Danie Strauss

The paradigm of Weideman: Appreciating the uniqueness of language and scholarly disciplines

A B S T R A C T This contribution commences with a substantiation of the claim made by Weideman regarding the inevitable "philosophical base" of linguistics by showing that the question what a special science is, is not itself specifically scientific in nature. Moreover, *modal abstraction*, as the distinctive feature of scientific thinking, also confirms the philosophical foundation of the various academic disciplines. The philosophical paradigm of Weideman enables an appreciation of the *uniqueness* of aspects and the *coherence between* them. Ultimately the argument proceeds from a non-reductionist ontology. While appreciating what was discovered by one-sided (reductionist) approaches in the history of linguistics, at once also has to recognize undeniable states of affairs. By expanding this perspective, in order to include the intertwinement of modal aspects and (natural and social) entities and processes, the functional and structural conditions for the uniqueness of language and regarding the exceptional human ability to speak, are highlighted.

Keywords: distinctive features, irreducibility, uniqueness and coherence, sign mode, modal abstraction, modal analogies, one-sided trends, apriori/ aposteriori, concept and word, constancy and change, speech organs, non-reductionism

1. Defining linguistics requires a philosophical orientation and presupposes an ontic point of reference

In one of Weideman's recent publications a subheading states that "Linguistics cannot function without a philosophical base" (see Weideman 2011:154 ff.). A claim such as this is itself *philosophical* in nature, although an argument is needed to substantiate such a claim. Weideman sets out to provide such an argument in chapter 1 of this work, dedicated to the development of a framework for the study of linguistics. The first chapter aims at answering the question "What is linguistics?" Achieving this aim has to deal with the following underlying issues:

(i) Are there d*istinctive features* setting off scholarly thinking from non-theoretical contemplation?

(ii) How does one differentiate between philosophy and the various academic disciplines (including linguistics)?

(iii) Answering question (ii) should entail an argument regarding the *foundational position* of philosophy.

Sometimes academic disciplines are described in terms of a prominent *theory* within a specific special science. For example, one may think that physics is nothing but *quantum theory* (which is not fully reconcilable with Einstein's theory of relativity). Or one may say that mathematics "is axiomatic systems expressed in set theoretic language" (see Hersh 1997:41). Within the discipline of linguistics various options are open. One may hold that it is phonology, grammar or semiotics. Yet, as soon as one introduces the history of any discipline it becomes clear that no definition of any discipline could get away merely by stipulating one or more *sub-disciplines* of the special science under consideration. Equally less will it suffice to pursue the general practice in the teaching of any scholarly discipline, namely to commence by providing a *definition* of the nature of the discipline (and its sub-disciplines) to be taught.

Suppose we state that *linguistics is the theoretical study of the lingual aspect of language* [A], as Weideman asserts (Weideman 2011:19), and suppose this definition assumes that the discipline of linguistics is constituted by sub-disciplines such as phonology, semiotics, philology, semantics, and so on. Then the crucial question is if the italicized definition [A] could be appreciated as a *statement* belonging to the discipline of linguistics or perhaps as a statement belonging to one of the (mentioned) sub-disciplines of linguistics? This is clearly not the case, for [A] is neither linguistic in nature nor saying anything which belongs to the mentioned sub-disciplines. The linguistic special scientists may advance the rebuttal that it is only a specialist within the field of linguistics who can tell us what this discipline is all about. However, this attempted disproof misses the point – the question is not *who* provides us with a definition of linguistics? but: what is the *nature* of such a definition? Clearly, any definition of linguistics takes a step back: it no longer *employs* the language of linguistics as one of the existing special sciences, but *speaks about* this discipline – which means that even when a specialist in the field provides us with an answer, such an answer still belongs to a philosophical reflection on the nature of linguistics.

What is furthermore required is a "subject-independent" ontic orientation. The term "on" refers to the Greek word designating whatever *exists*. Only if what Weideman calls the "lingual aspect" does have an *ontic status* do we discern an enduring "anchor-point" making possible the *history* of scientific developments within the discipline of linguistics. The same applies, for example, to mathematics. If mathematics is axiomatized set theory, whatever happened before Cantor developed modern set theory (between 1874 and 1899), or before its first axiomatization in 1904, does not belong to mathematics any longer. Hersh is therefore justified in criticizing the (reductionist) view that mathematics is set theory, because it eliminates the "pre-set-theoretical" history of mathematics. "This claim obscures history, and obscures the present, which is rooted in history" (see Hersch 1997: 27 and Strauss 2011:16).

