjective' and so could not meet the criterion of the purity of 'sense' as 'thought' which ought to be 'the property of many' (Frege 1970: 59) In this way Frege achieved among other things that (1) natural language terms and their concepts could be treated as univocally definable; (2) natural language could be aligned without contradiction with applied formal systems, such as applying a measuring tape to actual phenomena; and (3) natural language could be regarded as a *homosemiotic* as well as *monosemiotic sign system*, that is, a sign system made up of only one and the same kind of signs.

In a parallel move, Ferdinand de Saussure, by playing down *Vorstellung* as a component of the signified, by declaring it as arbitrary along with the signifier, and by decreeing that semantic value was the effect alone of differential relations amongst terms, likewise cleansed the description of language of its contamination by *psychologism*. The founder of modern linguistics further strengthened this line of thinking by insisting that without language we would live in a 'nebulous' world. (Saussure 2005: 155; Ruthrof 2010) The combined force of Frege's and Saussure's intervention in the history of semantics can to this day be felt in our dominant theories of natural language in the sense that the relation between language and world has been reduced largely to one between a heterogeneous set of phenomena and a homogeneous representational system. As a result, all the traces of the perceptual and gestural precursors of language, which I am suggesting have survived *in* language, have been eliminated for our descriptions. Had the history of semantics favoured Locke, Kant, phenomenology, and especially the semiotics of Peirce, the theory of linguistic meaning would look very different. As it turned out, however,

such alternatives were overpowered by what is now standard, analytical philosophy of language and post-Saussurean linguistics. So it should not come as a surprise that what is now missing in our conception of natural language is its fundamentally *heterosemiotic* character. My aim in this Lecture is challenge the psychological cleansing which resulted from both Saussure's and Frege's theoretical contributions and which to this day powerfully hold sway across a large palette of approaches spawned by the two founding fathers of modern language studies.

Heterosemiosis in natural language

Given these introductory remarks, I propose the hypothesis that **natural language is a *heterosemiotic hybrid***. An earlier version of this position can be found in *The Body in Language*. (Cf. Chapter 6: Sign Conflict: Meaning as Heterosemiotic, pp. 72-84.) Unlike the semiotic systems employed in metric or imperial tape measures, which are formal, definitionally secured, and as such both *homosemiotic* and *monosemiotic*, natural language is made up of different semiotic systems. Here we are dealing with a symbolic signs in the form of arbitrary *signifiers* which, together, form a coherent even if gradually changing system of semiotic entities of the same kind, namely conventional sounds. But by themselves *signifiers* do not *mean*; they only do so in conventional agreement with *motivated signifieds*, a set of semiotic entities of an entirely different kind (1).

Furthermore, *signifieds* not only have a material side, that is, iconic content in the sense as part of *aboutness*, they also have a formal side, their regulatory character of conceptuality. On the material side, such heterogeneous iconic information as pressure, radiation, molecules, and soundwaves (2) is in need of conceptualization once more in heterogeneous terms, such as *directionality* (look here, not there), *quality* (kind), *quantity* (sufficient amount), and *degree of schematization* (appropriate abstraction) (3). Fourthly, we need to address the question how the native speaker acquires mastery of the linguistic sign. What is at stake here is the way the semiotic community as speech community teaches individuals how to link word sounds and their conventional syntactic combinations with the perceptual world via *imagined scenarios*, that is, *imaginability*.(4)

In this social interaction, the *heterosemiotic* nature of language shows itself as a pedagogically driven linkage of observable or *public* signifiers (sounds, written linguistic expressions) and mental events under public control, or *indirectly public signifieds*. Beyond the description of the heterosemiotic character of the linguistic sign we should also revisit *reference* (5) from the viewpoint of the interacting sign systems that are at work here. This leads to the analysis of the following five ways by which *heterosemiosis* reveals itself in natural language.

Linguistic heterosemiosis 1

Let '*Kron snov mire novtynie sabvon*' be a well-formed sentence in a natural language, which we will call *Vok*. Imagine further that its pronunciation roughly follows international phonetic transcription such that the word sounds pose no difficulty to the uninitiated. We then have a syntactic string of *signifiers* which we are able to deal with in such a way that if we speak the sentence it would be understood 'in a flash' by any speaker of *Vok*. However the *public* face of *Vok* is an insufficient, though of course necessary, condition of linguistic meaning for the uninitiated. We are unable to achieve *semantic ascent*. (Quine 1993:81) This situation reveals the first stage of the *heterosemiotic* character of natural language. In order to rise from the level of syntactically ordered signifiers to meaning, we must be able to associate the *signifiers* of *Vok* with its *signifieds*, two semiotically heterogeneous sets of entities. The former are require sound wave of certain magnitudes, the latter are mental events, imagined scenarios, or mental projections of possible states of affairs, that is quasi-perceptual *iconic* representations abstracted to an appropriate degree. Suffice it here to emphasize that as such *arbitrary, symbolic linguistic signifiers* and *motivated, mental signifieds* belong to distinct *heterosemiotic* domains. Only once we have been taught to transform the semiotic string of '*Kron snov mire novtynie sabvon*' into the entirely different semiotic sequence of appropriate *signifieds* can *semantic ascent* be accomplished. Only then will the event of linguistic meaning have occurred.

Linguistic heterosemiosis 2

Having taken the first heterosemiotic hurdle of natural language, the semiotically radical distinction between signifiers and signifieds, we are now in a position to turn to the character of the *motivated signified* itself. As I will try to show, it is precisely what makes the signified *motivated* (in sharp contrast to Saussure's subsumption of the signified as an arbitrary component of the arbitrary linguistic sign as a whole) that is responsible for its internal semiotic heterogeneity. For not only is the signified *heterosemiotic* vis-à-vis the signifier; it is also *heterosemiotic* with respect to its very make-up. As Derrida might say, the *signified* 'differs from itself'. (Derrida 1973: 129) The fairly obvious reason why this is so is that on the material side of the signified, we find such ingredients as olfactory, gustatory, tactile, emotional, thermal, gravitational, visual and aural 'contents' competing with one another for homogenization in any meaning event. While olfactory and gustatory readings of the world are neural transformations of molecular information, tactile and gravitational readings draw on pressure on the organism, visual and thermal readings are responses to radiation, emotional realizations are readings of internal sensations and their mental variations, and aural readings require sound waves, by themselves they are a semiotically *incommensurate* series, in short, they are *heterosemiotic* with respect to one another.

Linguistic heterosemiosis 3

As argued in the previous lectures, the *motivated signified* can be thought coherently only if we distinguish its material side, or iconic content, from its regulatory component, the transformation of mere mental materiality into at least the following four orders: a *directional* (1) *quality* (2) of a certain *magnitude* (3) abstracted to a certain *degree of schematization* (4). None of these orders are semiotically homogeneous. The first deals with the phenomenon of *attention*; the second with the *kind* of imagined object the signifiers has pointed us; the third with the *amount* of information about the imagined object, sufficient for comprehension; the fourth with the degree to which the imagined object (state of affairs) needs to be generalized for the meaning event to be able to take

place. The fact that in habitual speech all this occurs at very high speeds (<250ms in the case of brief, standard expressions) is likely to be a consequence of the staggering number of synapses available in the human brain for the processing of perception and language (10^{14}). But this is of no concern in the present Lecture. What is, is before any homogenization of semiotically heterogeneous mental materials and their equally heterogeneous regulatory functions can take place, we are dealing with a fundamental *heterosemiotic* situation at the very heart of the motivated linguistic signified. Yet this is not the end of the heterosemiotic story of natural language. Having explored the internal features of the signified and its neural and mental production, we now turn to the most important question of natural language semantics: the question of how such heterogeneous aspects of language as its mental mechanisms can be reconciled with its public character. In other words, what role does the *heterosemiosis* central to language play an explanation of how *semantic privacy* can be avoided in spite of the necessarily mental features of language in light of its *publicness*.

Linguistic heterosemiosis 4

To get to grips with the problem of steering a course between the rock of *semantic privacy* and the hard place of a purely *externalist* (behaviourist; formal) description negating the indispensable role of *imaginability* in the event of meaning, it will be helpful to sum up the likely ingredients of language that need to be taken into consideration. We have words combined into syntactic strings (lexicon, phonetics, syntax, etc.), language as social action (pragmatics), the perceptual world (*Wahrnehmungswelt*), its imaginative schematic variations (*Vorstellungswelt*; cf. Wittgenstein *PI* §402), native speakers (competence; performance) and the speech community (pedagogy). *Prima facie*, proposing to reconcile the members of such a collection does not promising. After all, they belong to entirely different, even if overlapping spheres, the domain of physical objects, the dynamics of social reality, the world of appearances, the mental sphere of imagination, the bio-social realm of trained individuals, and the institutionalised monitoring mechanism of the social stewardship over language. And yet, it is precisely

this combination of apparently disparate components that is indispensable for an adequate description of what makes natural language what it is. Paradoxically, it is this social assemblage that makes natural language *natural*.

