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How to Get the Body Back into Language.

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1. Introduction

The relation between body and language has been well canvassed in the literature at the 'articulatory-perceptual' level (Chomsky 2002:28). In contrast, the 'corporeal turn' has not yet occurred at the level of its 'conceptual-intentional' features (Ruthrof 1997: 254-261;289). In fact, the socialized human body is notoriously absent from our accounts of syntax, semantics, and pragmatics. For over a century a yearning for scientific clarity has lead to a denial of any perceptual traces which language may have inherited from its precursors. Yet it may be precisely such traces that make meaning 'rich, complex and unsuspected; in fact, barely known' (Chomsky 2002:36). Indeed, the relation between body and language has largely remained a taboo. And while embodiment has been acknowledged in autopoietic research (Varela et al. 1991; Maturana and Varela 1987; Maturana 1980; Maturana 1978) and neuro-linguistics, (Lüdtke 2006; Lakoff and Gallese 2005; Fauconnier and Turner 2002; Lakoff and Johnson 1999; Fauconnier 1997; Turner 1991) we still lack a thoroughgoing corporeal theorisation of language as a whole.

This is why I ask two questions. First, 'why is it so difficult to produce a satisfactory theory of meaning for natural language?' In a popular study, it takes David Crystal 186 pages to address meaning, though much of what he says before that depends on the meanings of the expressions he cites (Crystal 2008). Nor has this dilemma been resolved in the available research on language. My second question is 'what would it take to devise a theory able to account for the role of the socialized human body *in* language?' Though at first blush the two questions appear to have little in common, I will argue that they are *intimately* related.

2. What makes natural language semantics such a difficult nut to crack?

Natural languages consist of such things as linguistic expressions and their phonetic representation; syntax and grammatical rules for generating sequences of linguistic signs; semantics, including names, definite descriptions, predicates, quantifiers, demonstratives, pronouns, indexicals, logical connectives, disjunctions, conjunctions, implication, entailment, and weak synonymity; as well as pragmatics, the way

language is employed in social situations. It is in semantics and pragmatics where research is most wanting. This, I claim, is a consequence of at least the following six flaws: the formal fallacy; syntactocentrism; radical arbitrariness; loss of iconicity; homosemiotic and monosemiotic assumptions; and the absence of *Vorstellung*. Together these form a formidable hurdle to the kind of explanation I want to advocate.

2.1 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 1966). 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 know the meaning of 'a', 'b' and 'c' via definition within a formal Euclidian system and the way we know the meaning of 'morning star' or 'evening star'. Without 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, whereas in formal sign systems the 'background' knowledge of geometry is itself formal and does not modify the sense of its expressions. 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* 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 *Vorstellung*. This is so because one person's idea associated with a term is not the same as another's, an instance of fuzziness unfit for a *Begriffsschrift*. Thus took 'iconic cleansing' root in the philosophy of language. The ubiquitous use of Frege's moves in philosophy can only be hinted at here. There is Quine's separation of the theory of meaning as *intensional*, comprising meaning, synonymy, significance, analyticity, and entailment, from the theory of reference as *extensional*, consisting in naming, truth, denotation, and extension. (Quine 1993:52f.) This works in formal systems but not in natural language (Eco 1984:45). Much the same goes for Carnap's sense as the '*intension* of an individual expression' (Carnap 1958:40). In natural language all expressions are *extensional* and in a broader than formal sense.