Importantly, we should disabuse ourselves of the assumption that *imaginability* as a human mental capacity, supported massively by neurons far in excess of perceptual needs, can in any way be regarded as an *addendum* to other human capacities. Quite the contrary, I would suggest that it was very probably precisely the asymmetry between the relative paucity of perceptual input cells and the vast array of internal monitoring neurons that, combined with social pressures, was responsible for the emergence of natural language in the first place. If we can run with this speculative claim for a while, and there is increasing neuro-scientific evidence in support of this assumption, it will become obvious that *imaginability* is hardly the sort of thing to be eliminated from a realistic description of language.

I emphasize this point in the face of externalist explanations inclined to argue a direct connection between word and world. (Stainton Given the prominence of the imaginative processing of perceptual reality in the socialized human mind, no such direct link is likely to exist. Even the most practical applications of language to physical reality always already involve the intervention of imaginative alternatives, memory, and habitual projections. Having said this, I now want to shift the focus to the *heterosemiotic* relations amongst our six components. Institutionalized pedagogy in the form of dictionaries, grammar books, collections of idiomatic expressions, teaching manuals, language curricula, kindergartens, schools and universities, novels, theatre, conversations in pubs and restaurants, teachers, parents, and peers, all combine into an inescapable onslaught of what Wittgenstein in the *PI* called *Abrichtung*, a strict form of training. So forceful is this *diffuse pedagogy* that we hardly are aware of its relentless alignment of individuals along specific lines of behaviour. Accordingly, we find ourselves *abgerichtet*, that is, irrevocably and uni-directionally ordered to replicate a prescribed linguistic behaviour.

Hence Gilles Deleuze and Felix Guattari in *a Thousand Plateaus* speak of language as ‘order words’. (Deleuze and Guattari 1987:) Indeed, we are trained to follow those pedagogic instructions non-consciously to the point that we feel we are behaving *naturally*, a signifier that stands in strange contradiction to the term *natural language*. I will have more to say about this topic in Lecture 6 when I address the notion of the ‘linguistic linkage compulsion’ in detail.

But what precisely is it that makes up the constitutive ingredients of this kind of training that produces the *native speaker*? It consists of the combination and imposition of *heterosemiotic* elements. Public signifiers (Peirce’s symbolic representamens) are repeated in association with reference to states of affairs in the world (Peirce’s objects) which, however can be grasped only by a transformation of individual percepts into memorable, imaginative generalizations (Peirce’s iconic and hypoiconic interpretants), all three of which are *heterosemiotic* with respect to each other. The important social result of this pedagogy of linguistic homogenization is that what is commonly viewed as *private* (Locke’s private ideas) is transformed not into *public* interpretants, since signifieds cannot be observed and shown in social reality, but into *indirectly public* entities controlled and continuously monitored by directing and re-directing the speaker’s outward and so observable linguistic behaviour. This however never makes *signifieds* public; they remain obscured from public scrutiny as *indirectly public* events. Attempts of a large sweep of natural language semantics to deny this relation have failed in the face of what actually occurs when we constitute linguistic meanings. Natural language is neither like a formal system, such as chess, nor like an applied formal system, such as a measuring tape. The *semantics of imaginability* is a so far rudimentary project aimed at rectifying that bias by foregrounding the fundamentally heterosemiotic nature of natural language.

Linguistic heterosemiosis 5

When Frege defined *reference* as *Bedeutung* (meaning) to which the pure, definitionally governed ‘thought’ of *Sinn* (sense) point us, he was talking strictly about a *realist* relation between language and world, such that linguistic expressions operate within a binary form of logic of truth values of true and false. If true, the relation can be demonstrated by evidence in the world; if false, the relation fails the test. This resumes Aristotle’s description of language predication from the point of view of the kinds of propositions it permits us to form, propositions about what is and propositions of what is not. Yet this was only one branch of the Aristotelian explanation, the other being Aristotle’s emphasis on *homoiomata* or resemblance relations carried and conveyed by language. Locke, Kant, the later Husserl, Peirce, Ingarden, Schutz and the *semantics of imaginability* follow Aristotle’s second emphasis. The Fregean approach was resumed by Russell in ‘On Denoting’ (1905), critiqued famously by Strawson in ‘On Referring’ (1950), and refined by Gareth Evans (1982), which remains the dominant tradition. In Russell, Frege’s *Sinn* becomes meaning, with reference remaining the criterion by which to decide on the truth or falsity of a sentence. If there is reference, the sentence has meaning; if not, not. Neatly argued and forceful as it is, this tradition has the disadvantage of discarding a vast bulk of language use as irrelevant to the description of natural language, notably the language use of the entire historically stored literature of the world, arguably the most comprehensive language laboratory at our disposal.

A broadly semiotic approach in the spirit of Peirce’s writings permits a more generous and, I believe, more appropriate description of reference. For one, it invites us to cast our analytical net wide enough to capture *all* forms of natural language. It also permits us to see that reference is an application rather than part of the ‘inside’ of language, as in the Saussurean paradigm. From the perspective of the *semantics of imaginability* we have already drawn the crucial distinction between *reference* and *aboutness*, the former being a possible consequence of the latter, the latter being a necessary precondition of the former. From the angle of linguistic *heterosemiosis* we can draw the following additional distinctions. (1) There is linguistic self-reference, linguistic expressions referring to other

chains of signifiers, a relation between two entities of the same semiotic kind. In this sense, reference is *intersemiotic* as well as *homo- and monosemiotic*: two or more semiotic entities are being related to one another, while they belong to one and the same semiotic system, linguistic signs. (2) In contrast, *reference* of the kind theorized from Frege to Evans is *intersemiotic* and *heterosemiotic* in the sense that it links two semiotic systems but systems that belong to distinct semiotic domains, the *signifying chain* being part of the a linguistic sign system, the *referent* belonging to nonverbal semiotic domains, such physical objects, social states of affairs, human emotions. (3) Instead of having to restrict *reference* to realist relations between language and world, as in Frege's Venus being the referent of *Morgenstern* and *Abendstern*, a broadly semiotic approach also caters for *non-realist reference*, as for example Emma Woodhouse in *Emma*. To argue *fictional reference* what we have to do is to ask what sort of sign systems are required for its establishment. *Realist*, or Fregean *reference* can be 'fixed' by a demonstration of *heterosemiotic overdetermination*, while *fictional reference* is supported by one sign system alone, *linguistic signs*. A similar analysis can be given for visual references in paintings and film, which are likewise semiotically underdetermined. These remarks can be read beyond our discussion here as incidental comments on the kind of reference fixing we find in Kripke, inspired by Wittgenstein's notion of 'baptism'. (*PI* §38)

Reference, like *aboutness*, is comprehended by the native speaker in what look like impossibly brief time spans, an issue that must be regarded as an especially tricky hurdle to take for a *semantics of imaginability*. It is for this reason that I want to dedicate the next Lecture to addressing the high speed event of comprehension in response to the sound of linguistic signifiers and the way we 'encode' *imaginability* in linguistic expressions.

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Lecture 6: The Event of Comprehension and the Linguistic 'Encoding' of *Vorstellung*

Introduction

So far what has been asserted has very much been a rough indication of where a *semantics of imaginability* would take us, in polemical contrast with some of the dominant accounts of natural language. So far what has been dogmatically asserted is that only if (or *iff*) I can imagine what you are talking about then there is *semantic ascent*, that is to say, am I able to rise from the level of phonetics and syntax to linguistic meaning. On hearing (or reading) '*ce n'est pas la mer à boire*' the native French speaker, within the time span of about a quarter of a second, typically grasps the meaning of the phrase. She is able to align the sound sequence with an imagined evaluative stance appropriate to a specific social situation. While the event of comprehension within the parameters of *semantics of imaginability* is much more easily demonstrated by way of phrases such as 'I do like Tudor style houses', it is idiomatic expressions that challenge the theory as to its claims to offering a generally valid explanation of what happens semantically in natural language. This is because many idiomatic expressions do not follow Frege's law of compositionality. Their meanings are not simply the cumulative result of the meanings of their component parts. Whereas an Australian idiom of the form of 'He couldn't hit the bum of a bull with a handful of wheat', just as does the above French example, permits the reconstruction of its overall meaning as a result of the imaginative scenario the various parts of the sentence guide us to project, some idioms are not so transparent. Consider this exchange at a party: 'Where is John?' 'He is driving the big white porcelain truck'. Here we have to invest a good deal more of imaginative, nonverbal reconstruction to 'picture' what is going on, an interpretive process that is stalled for non-native speakers in the case of many of the standard Chinese idioms the comprehension of which requires a good deal of cultural background. An example would be *máng rén mó xiàng*

(The blind men feeling an elephant) indicating fallacious *pars pro toto* reasoning. The native Mandarin speaker has been trained to leap from the sound sequence straight to the comprehension of a specific kind of erroneous behaviour. But even here the imaginative realization of the fumbling blind men is available ‘in a flash’ to the Chinese.

High-speed comprehension

Neuroscience tells us that the time span of comprehension of simple linguistic expressions (words, short phrases) is in the order of <250 milliseconds. (Van Petten et al. 1999) This alone suggests that propositional, sentential, and other transformations of signifier chains into alternative sign sequences is an unlikely explanation of semantic uptake. And this quite apart from the fact that each such transformation would still require a *semantic* rather than merely *syntactic*, at least minimally temporal, resolution. This leaves intact Peirce’s important observation of the infinite chain of signification (taken up famously by Derrida), while yet insisting on points of semantic recognition, Lacan’s *point de capiton*. Perhaps it is not so surprising in this context to remind ourselves of the efficiency of communication achieved on the laptop screen by the introduction of icons in competition with verbal instructions. Icons of course win ‘hands down’ as to speed of semantic uptake. The reason for this, I suggest, is that they do not operate as *percepts* requiring individual interpretive resolution but as *iconic schemata* communicating ‘in a flash’ only its *salient* features. This may permit us to reconcile Peirce’s insistence on iconicity in human communication with the neuro-scientific observations of split-second events of linguistic comprehension. If we run with Peirce’s strong commitment to iconicity in any of the perceptual modalities and their mental variants, such that any ‘method of communicating an idea must depend for its establishment upon use of an icon’, we can argue that the semantics of natural language most likely involves high-speed *iconic schematizations*. (CP 1.158)

While I want to postpone the topic of *schematization* to Lecture 7, I would like here to pursue the question of how the hypothesis of high-speed comprehension via *iconicity*

could be coherently argued. How is it possible for a sentence like ‘Don’t you think Jane was a little too touchy last night?’ to be understood in a ‘flash’, as Wittgenstein would say? (*PI* §§139; 191; 318; 319) And what sort of ‘outward criteria’ could we establish for such an “inner process”? (*PI* §580) Perhaps, Wittgenstein suggests, ‘The lightening-like thought may be connected with the spoken thought as the algebraic formula is with the sequence of numbers which I work out from it’. (*PI* §320) The problem here, one we have already dealt with, is that there is nothing to *imagine* in algebra except syntactic relations. In stark contrast, our sentence cannot be semantically resolved at the level of its syntax. In comprehending the linguistic expression our *imagination* about a portion of our world is indispensable. Linguistic *aboutness* is the cluster of resemblance relations which we cannot but project in order to comprehend the sentence. First there is the formulaic ‘don’t you think’ which directs the addressee to his own ‘picture’ and interpretation of an event. This acts as an ‘illocutionary’ command demanding of the listener to perform a summary judgment about a specific *iconic* content. Second, there is the substantive reconstructive task of projecting the event of ‘last night’ in which an agent ‘Jane’ has to be imagined who, the questioner implies, appeared different in light of her usual behaviour. Third, the ‘perlocutionary’ consequence of the addressee actually forming any judgment or refusing to do so is an optional extra outside the act of comprehension. With or without the addressee compliance, meaning has already taken place. Yet, if this semantic-pragmatic process cannot work along the algebraic lines considered by Wittgenstein, how is something so complex possible to take place in as short time span as neuroscience assures us it does? Before I attempt an answer to this question from the perspective of the *semantics of imaginability* I want to briefly return to Wittgenstein’s solution via his notion of *Abrichtung*.

Abrichtung

The noun *Abrichtung* and its verb forms of *abrichten* and *abgerichtet* play a central role in Wittgenstein’s *PI*, a fact that is concealed by its innocuous English translation of ‘training’. (*PI* §§5f., 86, 157f., 189, 198, 206, 223, 441, 630; PPF 70) To be sure,

Abrichtung is indeed a form of training and Wittgenstein liberally also relates it to education (*Erziehung*). The signifier *Abrichtung* is made up ‘*ab*’ (here ‘along’) and ‘*Richtung*’ (direction), suggestive of a line of soldiers on the parade ground being strictly aligned, star trooper style. The important point to make here is that *Abrichtung* in its traditional German linguistic context is typically employed for the training of animals, such as the training of lions to jump through hoops on fire, the breaking in of horses, as well as military training in boot camps. *Abrichtung* likewise characterizes well what happens in the teaching of mathematics, logic, and the measuring and reasoning processes of sciences. But it would be odd to say that we are *abgerichtet* in schools and universities to interpret T.S. Elliot’s *The Hollow Men*. Is the ability to tell jokes a case of *Abrichtung* in the strict sense the term suggests? Certainly, *something* must have been strictly programmed to enable us to do so. Perhaps Wittgenstein’s choice and consistent use of the term points to a certain biographical bias in his own early education as engineer, mathematician, and logician, all areas in which *Abrichtung* looks like an appropriate description. However, the very turn from the *Tractatus* to the *Philosophical Investigations* and his other later writings would suggest that *Abrichtung* may not have been a term that served this very *Kehre* so well. After all, in the *PI* the basis of his natural language analysis is no longer the ‘crystalline’ purity of Fregean ‘thought’ but the complexity of ‘forms of life’, *Lebensform* and *Lebensformen*, heterosemiotic clusters of nonverbal signs underpinning *language games* (*Sprachspiele*). So one might have expected that he would have interrogated the very vocabulary of description he employed. The fact that he did not do so suggests to me that because of the lightening speed of comprehension of linguistic expressions by native speakers, which he took as an empirical given, he felt confirmed that something like *Abrichtung* rather than meaning negotiation must be at the heart of semantics. And his references to our ability to learn logic and algebraic syntax, certainly supports his choice of vocabulary. However, in light of my criticism of the analogy between algebra and natural language, while supporting Wittgenstein’s metaphor of comprehension occurring ‘in a flash’ I want to offer a somewhat different solution under the heading of ‘iconic speed’.

Iconic speed

We have briefly mentioned the superiority of icons on the laptop screen in terms of efficiency of communication. Icons are able to sum up entire verbal paragraphs in a single sign. The famous line in *Anthony and Cleopatra* of a picture being able to represent ‘a thousand words’ in an instant makes that very point. What needs to be fleshed out is what precisely is being communicated and how iconic communication works as a semiotic mechanism. First, I suggest, to do so we need to clear the cobwebs of the *subjectivity* imagined objects and states of affairs. In other words, we must show why Frege’s elimination of *Vorstellung* from meaning rests on its too rash a dismissal on the grounds of being merely subjective. Frege, I want to say, was rash for too main reasons. One, he was driven to banishing *imaginability* as a semantic ingredient because he demanded *meaning identity*, which he felt was threatened by the vagueness of individual *Vorstellungen*. Yet identity is an illegitimate import into the description of natural language as a criterion and necessary condition. Hardly anything in the practice of natural language fits the criterion of identity. To make it a central demand for linguistic meaning was a historical invention by Frege pursued later in formal semantics from Montague (1970; 1974) to contemporary hyperintensional semantics (Duzi et al. 2010) Husserl too started with identity conviction in his Platonic description of meaning as an ideal entity only to founder on his own later more realistic descriptions of the *Lebenswelt*. (Ruthrof 2012) Importantly, Wittgenstein largely freed himself from the Fregean identity criterion in the *PI* when concedes that while ‘there can’t be any vagueness in logic’, it is a mistake to demand logical ideals for natural language. ‘Where does this ideal come from?’ he asks. ‘It is like a pair of glasses on our nose through which we see whatever we look at. It never occurs to us to take them off.’ (*PI* §§101; 103) Instead, what we should accept as a starting point is the ‘there must be perfect order even in the vaguest sentence.’ (§98)

If identity is a false path to take in the description of language, then one main reason for the Fregean dismissal of *Vorstellung* loses much of its force. Nevertheless, *imaginability*

cannot be so vague as to block communication altogether. As it turns out, mental images and their variants in other perceptual modalities such as olfactory and gustatory readings are by far less subjective than is often assumed. Within one and the same culture they share a striking resemblance with one another. Take for instance the images we typically entertain on the cue of ‘laptop’, ‘drone’, etc. are so similar to one another that their alleged variance can be said to be negligible. The mistake in emphasizing subjective difference rests in part on a fundamental misunderstanding. Mental projections (images, stored memories of smells, sound, feelings, etc.) are often assumed to be *percepts*. They are not. Whereas percepts are specific perceptual realizations, the recognition of objects does not rely on percepts but on their transformations into *schematic abbreviations*. It is quasi-perceptual schemata at different levels of abstraction appropriate to need rather than percepts that are drawn on in recognition. Ditto in *semantic ascent* in language. This, then, is the second reason why Frege’s elimination of *imaginability* from the theorization of natural language is flawed. Indeed, it is precisely *imaginability* that makes natural language *natural*.