2.2 Syntactocentrism

Another hurdle to a rich description of language is 'syntactocentrism' (Jackendoff 1997:15). 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; 1971) 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). *Recursivity*, for example, fails in the face of idioms. As Jackendoff notes, to regard idiomatic phrases as 'marginal' is a fundamental error (Jackendoff 1997:154). This qualifies Humboldt's claim that we can generate an infinite number of sentences from a limited stock of terms. Recursive infinity is a theoretical option unexplored in cultural practice. Mastery of a language is judged by idiomatic competence rather than expertise in recursive rules. As to *predicability*, (Keil 1979; 1981) the assumption is that what can and cannot be said of things and persons is dictated by syntax, such that 'the tree was sincere' or 'colourless green ideas sleep furiously' are not predicable. This is not so. First, both sentences could function perfectly well in their own possible worlds, say cartoon stories with personified trees or puppets called 'colourless green ideas' who snore and toss violently in their beds. *Predicability* now is a function of the sort of world we imagine rather than of syntax. Second, if it is Leibnizian 'compossibility' rather than grammaticality that dictates *predicability*, then we must turn our gaze to the socio-perceptual frame of language, its pre-linguistic precursors and the possibility of a *perceptual proto-syntax*. A similar criticism can be lodged against the notion of *conditionals* as linguistic innovation. According to Derek Bickerton, syntax did probably 'not exist prior to our own species'. Phrases such as '*x* happened because *y* happened' or 'if *x* happens, either *y* or *z* will happen', must have been invented by natural language (Bickerton 1990:162; Bickerton 1981; 1987). Though conditionals are strong markers of syntax, I reiterate Wittgenstein's point that language, including syntax, is a 'refinement' and not a replacement (Wittgenstein 1976:3f.). It is not plausible that before the event of language hominids lived in chaos. 'If-then' patterns must have shaped their world according to principles of human physiognomy and respect for objective constraints to secure survival. If so, *conditionals*, in a primitive form, have been inherited from pre-linguistic behaviour, a *proto-syntax* already incorporated in, rather than excluded from, Bickerton's 'proto-language' (Bickerton 1990:130-163).

2.3 Radical arbitrariness

A serious flaw is the continuing acceptance of Saussure's radical arbitrariness thesis. 'The bond between the signifier and the signified is arbitrary', we read in his *Course in General Linguistics* of 1916, and since the sign as a whole 'results from the associating of the signifier with the signified, I can simply say: *the linguistic sign is*

arbitrary' (Saussure 1974:67). This is a *pars pro toto fallacy* of enormous consequence. Later on in the *Course*, Saussure concedes that there are always traces of motivation in all languages, a concession however which hardly diminishes the radicalism of his claim (Saussure 1974:131-134). Imagine a situation in which speakers from different cultures, say Chinese, French, German, and English, engage in rudimentary conversation. The Chinese says '*da muze*', pointing at his thumb. The others chime in with the signifiers '*pouce', 'Daumen',* and *'thumb'*. Far from being arbitrary, the shared *signified* appears to be *motivated*. Without this intersubjective baseline, even such a minimal conversation could not take place, nor could wholesale translation between different languages. It is the *ostensive ground* of both human physiognomy and perceptual world that appear to produce the *motivated* character of *signifieds*. The neglect of this *ostensive,* nonverbal ground was precisely what seduced Quine to formulate his thesis of 'untranslatability' and 'indeterminacy of reference' (Quine 1993:50-52). In short, *radical arbitrariness* cannot be consistently argued for natural language.

2.4 Loss of iconicity

Arbitrariness and loss of *iconicity*, in the sense of resemblance relations, go hand in hand. For example, in a paper by Michael C. Corballis, a state of the art summary of evolutionary linguistics, we find both to play a prominent role (Corballis 2008:32f.; Hurford 2007:126ff.). Such is the influence of Frege's elimination of *Vorstellung* and Saussure's arbitrariness thesis. But 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.

2.5 Homosemiotic and monosemiotic assumptions

Two further obstacles to a rich view of language are the related assumptions of its *homosemiotic* and *monosemiotic* character. In *homosemiotic* systems all signs are of the *same* kind, as in calculus; in *monosemiotic* systems we are dealing only with *one* kind of sign, as for instance in olfactory readings of airborne molecules. If we regard natural language as *homosemiotic* we deny the possibility of semiotic heterogeneity. This denial is widespread in philosophical semantics. In the naturalism of Devitt and Sterelny, it leads to the alignment of language and world without a *tertium comparationis* (Devitt and Sterelny 1991:15). Much the same can be said of some truth-conditional theories (e.g., Kempson 1975:31). In contrast, I will try to show that

language is both *polysemiotic* and *heterosemiotic*. In preparation for this move we need to stipulate a further crucial concept, that of *Vorstellung*.

2.6 Vorstellung

Neither perception in the raw sense of an organism's response to molecules and electromagnetic radiation nor *Vorstellung* as a summary term for all perceptual modifications, or *mental states*, plays a significant role in semantics and pragmatics. And yet, without *Vorstellung* we would find it impossible to imagine anything in response to verbal clues. We remember that Frege eliminated *Vorstellung* from language as a precondition for sense as pure thought, a guarantor of logical identity. Yet, as Wittgenstein notes, 'the crystalline purity was, of course, not a result of investigation: it was a requirement' (Wittgenstein 1953:46).