What lastly remains to be resolved in this section is the question of speed. How we asked can anything as complex as our question about Jane alleged touchiness be imaginatively be processed at the sort of speed we associate with the split-second performance of semantic uptake. We can now turn to current to cognitive linguistics and neuroscience for support. First, in support of *imaginability*, Lawrence Barsalou writes ‘the brain contains conceptual representations used to interpret image-like representations, thereby implementing powerful computational functions such as categorization, inference, propositions, and productivity’. (Barsalou 2012: 240) Furthermore, ‘the human cognitive system can produce an infinite number of linguistic and conceptual structures that go far beyond those experienced.’ (242) Whether what goes on at the neural level is indeed computational is beyond the boundaries of a *semantics of imaginability*. What matters is that we *do* imagine world-like scenarios and that they play a role in the realization of linguistic meaning. In addition, Barsalou and Hastings also emphasize ‘situated

simulations' as a basis for concrete as well as abstract concepts. (Barsalou and Hastings 2005: 252) On the assumption that such findings are realistic descriptions of what occurs in the human brain as the material basis of human mental performance, the speed at which situated simulations is said to take place is very well suited to answering our question by saying. Yes, that is how fast the human brain is able to process *iconicity*, both perceptual and imagined. This position is very much backed up by the kind of research conducted by Pulvermüller, Shtyrov, and Hauk in 'Understanding in an Instant' in which semantic brain responses are measured 'with millisecond temporal resolution'. (2009: 81) So fast indeed can uptake be that even incomplete word identity permits 'semantic integration'. (Van Petten et al. 1999: 394)

The linguistic 'encoding' of *Vorstellung*

Having argued high-speed imagined resemblance relations as the mainstay of linguistic meaning, we should also look briefly at the other necessary precondition of linguistic communication, the transformation of *vouloir dire* into linguistic expressions. Before I can form any sentences, I must be able to *imagine* what I want to talk (or write) about. Again we are dealing with *imaginability* as *aboutness*. Without wishing to enter any distracting discussion whether this process is well characterized as a form of 'encoding', what I want to emphasize is the *heterosemiotic* relation between *imaginability* and the appropriate choice of *signifiers*. The fact that we are often not satisfied with the way we have performed this transformation and say something like 'what I really wanted to say' *unconceals* the interpretive labour that characterizes language use beyond habitual speech. As complex as this transformational, heterosemiotic process is, however, in habitual language use it occurs once more at lightening speed. We have already reassured ourselves with reference to current neuro-scientific findings that it is not only possible but factual. That we comprehend simple word and phrases within a time span of less than 250 ms is no longer in doubt. But how is this possible not just as a brain based process but as a social process? After all, as native speakers we have to be trained to perform

language that efficiently. This takes us to the all-important aspects of language acquisition and language pedagogy.

The linguistic linkage compulsion (LLC)

The sense of rigour, inescapable directionality, and coercion associated with Wittgenstein's German term *Abrichtung* that is lost in the English translation by the bland term 'training' turns out to be most appropriate it would seem in the context of the way every culture inducts its children into the way the mother tongue must be spoken and written. I have mentioned Deleuze and Guattari's notion of language as a set of 'order words', a perspective that neatly reflects the degree of compulsion involved in language learning. There is virtually no leeway. All the options of how to express ourselves are provided within a strict frame of what is accepted and what is not. This is perhaps one of the reasons why creative deviance in innovative poetry is so very hard to achieve.

Whenever I have discussed the degree of coercion in what I now call the 'linguistic linkage compulsion' with my students, there has invariably been some strong opposition to the very notion. Many of the students felt that they had the subjective freedom to do lots of things as a response to any *signifier*, oral or written. A simple test to destroy this noble illusion is first to eliminate the possibility of having misconstrued the signifier and then to ask whether they were able to at least identify the *signified* they had discarded and further whether they would be able to do so prior or after they had decided on an alternative. That usually did the pedagogic trick. They were invariably able to identify the *signified* they confessed they had opposed. Which corroborates the logical necessity that we could not even speak of an alternative if we were not aware what we had been denying. So the 'linguistic linkage compulsion' is with us, like it or not. During the millisecond process of meaning our precious individuality is strangely suspended.

So let us begin again with the simple empirical observation that when I hear the word sound 'shoe' I am not in a position in the split-second event of *semantic ascent* to

entertain the meaning of ‘running’, ‘brunette’, or ‘democracy’. What, we want to know, must be the case for the ‘linguistic linkage compulsion’ or LLC to function? What are its necessary and sufficient conditions? And how is it brought about as something so strictly binding in native speakers beyond their control? The LLC appears to be a necessary condition of Wittgenstein’s ‘use’ in the sense that without it, ‘use’ would be far less well regulated than it obviously is. But what is it that makes LLC so binding? The stumbling block to an answer seems to be inherent in our very approach via the *semantics of imaginability*. How can image schemata, taste schemata, sound schemata, and other schematized quasi-perceptual modalities be produced and re-produced at the speeds registered in brain research? For if natural language were to function like algebra, that is, syntactically, the answer would be straight forward. But we have already had to discard this option. Likewise to be discarded is the option of signifier chains forever cashing out meaning by forever more such chains. No matter how fast we can perform this operation, we would never touch down to secure even a *minimal meaning*. Ditto all sentential explanation suggesting that actual sentences are semantically replicated as sentences in the mind, brain and so on, *ad infinitum*. There are two obvious ways of stopping the signifying buck. One is to argue with Putnam that language is anchored semantically in the world, the *Wahrnehmungswelt*; the other that language is made semantic by nonverbal mental scenarios or the *Vorstellungswelt*, the default version of the former. This latter path is the one advocated in the *semantics of imaginability*.

If this is how meaning comes about, then the LLC must be the result of native speakers are being relentless forced from the cradle to the grave by the speech community to forge the mental association of specific linguistic signifiers with specific nonverbal schemata within strictly circumscribed parameters for specific purposes. This formulation allows to define the native speaker as anyone fully and strictly trained (*abgerichtet*) in the LLC operative in a culture. Such an explanation would look after all linguistic cases of the kind studied by Commander Data in *The Next Generation* to be able to perform his duties, including situational small talk about absent things. Given the efficiency of image

schemata and their non-visual cousins and the demonstrated high-speed occurrence of iconicity, there then seems to be no stumbling block to claiming that it is indeed the LLC as a strictly trained association of signifiers and nonverbal schemata in tightly prescribed situations that constitute linguistic meaning. At least, this explanation would cover *habitual speech*. For interpretively problematic linguistic contexts we need some additional arguments.

LLC in interpretively problematic contexts

It is a common occurrence to have a conversation interrupted by someone saying ‘What do you mean?’ Communication in some way had been unsuccessful. In this and similar cases, speech turn from its *habitual performance* as a routine association of word sounds and nonverbal mental schemata (*aboutness*) into interpretively problematic linguistic exchange. When that happens, LLC has failed. The training of one of the speech partners reveals itself as inadequate resulting in *insufficient semiosis*. I will address the topic of *sufficient semiosis* in Lecture 8 where I will address the social constraints guaranteeing linguistic communicative success. What is important here is to suggest how the failure of LLC is typically rectified. In most such cases, alternative sets of signifiers are being tried out until the speech partners arrive at *semantic-pragmatic reciprocity*, that is, until the participants in the speech situation feel assured that they share the nonverbal imaginable schemata required for the projection of the mental scenarios intended by the speakers. Nonverbal mental schemata have played a significant role in this series of Lectures so far, yet have not been properly defined. Together with a discussion of the social constraints, without which the *semantics of imaginability* is vulnerable to charges of *subjectivism* and too speculative a *mentalism*, I have postponed to the end the question of how we can argue the way individual percepts are transformed into suitably abstracted iconic schemata. I will address the crucial question of nonverbal mental schematization in Lecture 7 and conclude the series with Lecture 8 on ‘Sufficient Semiosis’.