Neither 'pure thought' nor 'identity' is a necessary condition of natural language. While identity is essential in formal systems, not even weak synonymy yields much insight into how natural languages work. On the other hand, not only will we find that the elimination of *Vorstellung* was mistaken, we will discover that without it language could not function at all. To shore up the kind of concept of *Vorstellung* I have in mind I turn to an evolutionary perspective.

3. Interlude: the neural ground of *Vorstellung*

Vorstellung is roughly synonymous with Kant's '*inner sense'* which he thought of as 'the sum of all *Vorstellungen'* and so subsumes his 'reproductive' *Einbildungskraft* under a broad umbrella (CPR A177/B220). All variations of perceptual input, which is itself always already modified by *Vorstellung,* as well as all variations of *Vorstellungen*, make up our *Vorstellungswelt*. This traditional picture can now be updated with the help of some recent scientific research. In his paper 'Nano-Intentionality: A Defense of Intrinsic Intentionality', Tecumseh Fitch addresses the goal-directedness of living eukaryotic cells, starting with one-cell organisms and ending with the complexities of neuron clusters in the human brain (Fitch 2008).

Fitch describes as 'nano-intentionality' the capacity of eukaryotic single cells to alter their own molecules in response to external challenges, remember solutions and so extend their individual existence. Multi-cellularity and communal interaction of more specialised cells mark the path that 'nano-intentionality' takes up the evolutionary ladder. Beyond 'nano-intentionality' and 'micro-intentionality', neurons learn by generating 'models of the world' produced within the nervous system: 'once the primary representation is in place, so is the machinery for illusions and hallucinations, and more adaptively, imagery and imagination'. Fitch sums up the evolution of intrinsic intentionality in four steps: (1) nano-intentionality of eukaryotic cells over

two billion years; (2) interacting nano-intentionality of multi-cellular organisms; (3) micro-intentionality of neurons; (4) neuron based capacity for representation and serial awareness. This, then, is how 'brains make minds' (Fitch 2008:157-177).

Accepting Fitch's scenario as the current 'best predicate' provides us with a plausible picture of *Vorstellung* in both its reproductive and productive capacity, as the central mediator between our perceptual world and language. From here we can relate *Vorstellung* and the two functions of language, representation and communication, by viewing language as *a set of instructions for imagining and acting in the world* (Ruthrof 2007:22). *Vorstellung*, then, would be at the hub of our theory. If in reading any written text we were unable to *imagine* (quasi-perceptually, not propositionally) what slice of world was represented, we could not grasp its meaning. Vice versa, if we didn't imagine a mental world prior to selecting linguistic expressions, we would do no more than repeat sequences of signifiers, a mere syntactic performance, that is, one without *meaning*.

4. The body in language

We can now address our second question: what would it take to construct a theory able to account for the role of the socialized human body in language? If natural language can be described as 'a set of instructions for imagining, and acting in, the world', then every linguistic utterance implies an indirect speech act such as 'imagine the following'. Every utterance is intelligible in terms of the mental world (or cluster of signifieds) it codifies and in terms of the ability of listeners to project a mental world from what they hear, within social constraints. The combination of public signifiers and mental states then would amount to linguistic communication. Central to this scenario is *Vorstellung* as perceptual modification, which requires the redefinition of the linguistic sign and its components. Instead of saying that the linguistic sign is arbitrary, we retain Saussure's conventional signifier but redefine the *signified as always motivated.*

4.1 The iconic signified

The loss of *iconicity* deplored earlier can be remedied with help from such sources as Ernst Cassirer's 'sensuous abstractions' and 'schematised percepts' (Cassirer 1957:331), Lev Vygotsky's 'generalised reflection of reality', his observation that 'thought and language reflect reality in a different way from perception' and his idea of an inner speech 'saturated with sense to such an extent that it would require many words in external speech to explain it' (Vygotsky 1962:153; 12). *Iconicity* in language can be reconstructed from within phenomenology by re-working such concepts as Edmund Husserl's 'appresentation', Alfred Schutz's 'typifications' and Roman Ingarden's 'concretisation' (Husserl 1973; Schutz 1959; Ingarden 1973). The most

compelling arguments for *iconicity*, however, can be found in the work of Charles Sanders Peirce and his insistence that for anything to be meaningful it must be translatable into 'iconic signs' (Peirce 1.158).