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Lecture 7: Iconic Schematism

Introduction: The grizzly bear cub

On the assumption that a recent program on grizzly bears in Alaska was a case of reality TV rather than a cg simulation, I found it instructive to follow the hesitant movements of the most cautious of three bear cubs learning to catch salmon in a fast flowing creek. Setting an example of how to catch the fish the mother bear displayed her skill, feasting and at the same time feeding her offspring. Soon two of the cubs joined in the hunt and quickly acquired the required skills, while the third cub was reluctant to follow suit. After some additional coaxing and coaching, however, the third cub too imitated mother and gradually turned into a successful salmon catcher. Not surprisingly perhaps it is the slowest performer that teaches the observer most about what must be going on in the mind of a learner of survival skills. What the image sequence suggested to this observer is the transition from *percept* to *non-linguistic concept* and from *problematic interpretive trial and error movements* to *successful action* and from there to the formation of *habit*, all in what appeared to take place in a relatively short time span. What strikes me as important in this learning process are pedagogy, demonstration and peer behaviour, and, most above all, the transformation of the specifics of observational uptake in *percepts* at the repeated moment of *seeing* the fast-moving wriggling prey into a habitual schematization of a 'much the same again and again'. In Schutzian, phenomenological terms, we might speak of the emergence of a *typification* as a *recipe* for social action. Without this movement from perceptual specificity to generalised grasp, the cub would, it seems to me, forever remain stuck with having to repeat at the moment of observation and hesitation. Whatever alternative description of this process we may wish to substitute for this rough brush sketch, what seems to me to be a condition without which the learning success would not be possible is *mental schematization*. More precisely, what

seems to have played a crucial role is the emergence of *iconic schematism*, in Peirce's sense.

In this Lecture I want to focus on the role of *schematized iconicity* in language. I will do so by tracing the way *resemblance relations* have been argued in a number of key thinkers who have made significant contributions to natural language semantics. In so doing, the Lecture will attempt to bring the debate of linguistic abstraction up to date in opposition to sentential, propositional, and formal explanations.

Locke's dilemma

The often underestimated achievement of Locke's semantic explorations in his *Essay Concerning Human Understanding* (1689) was his attempt to revive Aristotle's notion of *homoiamata*, or *resemblance relations*, as a vital ingredient of natural language.

According to Aristotle, 'spoken words are symbols of *pathemata* (affections in the soul)' which 'are the same for all' and as *homoiamata* (likenesses) of *pragmata* (actual things) which are 'also the same'. (*De Interpretatione* 1, 16a, 3-8) Locke runs with these principles from the perspective of his empiricist epistemology as far as he could, but ultimately failed to escape the charge of *semantic privacy*. Locke's resemblance semantics failed for two important reasons. He did was unable to make convincing his argument of how to reconcile his *private ideas* with language as *public discourse* and did not have the equipment to argue persuasively the mechanism of abstraction that must be assumed to operate in the necessary transformation of specific perceptual contents into linguistic concepts. (Ruthrof 2012a)

Leaving the problem of Locke's *semantic privacy* aside, there can be no doubt that he was fully aware of the importance of providing an explanation of how language achieves its *general* character even in its most *concrete* terms. I sum up his proposal as follows. From the premise that 'the far greatest part of words that make up all languages are general terms' (*Essay* III, iii, 1) Locke proceeds to the second premise that not every

particular can have ‘a distinct peculiar name’. (III, iii, 2) What is needed therefore is that particulars be ‘reduced into sorts under general names’. (III, iii, 4) How do they come into existence? ‘By being made the signs of general ideas’ by ‘separating from them the circumstances of time and place and any other ideas that may determine them to this or that particular existence’. Thus Locke argues for a ‘way of abstraction’ by which terms are able to represent ‘more individuals than one’ via ‘conformity’ to an abstract idea ‘of that sort’. (III, iii, 6) Locke then exemplifies his process of abstraction by way of *phylogenesis* in which the ideas of ‘nurse and mamma’ are ‘well framed’ in a child’s mind, a stage which, by the passage of ‘time and a larger acquaintance’ transforms into an increasing knowledge of resemblance relations. As a result, the child learns to distinguish between what is peculiar to specific persons and things, while they ‘retain only what is common to them all’. (III, iii, 7) For Locke, from this starting point humans develop a complex hierarchization of general terms from simple to increasingly complex ideas, a process he regarded it as ‘so evident that there needs no other proof of it but the considering of a man’s self, or others, and the ordinary proceedings of their minds in knowledge ...’ (III, iii, 9)

Locke’s account has been savaged in the literature for a variety of reasons, for its naïve empiricism and its failure to clarify whether his generalisations are sentential, propositional, formal, or iconic. (Ruthrof 2012a) In disagreement with much of such criticism, it seems fairly obvious that since Locke is starting from perception that certainly his ‘simple ideas’ are conceived iconically rather than as more words or propositions, let alone formal entities. This is both a central problem for Locke and a source that makes his explorations attractive to a *semantics of imaginability*. Yet it had to be left to later thinkers to advance his iconic starting point further. The most incisive intervention in this respect is undoubtedly Kant’s much disputed *schematism*.

Kant's measuring tape

In Arthur Schopenhauer's famous put-down of the *Critique of Pure Reason* in *Die Welt als Wille und Vorstellung* we find the caricature of Kant as someone who would measure the shadow of a tower instead of measuring the tower itself. Yet Schopenhauer's self-satisfied empiricism suffers from a major defect. He does not appear to realize that the measuring instrument, such as a tape measure, he needs to do the measuring is precisely the kind of schema Kant argued to be indispensable in coming to grips with the objective world of appearances. (Ruthrof 2011: 115) Far from Kant's schematism being an idealistic intervention in the allegedly simple process of observation, it proves the necessary *tertium comparationis* that facilitates the bridging of the gap between the 'given' and its human comprehension. So what does Kant's *schematism* consist in?

Whenever an object is subsumed under a concept, 'the representation of the object must be *homogeneous* with the concept.' (CPuR A137/B176) Since the object itself is heterogeneous if compared with the concept we need a third entity as a bridge allowing the comparison to take place. Accordingly, the empirical plate can be conceptualized with the help of the *schema* of geometrical roundness. Kant speaks of this as 'some third thing' which is homogenous both with a category and with an appearance, a 'mediating representation' which is 'pure', that is 'void of all empirical content'. This bridging notion that would permit the mental alignment of sensible and intellectual entities, Kant calls the '*transcendental schema*'. (A138/B177)

For our purposes here, dictated by the parameters of the *semantics of imaginability*, the most fruitful part of Kant's *schematism* is his insistence that 'it is schemata, not images of objects' that we need to stipulate as the content of concepts. Thus, 'the concept "dog" signifies a rule according to which my imagination can delineate the figure of a four-footed animal in a general manner' rather than a 'representation *in concreto*'. Generalizing, Kant adds, 'the *schema* of sensible concepts, such as of figures in space, is a product and, as it were, a *monogram*, of pure *a priori* imagination, through which, and

in accordance with which, images themselves first become possible'. (A140ff./B180f.) Though Kant's elaboration of his schematism is far more wide-ranging than these quotations are able to convey and although he does not apply his principles to natural language, what is important for the problem of the generalization of *iconicity* as a functioning component of linguistic signifieds is the direction in which Kant is pointing us, namely towards a way of explaining how we are able to reconcile *resemblance* and *abstraction within* the linguistic sign. In this respect, Kant's schematism at the same time provides a path towards rescuing Locke's flawed theory of generalization and *semantic privacy*.