Although it would seem that signifieds typically come in linguistically conceptualized form, I separate *iconic content* from its conceptual regulation for two reasons. First, unlike Fodor's '*atomistic* concept', a concept from nowhere, the corporeal concept shows whence it receives its content (Fodor 1998). Second, there remains a fundamental *semiotic rift* between linguistic expressions and nonverbal signification. Contrary to the claim that thought without language is an 'uncharted nebula', (Saussure 1974:112) cognitive science has shown that there remain sharp discrepancies between sensory readings and their linguistic codification (Ackerman 1991). Our sense of smell, impoverished though it is, still lets us recognize thousands of olfactory distinctions without verbal equivalents. Our gustatory faculties are likewise superior to their verbal representations. While the *semiotic rift* is less prominent in the tactile and visual domain, it reminds us verbal and nonverbal signification continue to exist side by side. Given the evidence, there can be little doubt then that raw iconicity precedes our linguistically refined conceptualized signifieds. However, this does not entitle us to say that language 'conceptualizes the unconceptualized', as does Brandom, who objects to human 'preconceptual capacity sharable with non-concept using mammals'. Such a view is the consequence of an extreme, top-down 'inferentialism' in an 'essentially propositional doctrine' (Brandom 2001:16;24;13). It is much more plausible, as Alasdair McIntyre suggests, that even as language-users 'we still rely in very large part on just the same kind of recognitions, discriminations, and exercises of perceptual attention that we did before we were able to make use of our linguistic powers' (McIntyre 1999:40). What must be stipulated also is a transformational mechanism by which quasi-perceptual iconicity, that is perception transformed into *Vorstellung*, is generalized to varying degrees according to rules. I propose that this function is provided by linguistic concepts. Now, iconic mental materials, such as olfactory, gustatory, haptic, tactile, proximic, thermal, gravitational, kinetic, visual, emotional and other readings of our *Umwelt* and ourselves, that is, nonverbal signification, supply the raw content which, under second-order conceptual regulation, make up the linguistic, *iconic signified*.

4.2 The concept as social constraint

While the *pre-linguistic* concept can be regarded as a primitive constraint on iconicity, the *linguistic concept* fulfils the role of regulative refinement. At least four principles appear to dictate the linguistic concept orders nonverbal, iconic materials: *directionality; quality; quantity; and degree of schematisation* (Ruthrof 2009). This quadruple conceptual regulation reflects one of the ways in which culture and society control language as *praxis*. Social monitoring in natural language takes place at different levels, inhibiting as it does mentalist and subjectivist deviance. In rising order, social control appears at the level of phonetics, the lexicon, syntax, register or linguistic propriety, discourse, discursive paradigms, and the meta-system of

sufficient semiosis. (see below) Typically, a linguistic concept *directs* us to attend to a specific iconic phenomenon, *this person* or *that object,* a *class* of things, a *supercategory*, or a *subcategory*. This part of the conceptualising process we can term the *directionality* of language. Iconic mental materials are regulated further in terms of *quality* as a specification of the *kind* of red, or the *kind* of touch; as to *quantity*, that is, what *size*, or how *many* spots; and *degree of schematisation*, or the extent of *abstraction* to which a signifier is to be semantically and pragmatically specified.

4.3 Deictic and referential background

A theory aiming to reconcile body and language also needs to take seriously two features which are typically absent from our standard descriptions: implicit *deictic background* and *referential background*, each of which is to be carefully distinguished from *explicit deixis* and *reference*, respectively. *Deictic background* can be explicated as the typical way a culture speaks its terms. The Mandarin signifier *guanxi,* for example, which is often translated as a corrupt use of social relations, has no such negative values when used as part of a conversation in Chinese. Without the right *guanxi* it is very hard to be successful in Chinese society. Its 'neutral' translation as 'connection' covers up that difference. Or compare the way the acronym IMF is spoken by members of lending countries and members of societies dependent on borrowing from the fund. As such, *implicit deixis* or *deictic background* must be recognized as critical in intercultural exchange. At the same time, all natural languages cohere as systems of expressions intelligible against their *referential background*, a culture's *Vorstellungswelt.* As such, *referential background* produces significant semantic effects in natural language, effects that a corporeal theory of language is able to accommodate. Nor should referential background be confused with *reference,* the link between a referring expression and a specific item picked out by it (Strawson 1950; Evans 1982). Fundamental to any such considerations of course is the level at which we decide to describe *meaning.*