Peirce's hypoicon

Contrary to some recent literature, anyone who has carefully read Kant and Peirce cannot but notice literally hundreds of threads of Kantian thoughts further developed in Peirce's writings. It is not only that Peirce's acknowledges Kant as a 'somewhat confused pragmatist' (whom he 'more' than just admires), (CP 5.525) Peirce's entire oeuvre is seeded with transformations of Kantian impulses. Abduction is a barely altered notion compared with reflective reasoning, defined in the third *Critique* as a form of reason that looks for a law for the subsumption of singular examples, in contrast with formal, inductive, and practical reasoning. Kant's progression from *Anschauung* to understanding, the imposition of ideas on appearances, and large-scale judgments are refracted in Peirce classification of firstness, secondness, and thirdness. Crucial too, in both Kant's *Critiques* and Peirce's semiotics is the role of the judging community, Kant's *sensus communis*. More to the point, Peirce was keenly aware of the need to provide a frame within which his notion of *iconicity* could be abstracted according to the practical needs of actual sign usage. In this respect, what is especially useful for a *semantics of imaginability* is his subdivision of the *hypoicon* into *image*, characterized by imitation and resemblance, a kind of mirroring; the *diagram*, characterized by abstraction and idealization, and *metaphor*, which combines resemblance and displacement, producing a 'parallelism in something else'. (EP 2.273)

In what way, then, can we employ Peirce's sign theory to shore up our arguments in favour of a resemblance oriented natural language semantics? Let us recapitulate. Peirce's sign complex consists of a *representamen*, 'a sign' to be interpreted, which stands for something, typically an *object*, and which is *addressed* to an interpreting entity, in respect of some *idea* or 'ground', in the process creating an *interpretant*, typically a *Vorstellung*. (CP 2.228) As such we observe a mediation occurring between the *object* and the *interpretant*. (CP 8.343) In addition, the sign process as transformational mechanism is, theoretically at least, open ended, *ad infinitum*, a dynamics in which subsequent *interpretants* become increasingly transparent or, in Peirce's terms, 'more diaphanous'. This infinite chain of signs, Peirce regards as 'an endless series of representations'. In this transformation of semiosis, and leaving aside purely formal sign systems, iconicity never completely disappears. It is part of meaning, except that it thins out, as it were, in increasingly abstract signification. As Peirce puts it, meaning is 'nothing but the representation itself conceived as stripped of irrelevant clothing'. Crucially, however, 'this clothing can never be completely stripped off'. (CP 1.339)

Just as Husserl's generalization in contrast with radical formalization always still have some mental material content, so too in Peirce's scheme, do signs meant to convey resemblance relations always retain traces of *iconicity*, that is, at least a minimum of similarity between what is represented and its representation. (CP 5.74) *Iconicity* is the dominant sign quality whenever we have a representamen 'fit to be a substitute for anything that it is like'. (CP 2.273) Very much a Kantian observation is Peirce's remark that the icon is 'of the nature of an appearance, and as such, strictly speaking, exists only in consciousness'. And, continuing in the vein of Kant's schematism, Peirce adds that the 'geometrical diagram' cannot be found in nature. (CP 4.447) But if *Vorstellung* plays an indispensable role in Peirce's iconic sign and if, as he insists, '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) it follows that natural language, where assertions are

ubiquitous, must have a special place reserved for *iconicity* as *imaginability*. Furthermore, since iconicity cannot be replicated at the level of specificity of percepts because of the fundamental generality of linguistic expressions, and because different linguistic contexts demand different degrees of generality, we are forced to think *mental iconicity* within language in terms of *degrees of schematization*. In this Peirce's semiotics affords us substantial support.

Phenomenological typification

Another philosophical avenue in the wake of Aristotelian resemblance relations in language can be taken by turning to the writings of the later Husserl and his students and colleagues, in particular Alfred Schutz and Roman Ingarden. Leaving aside Husserl's early description of linguistic meaning in his *Logical Investigations* in terms of Platonic ideality, a route which proved misleading in light of his later insights, especially those to do with the notion of the *Lebenswelt*, we need to focus on his idea of *typification*, taken up in a radical way in the social philosophy of Alfred Schutz as recipes for social action. (Schutz 1971) *Type* and *typification* are concepts meant to permit non-formal generalisation of complex and especially social issues. In his notion of *concretization* as a central part of the activity of reading literary works, Roman Ingarden extended Husserl's *appresentation*, a specialized form of *typification*, by which we *schematically* 'co-present' what is not given but must be there according to prior experience and its logical extension. (Ingarden 1973) Suffice it here to draw attention only to Husserl's foundational contribution. As Husserl puts it, 'with each new object constituted for the first time, a new *type* of object is permanently prescribed, in terms of which other objects similar to it will be apprehended in advance'. (Husserl 1973: 38; my emphasis) It can be easily seen how this sums up quite neatly the sort of process that must have occurred in the mind of the grizzly bear cub described in the Introduction to this Lecture. What we have to add to extend Husserl's remarks to the linguistic sign is to extrapolate his so newly established *type* or *typification* to characterize the conceptualized iconic materials of the *motivated signified*. Importantly for natural language, too, is Husserl's emphasis on

‘fore-prehension’ as ‘*Vorgriff*’ facilitated by *imaginability* as a ‘pre-picturing’ in schematic form. (Husserl 1973: 127f.) In this respect, Husserl’s *typification* is much more closely related to Kant’s *schema*, an argument persuasively made by Dieter Lohmar (2003: 93) by pointing out that although in terms of their genesis the two notions are quite different, in terms of their *function* they very much serve the same purpose.

Other philosophical concepts in the Husserlian phenomenological toolkit that serve our purpose of shoring up *iconic schematism* in the service of the linguistic sign as a central component of a *semantics of imaginability* are the *Totalitätstypik* and *habituality* of the *Lebenswelt*, (Husserl 1970) ‘quasi-perceiving’, ‘quasi-judging’, ‘quasi-wishing’ and other mental quasi-acts. When language points to absent things, as it largely does, *Vorstellung* is indispensable in the form of ‘semblance-acts’ and ‘as-if-modification’. (Husserl 2005) As pointed out in Lecture 6, *Vorstellung* as a component of the linguistic sign is not free but on the contrary strictly circumscribed by what I call the ‘linguistic linkage compulsion LLC. Husserl makes a similar point when he speaks of ‘exclusive directionality’ producing intersubjectively shared or, in terms of the semantics advocated here, *indirectly public schematizations*. More recently, the issue of conceptual schematization was taken up by psychologists, foremost among them by Eleanor Rosch and by language theorists in the tradition of George Lakoff. In the following, I briefly sum up some of their contributions to the topic of *iconic schematism*.

Prototypes and conceptual blending

In the wake of Lev Vygotsky’s groundbreaking work on language acquisition and in particular his concept of language as a *generalized reflection of reality*, (Ruthrof 2012b) Eleanor Rosch discusses the *schematization* under the heading of *prototype*. (Rosch1999; Rosch and Mervis 1975) Prototypes explain conceptual categorization from the perspective of Wittgenstein’s *family resemblance* (PI §§67-77; 108) As such, they are characterized by *vagueness* since each case lacks a clear rule for categorization; *typicality* understood in terms of ‘goodness of example’; *genericity* because any description of a

member of a prototype typically produces class description valid for all its members; and *opacity* since the basis on which the categorization is made is typically not clear to the native speaker. (Hampton 2006: 80) The theory of prototypes is wittily dismissed by Fodor and Lepore in their paper ‘The Red Herring and the Pet Fish: Why Concepts Can’t Be Prototypes’. (Fodor and Lepore 1994) This kind of controversy shows the vast gaps that exist in the very foundations of the description of natural language. Fodor’s own ‘atomistic concepts’ are likewise open to critique. From the perspective of the kind of *semantics of imaginability* advocated here and in all my recent work I take fundamental issue with the tradition of concept study that takes the concept as a whole, instead of distinguishing between the mental materials that contribute its *content* and the *regulatory mechanisms* responsible for specific organisation in the linguistic sign, a combination that resumes a Kantian theme. Here my combination of a revised Saussurean sign notion and Peircean *iconicity* follows a very different explanatory avenue. (See Redefinitions in Lecture 4)

In *The Way We Think: Conceptual Blending and the Mind’s Hidden Complexities* Fauconnier and Turner discuss the dynamics of human conceptual integration as a matter of largely non-conscious habit. (Fauconnier and Turner 2002; Ruthrof 2011: 111-113) Without using the term, they subdivide what Kant called *Vorstellung* into ‘mental spaces’. In ‘conceptual blending’, mental spaces are viewed as open assemblages which our minds form and utilize as we think and speak. Mental spaces are theoretical constructs corresponding to the possible worlds of formal semantics. More precisely, mental spaces are conceived as ‘small conceptual packets’ within ‘frames’ or ‘long-term schematic knowledge’. (Fauconnier and Turner 2002:40) Our conceptual habits are such that we arrange these spaces into networks of different degrees of complexity. ‘Single-scope networks’ are distinguished from ‘double-scope networks’. In the former, as for instance

in phrasing the competition between two CEOs in terms of a boxing match, the components of the latter are typically superimposed on the space of the former. In this, the single-scope network displays 'two input spaces' from different frames, the task of one of which is the organisation of the blend. In contrast, a double-scope network is characterised by not necessarily compatible frames as well as an organisation that draws from each of the various sub-domains, resulting in a new and often highly creative, conceptual structure. 'Input space', 'generic space', 'blended space', or 'entrenchment' are regarded as widely shared mappings, elaborated into such notions as 'the running of the blend', 'emergent structure', conceptual 'compression' and 'de-compression', by which conceptual blending unfolds as a coherent whole. In representing the dynamics of blending, the authors rely on diagrammatic iconicity in that circles, points, lines, and squares are used to spatially illustrate the interaction amongst mental components. Such features appear to distance the theory of conceptual blending from more traditional approaches, as does the authors' speculative conviction that 'in the neural interpretation of these cognitive processes, mental spaces are sets of activated neuronal assemblies, and the lines between elements correspond to coactivation-bindings of a certain kind'.