4.4 Redefining meaning

Defining 'literal meaning' in *Intentionality: An Essay in the Philosophy of Mind* John Searle makes the claim that in the following set of examples the word 'open' retains the same literal meaning: 'Tom opened the door'; 'Sally opened her eyes'; 'The carpenter opened the wall'; 'Sam opened his book to page 37'; 'The surgeon opened the wound', 'The chairman opened the meeting'; 'The artillery opened fire'; and 'Bill opened a restaurant'. While the truth conditions may change, says Searle, 'the semantic content is the same' (Searle 1983:145f.). From the perspective of ordinary language use Searle's analysis looks odd. No reader sensitive to the nuances of English would say that in such phrases as 'opening fire' and 'opening a wound' the

meaning of 'open' remains the same. Language *directs* us to imagine radically different processes of 'opening'. This is so because in the event of meaning we do not separate out the 'atomistic' components of expressions. Meaning occurs as a total package. In any meaning event, individual signifiers undergo substantive semantic-pragmatic changes. 'A giraffe drinks' and 'a baby drinks' demand different meaning constructions of 'drink'. In terms of our redefinition of the signified, we can say that in each case the iconic mental materials which we have been taught to bring to the task of making meaning of 'opening' are made up of *different* admixtures of heterogeneous nonverbal readings conceptually regulated in *distinct* ways. In each case, the identical, arbitrary signifier 'opened' *directs* us to imagine non-identical scenarios with different *qualities* of 'opening', distinct *quanta* of 'how far' and 'how fast', and varying *degrees of schematisation*. As a consequence, the meaning of the signifier 'opened' in each of Searle's examples differs conspicuously.

The source of difference between Searle's sort of 'meaning' and the one advocated here is the result of an entirely different constitution of the semantic-pragmatic object itself. Inspired by a post-Fregean insistence on a pure sense, Searle has pegged his 'meaning' at a level of generality which allows him to claim semantic identity. Nor is Searle alone in this kind of enterprise (e.g. Wiggins 1992; Wunderlich 1980). 'Meaning postulates' and 'componential' semantics are vulnerable to similar criticisms (Carnap 1967; Bierwisch 1970). The body oriented alternative takes its starting point from the opposite end of the formal-natural spectrum: actual speech and the hermeneutic process of *Verstehen* as interpretation (cf. Heidegger 1962:188-213 and the hermeneutic tradition). The message, then, is clear. If we wish to re-associate language with the socialised human body we cannot but abandon the dream of the 'crystalline purity of logic'. As our analysis of Searle's examples has demonstrated, what is required is sensitivity to the *Vorstellung* of iconic traces in linguistic meaning as interpretive event.

4.5 Sufficient semiosis

Another consequence of an emphasis on language as a recipe for imagining social-perceptual scenarios in acts of *Verstehen* is that truth-conditional theories become superfluous. Or, more precisely, they retain their usefulness only in the theorisation of *reference*. This is so because understanding a sentence is a precondition for checking whether it is true or not, whether it is realist or fictional. We immediately grasp the meaning of 'Did you see that rabbit?' whether an actual rabbit was present or not. Meaning precedes truth. Nonetheless, language as a social system of representation and communication could not function if there was not in place a monitoring mechanism which retards rapid changes of linguistic meaning, a mechanism that can be conveyed via pedagogy and use. I have called this mechanism *sufficient semiosis*, with no more than a nod to Leibniz, to indicate the meta-linguistic function of flexible social constraints which native speakers have acquired through pedagogy, understood here broadly as the sum of all direct and indirect instructions by means of which speakers acquire linguistic competence. As such, *sufficient semiosis* regulates

'semantic scope' and replaces truth-conditions by telling us when to continue a linguistic exchange as useful, negotiate from a stance of the 'reciprocity of standpoints', (Schutz), dialogism (Bakhtin), or *Horizontverschmelzung*, (Gadamer), or terminate communication as unpromising. In this sense, *sufficient semiosis* acts as a framing condition for pragmatics and its preconditions. Nor should such preconditions be restricted to their formal, propositional skeleton, as in Grice's elegant theorisation (Grice 1989). What strikes me as essential here is that any such preconditions are realised first and foremost in quasi-perceptual form, that is, in their fundamental *iconicity* in and as *Vorstellung* as necessary condition of meaning within the social framing of *sufficient semiosis.* In the remainder of the paper I briefly address two more prominent hurdles in the way of any corporeal theory of natural language.