(Fauconnier and Turner 2002: 40)

Methodologically, the authors perform a series of transcendental reductions, mainly from natural language and some nonverbal events and objects, schematizing their specific contents and so teasing out what they see as underlying structural relations. As such, compression, de-compression, integration, single-scope and double-scope networks are

dynamic varieties of *schematization*. As I ask in my paper ‘From Kant’s Monogram to conceptual Blending’, what precisely is being blended in this way. ‘Conceptual blending’ needs a definition of the ‘concept’ in terms of its mental material content and regulation. Are concepts formal schemata? Are they like Kantian iconic monograms? Are they linguistically refined primitive concepts? And if so, what does the refinement consist in? If conceptual blending indeed choreographs intricate networks of conceptual meanings, how do we define ‘conceptual meaning’? As the authors concede themselves, the general principle of conceptual blending hardly explains anything. What is missing is the connection between percepts and concepts. How much of the perceptual material is retained in concepts? Does mental iconic material play any role in *Vorstellung* and its conceptual packaging? And if so, in what form does iconicity resurface in *Vorstellung* and, crucially, in language? Above all else, what the approach via mental space and conceptual blending needs is a redefinition of linguistic meaning. This could only be achieved for the project of ‘conceptual blending’, as well as for the entire Lakoff School if it were to develop a fully fledged semantics of natural language. This is still missing. Apart from this criticism, ‘conceptual blending’ is another fruitful contribution to the schematism that must be stipulated to do its work in the linguistic, *motivated signified*.

Degrees of schematization and the plasticity of meaning

Against this background we are now in a position to specify *iconic schematism* not only in terms of its presence as a component of the conceptualization of mental iconic materials in the signified, but also as to the *degree* to which those materials must be schematized in different linguistic contexts. By describing concepts as regulatory mechanisms constraining mental, iconic materials (a vague sensation, an indistinct

feeling, a still unspecified colour impression, a fleeting impression touch, a blurred not yet quite clear visual shape, etc.) in terms of *directionality, quality, quantity, and degree of schematization*, then the grade to which such materials are schematized is central to rendering as specific as required by the social situation of the linguistic event. This is why I emphasize the *degree of schematization* rather than simply speaking of schema, prototype, or atomistic concept. What is of paramount importance is that schematization is a *dynamic* notion, pliable enough to morph into forever new and different kinds of regulation. The infinite number of possible contexts in which the signifier 'free' can unfold the appropriate portion of its meaning potential as differently *motivated signified* testifies not only to the fundamental *plasticity* of language but also demands a description of concepts that is up to the task. The term *degree of schematization* is meant to accomplish this. When we use the signifier 'free' in such phrases as 'free from my cell'; 'free from worry', 'born free', 'free to err', 'a free nation', etc., different degrees of schematization activate the base iconicity of 'free' and 'freedom', quite apart from their regulation in terms of *directionality*, what *kind* of being free, what quantity of 'freedom' we activate in the split-second event of meaning. In each case we project a quasi-iconic situation within the activated materials are appropriately schematized. This is what we have been conditioned to do by means of a life-long and relentless pedagogic routine.

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SemioticonRuthrofLecture8 (final)

Lecture 8: Sufficient Semiosis

Introduction

The analytical notion of ‘sufficient semiosis’, a ‘soft-edged’ concept in the terms discussed earlier, was stipulated in response to a certain dissatisfaction with the inadequacies of especially ‘truth-conditional’ semantics which seemed to me to commit the error castigated by Wittgenstein in the *Philosophical Investigations* where he shows, convincingly in my view, that ‘the more closely we examine actual language, the greater becomes the conflict between it and our requirement. (For the crystalline purity of logic was, of course, not something I had *discovered*: it was a requirement) ... The *precondition* of crystalline purity can only be removed by turning our whole inquiry around ... but on the pivot of our real need’. (*PI* §§107f.) Truth-conditional analyses up to Davidson seem to me driven by that very crystalline requirement, whereas our ‘real need’ is to describe actual language in its non-ideal and non-identity based communicative sufficiency. To anticipate, at the end of a long experiment with ‘sufficient semiosis’ as an alternative to ‘truth-conditions’ for natural language analysis, I have come to the conclusion that language works because we are able, as a result of the ‘linguistic linkage compulsion’ exerted by the speech community, to match signifiers with what is imaginable. If this is so, then the truth-conditional tradition is based on a conflation of truth with *imaginability*, the latter being a pre-condition of the former. And if this is so, then we must address the relation between linguistic expressions and *imaginability* before we can give a satisfactory answer to the question of how is linguistic communication possible? A subordinate question would be what sort of role ‘truth’ plays in this process. For that we can pursue truth-conditional considerations has not only been demonstrated in the literature, it also has a specific function in a broader perspective of natural language. The more technical, up to formal signification, the more appropriate truth-conditional approaches will prove to be; the more socially complex our linguistic

expressions, the less convincing they look. That this should be so has to do with *imaginability* providing the all-encompassing basis for natural language, including non-technical, such as fictional and other playful variants, while ‘truth’ and ‘truth-conditions’ are special cases within this broader, linguistic semiotic frame.

When I introduced the term ‘sufficient semiosis’, the aim had been to offer an alternative to ‘truth-conditions’. ‘Sufficient semiosis’, I stated, ‘is to natural sign semantics what truth-conditional procedure is to formal semantics’. I went on to say that the concept was to account for ‘the cultural horizonality of natural language and its non-linguistic relations’. It was meant to relax for natural language the requirement of truth and identity in favour of a requirement of being able to ‘imagine a sufficiently coherent “world” with the help of quasi-perceptual acts’. (Ruthrof 1997: 48f.) In the book’s Glossary ‘sufficient semiosis’ is simply defined as ‘Community agreement on sufficient common ground for communication to take place’. (Ruthrof 1997: 292) Yet, as Peirce so incisively saw, signs *grow*, and the notion of ‘sufficient semiosis is no exception to this rule. It occupies some 10 pages in *The Body in Language* (2000) and has resurfaced as a description of linguistic constraints in ‘Semantics of Imaginability – *Vorstellungsemantik*; 13 Theses’. (Ruthrof 2011a) If I am allowed to plagiarize what I had to say under ‘sufficient semiosis’ in that paper, I reproduce it here for the benefit of my Semioticon readers.

Sufficient semiosis in the narrow sense

If language can be described, as we have here, as ‘a set of social instructions for imagining, and acting in, a world’ (Ruthrof 2011a: 165) and if ‘nonverbal signs are the deep structure of language’ (Ruthrof 2000: 146), then *sufficient semiosis* functions in a narrow and in a broad sense. In the narrow sense, sufficient semiosis comprises the kind of constraints that fall under the ‘linguistic linkage compulsion’, discussed as a general principle in Lecture 6. We can sum up these constraints as follows.

1. *Sufficient semiosis* has been devised as a collective term for the social constraints under which native speakers perform a natural language. Because mental events play

an important and indispensable role in a *semantics of imaginability*, sufficient semiosis is intended also to meet Wittgenstein's demand that "an 'inner process' stands in need of outward criteria". (*PI* §580) As such, *sufficient semiosis* is part of the public pedagogy of language acquisition and monitoring.