5. Abstract expressions

The distinction between concrete and abstract terms is useful only as a rough guide because it conceals an entire spectrum of differences between the two stipulated polarities: the distinction fails to account for *gradation*. Yet it is in this broad in-between domain where the bulk of terms is located. In light of our redefinition of linguistic concepts, varying *degrees of schematisation* of iconic mental materials can now be observed on a spectrum from *specification to generalisation*. The 'red, gull-wing 300SEL sports car' can be contrasted with the more general 'car', its supercategories 'motor vehicle', 'vehicle', and so on, up to 'entity'. In any such series, even at the most abstract level, the signified still retains traces of mental material content activated and conceptually regulated for meaning. No matter how abstract, such a signified can always be distinguished from any full-blown *formalisation x.* A frequent mistake in semantics is the assumption that the kind of abstraction that is operative in language is indeed *formalisation*. This is not to say that the formalisation of natural language is not possible. It certainly is. Yet when we perform it, we should not be surprised that we can do so since, after all, we have derived the tools of formalisation from natural language in the first place. What we have so reduced must however not be mixed up with natural language. Materiality, in the form of quasi-perceptual mental states, never entirely vanishes. Even highly abstract terms, such as 'freedom', retain a quasi-perceptual correlate in *Vorstellung,* of what it *feels* like to be free rather than restricted. Persons who have just been released from incarceration shouting 'freedom' are uttering the term with a high concentration of iconicity compared to the same term being discussed in a legislative council. In the latter, emotive, iconic mental materials are drastically *schematised*, a process which however never turns the signifier 'freedom' into a mere formally empty placeholder. Herein lies a fundamental difference between formal signification and natural language.

Nor do so-called 'function words' escape this stricture. Eve Sweetser for one has made a persuasive case for 'if', 'but', 'and', and other syncategorematic terms having retained perceptual, social traces (Sweetser 1990). Using her arguments, we can apply the corporeal principle to the entire range of terms identified under semantics and

pragmatics early in the paper, such as names via quantifiers to disjunctions and logical entailment. I have argued elsewhere that while we can speak of the *signifiers* of natural language as iconically 'disembodied' vehicles, in their *signifieds* the very corporeality so lost is retrieved in *Vorstellung* under conceptual constraints and as a result of pedagogy (Ruthrof 2000:85-116). Such are the bare bones for an argument in favour of recognizing the role of the body even in abstract terms. Another bugbear for bringing the body back into language is the public character of linguistic expressions.

6. On the public nature of linguistic expressions

There is not much of a haggle over the question of how public are linguistic signifiers. After all, they are given in an objective sense in dictionaries and in the sounds of the public use of language. Syntactic patterns appear to have more public visibility than the generative rules we can formalise from them. However, to claim that signifieds and their instantiations as meanings in pragmatic events are likewise public would amount to using the term in a quite different sense. Yet meanings cannot be called 'private' either (Wittgenstein 1953: 94ff.). In meaning events we are dealing with intersubjectively shared *Vorstellung* regulated by concepts under the constraints of *sufficient semiosis*. An advantage of Searle's 'literal meaning' is that it is public as a consequence of the identity conditions he has imposed on it. A serious disadvantage is that Searle's 'meaning' occurs only in specialised, technical discourse. Without introducing the socialised human body in the form of *Vorstellung,* instantiated in minds, brains and heads, natural language expressions do not mean at all. Their meanings can be called public only to the extent to which pedagogy and use are able to control the mental states of native speakers. We could therefore regard meanings as *indirectly* public. To guard against the charge of mentalism and subjectivism, s*ufficient semiosis*, then, must be invoked once more as social guarantee for the intersubjectivity of individual linguistic, mental states.

7. Conclusion

We can now give a single, broad answer to both our initial questions. Formulating a satisfactory natural language semantics has proved so difficult because we have failed to account for the presence of the socialized human body *in* language, which is required for the activation of arbitrary signifiers by nonverbal mental materials regulated and schematized to varying degrees by concepts in the neuron based human *Vorstellung*.

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