- 1.1 "Semiosis" here includes nonverbal readings.
- 1.2 "Sufficient semiosis" replaces truth and truth conditions and emphasizes meaning exchange as negotiation.
- 1.3 Sufficient semiosis is both public and indirectly public via outward criteria.
- 1.4 The components of sufficient semiosis so conceived include:
 - 1.4.1 The *linguistic linkage compulsion* according to which native speakers are forced to link the sounds of expressions with specific *motivated signifieds* in *Vorstellung*. This compulsion shows itself in our inability to think of our left ear on the cue of the signifier "nose" at the moment of the meaning event.
 - 1.4.2 *Constraints on Vorstellung* in its relation to natural language: a shared intersubjective world; informed by deep constraints (such as gravity, or the same by any other name; time; spatial dimensions of objects; etc.); drift in the *Vorstellungswelt*; the role of *Vorstellung* in technical language; in poetic language and jokes; *Vorstellung* and appresentation; *Vorstellung* in the reciprocity of standpoints.
 - 1.4.3 *Constraints on communication*: sufficient, promising (to be continued), unpromising (to be terminated); clarification; objections; politeness; speech acts and presuppositions; that is, as long as the propositional picture drawn by Austin, Searle, and Grice, is seen as no more than a shortcut to and dependent on imaginable scenarios. (Austin 1962; Searle 1977; Grice 1989)
 - 1.4.4 *Lexical constraints*: the relative paucity of olfactory terms; limited juridical terminology in Chinese compared to French, Dutch or English; lexical richness in the domain of social obligations in Chinese.

- 1.4.5 *Phonological constraints*: limits of variations in pronunciation; regional and social idiolects.
- 1.4.6 *Syntactic constraints*: compositionality; grammatical and ungrammatical performance.
- 1.4.7 *Constraints on embedding*: pragmatic boundaries as to how many subclauses a listener or reader can process without losing touch with the basic sentence structure.
- 1.4.8 *Constraints on recursivity*: idiomatic usage; predicability; economy;
- 1.4.9 *Constraints on predicability*: what can be predicated about phenomena in various discursive domains.
- 1.4.10 *Constraints on meaning events*: activation of signifiers by appropriate signifieds; experimental signifieds in the language arts; constraints on iconic-mental materials imposed by regulative concepts in terms of directionality, quantity, quality, and degree of schematization; semantic scope; conceptual overlap; conceptual boundaries; satisfaction.
- 1.4.11 *Constraints on reference*: what counts as an intersemiotic agreement between signifiers and specific items signified in the *Wahrnehmungswelt* and/or *Vorstellungswelt*. (Ruthrof 2011a: 175f.; numbering changed)

Sufficient semiosis in the broader sense

In the broad sense, sufficient semiosis reveals its double derivation from Leibniz's notion of 'sufficient reason' and Peirce's pragmatic description of sign exchange, as it operates within community constraints, for practical purposes. 'Sufficient reason' was designed to capture, within manageable logical boundaries, infinite phenomenal regress and its reflection in language and reasoning. As such, 'sufficient reason' functioned in the Leibnizian scheme of the universe as a divine calculus as a mechanism by which logically infinite strings could be legitimately terminated as soon as they achieved a

practical degree of agreed upon communicability. So much about the idea of ‘sufficiency’. As to the ‘semiosis’ part in ‘sufficient semiosis’, I draw once more on Peirce’s description of sign exchange in terms of community sanction, the structured mentalism of the interpretant, the necessary retention of the ‘object’ in the sign relation, and especially his insistence on the necessary presence of some form of *iconicity*, as schematized resemblance relation, and the in principle infinite growth of the chain of signification, curtailed here by pragmatic termination appropriate to the purpose of communication. (Ruthrof 2000: 146f.)

In its broad sense, *sufficient semiosis* emphasizes meaning negotiation within cultural frames. In so doing it has to abandon any claims to meaning identity in natural language, at least as a concept playing a central role in semantics, and claims as to any strict equivalence between ‘what is there’ and ‘what is said’, between world and word. Not only do we have to give up with Wittgenstein on the *Tractatus* matching of the fact of world and the propositions of language, we also have to go beyond Wittgenstein’s retreat to the observables of meaning as ‘use’ by reabsorbing *imaginability* into his pragmatic definition. ‘Use’, as it is conceived in the *PI*, has been stripped of *Vorstellung* by way of analogy with truth tables, algebra and, paradoxically, the very ‘crystalline purity’ Wittgenstein attempted to ban from the description of natural language. Unlike in formal systems and in spite of the rules imposed on native speakers by the ‘linguistic linkage compulsion’, Wittgenstein’s *Abrichtung*, if natural language draws of necessity on nonverbal signification (and not merely in a referential relation but as a basic condition at the heart of the linguistic sign), then meaning is in urgent need of replenishment by what has been eliminated: *imaginability*. (Ruthrof 2011b) This we can do with the help of Peirce. If we proceed along such lines, *sufficient semiosis* in the broad sense can function as the umbrella constraint which allows meaning to unfold not only along the strict lines of what is beyond the control of individual native speakers, but within a broad cultural frame of *mental, iconic reciprocity* in the pragmatics of linguistic communication.

Language *exists* only, that is, *exclusively* in and as *pragmatics*. There has never been a sentence or will ever be that means by itself. Even the sentences of grammar books and natural language examples in formal semantics have to be *instantiated* by speakers for *semantic ascent* to occur. In the *semantics of imaginability* this means that nonverbal semiosis is an indispensable ingredient of both the *inside* of language, in the sense that without it *motivated signifieds* would be empty, and *outside* language as social, situational framing conditions. The specifics of the phonetic, syntactic, and semantic features summed up above function properly only within the always situated umbrella of pragmatics. An important part of this situatedness form the decisions made by speakers as to the *initiation*, *continuation*, and *termination* of linguistic exchange. We *typically* initiate a conversation when it promises to be interesting, entertaining, fruitful, or necessary; we continue conversing when such promise is fulfilled, when further clarification is required, or if we simply enjoy the company of an another speaker; and we may terminate the exchange when *sufficient semiosis* cannot be achieved, when further elaboration proves fruitless, or when the conversation turns unpleasant. In all these cases, *imaginability* is a necessary ingredient in both how we construct meaning and how we judge the speech situation as a social event.

In the broadest sense of *sufficient semiosis*, an important component of the pragmatic umbrella of language is our construal of the *Weltanschauung* or belief system of a speech participant. When belief systems are incommensurate, *sufficient semiosis* fails. There is no common ground of beliefs shared by speakers committed to fascist obedience demanding mass extermination, those who would applaud the kind of social engineering of radical equality implemented in Mao's China, followers of the myth of the reconstruction of a fictional *umma* under a contemporary *Caliphate*, or adherents of the Enlightenment project of democratic rule under which universal rights could be granted to every individual. On the other hand, *sufficient semiosis* can act as facilitating communicative, pragmatic umbrella when belief systems, however different, are negotiable.

When it comes to such universal constraints as ‘gravity’, which form part of all belief systems, nonverbal signification reveals itself as the deep structure of language. ‘Gravity’, for example is first of all a ‘feeling’, in Peirce’s sense of Firstness, something that undergoes continuous re-theorization. While such scientific re-interpretations are subject to Karl Popper’s rule of *falsification*, what is never in doubt is the human sensation of ‘falling’. What is, are our discourses on why this should be so. In other words, as the *semantics of imaginability* predicts, our words, phrases, and sentences about gravity are meaningful because they are filled again and again and anew in each neologism by the same conceptually regulated mental corporeal source materials (clusters of sensations) in advance of their sentential, propositional, and mathematical intersemiotic translations and re-formulations.

The way the signifier ‘gravity’ (*Schwerkraft*; in Chinese ‘*earth-pulling-power*’) and similar ‘deep constraints’ are elaborated verbally determines the kind of metaphysical and ontological commitments which native speakers have been trained or, better, *abgerichtet* (to use Wittgenstein’s appropriate even if undertheorized term) to hold for true. At the level of nonverbal grasp, that is, our pre-linguistic, hominid heritage which the *semantics of imaginability* argues to be the continuing bedrock of natural language, we *feel* the way the world is. This deep ground partly determines and significantly limits *predicability*, what can be idiomatically *predicated* about words, as well as *recursivity*, or how far formal, syntactic patterns can be extended within idiomatic boundaries. Such constraints are modified by the range of metaphysical and ontological commitments characteristic of a speech community. Both sets of pragmatic boundaries are meant to be covered by the notion of *sufficient semiosis*. Lastly, truth-conditions can likewise be absorbed within the concept in the sense that they can play a specific role of checking mechanism in realist context without being able to usurp the much broader and more basic function of *imaginability*.

By way of conclusion of this lecture series, I want to emphasize that the *semantics of imaginability* advocated here remains a work in progress to be questioned, reworked, and improved upon in its attempt to assert its position in metasemantics and semantics as a revival of *resemblance relations* in natural language in the tradition of Locke, Kant, Husserl, and Peirce.

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I hope that you have enjoyed at least parts of this at times polemical search for a new way of exploring the way meaning works in natural language. Thank you for your sustained interest.

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End of Lectures Ruthrof