Without *ontically given* aspects as modes of explanation, such as n*umber, space* or the *lingual, no* single scholarly discipline can exist or undergo *historical development*. It is only on the basis

of the *universality* and *persistence* of the lingual aspect that one can speak of the *historical development* of languages and of the *history* of the discipline linguistics which is engaged in studying language from the perspective of the sign(ifying) mode aspect of reality. Since Descartes modern philosophy largely succumbed to the *nominalist* conviction that number and all universals are *modes of thought* (see his *Principles of Philosophy*, Part I, LVII; Descartes 1965:187). When the ontic status of *modes, functions* or *aspects* is acknowledged, then it must also be granted that they exist in the same sense as those concrete (natural and social) entities and events which have concrete *functions* within all the aspects of reality. This view responds positively to the question: are there, prior to any human intervention or construction, diverse ontically given aspects or functions of reality? This affirmation does not imply that the human thinking subject could be envisaged apart from this given diversity of aspects. Human thinking is emerged within this cosmic diversity. For this reason we experience all these aspects as are our *own*. Cognitive scientists and philosophers acount for this state of affairs by speaking of the "embodied mind" (see Lakoff & Johnson 1999:102 ff.).

Part of our human "embodiment" is found in the analytical ability we have to identify and distinguish. Logical thinking unfolds in these two, mutually dependent, activities: *lifting out* and *disregarding* (the activity of *abstraction*), *identifying* and *distinguishing* (the activity of *analysis*). Theoretical thinking emerges when a particular aspect of reality is identified and distinguished from others. One may say that theoretical thought is characterized by *modal abstraction*. The act of modal abstraction relinquishes the non-relevant aspects and focuses our theoretical-logical attention on one particular aspect. A theoretically articulated understanding of the meaning of the lingual aspect therefore depends on *modal abstraction*. The many sided functioning of entities ensures that although any special science, like linguistics, is delimited by a certain aspect of reality, it does not entail that linguistics is merely restricted to *one kind* of entity. Moreover, since a special science can only explore a specific mode of existence (aspect) by modally abstracting it, it has to commence by taking into account more than one aspect at once – which is typical of the task of philosophy. From this it follows that every special science inevitably proceeds from a *philosophical view of reality*.

However, strictly speaking a special science does not study an aspect as such. It merely explores a specific mode of explanation by using it as an angle of approach, as distinct glasses through which reality is observed. While a special science looks through the glasses (of an aspect) to reality, philosophy observes the glasses in their uniqueness and mutual connections.

In the case of linguistics this requires a twofold account: (i) what is unique about the delimiting angle of approach of linguistics as an academic discipline; (ii) how does this aspect cohere with other aspects of reality.

2. The unique delimiting angle of approach of linguistics

We may refer to this mode as the *lingual aspect*. Spoken or written words and sentences (utterances) appear to display a dual character, partly visible and partly invisible. Lyons distinguishes between *expression* and *content* and equates this distinction with the difference between *sounds* and *words* (Lyons 1969:54). De Saussure used the *sign* as point of orientation for these distinctions and Frege introduced the pair *Sinn* and *Bedeutung* (*meaning* and

reference) (see Frege 1892). From the point of view of the *sign* lingual subjects or agents are called *to signify*. Non-verbal signification expands the scope of *Sinn* in a semiotic sense, suggesting that one can depict the normativity (signify!) of this aspect by calling it the *semiotic aspect*. The *lingual form* of a response to this calling brings to expression *linguistic rules of grammar*, encompassing both *inflexion* (regarding the internal structure of words) and *syntax* (their structuration in sentences). And in this case it may be preferable to designate this mode as the *lingual aspect*.

Once signification took place various meanings (connotatively and denotatively) are attached to words and once this has been done communicative actions explore the *sharing of meanings*. The basis of shared meanings is found in disclosing the object function of various entities within the lingual aspect. Physical entities, for example, have latent object functions in post-physical aspects (see Weideman 2011:158 for an overview of the various aspects of reality). Material things cannot perceive, but they can be perceived by s*entient creatures*. They cannot speak but *humans* can name them, they cannot buy and sell but could be bought and sold by *humans*. Thus the latent sensitive, semantic and economic object functions of material entities could be *objectified*. In the context of this subject-object relation one may refer to this mode as the *semantic* aspect (enabling the discipline of *semantics* which studies the meaning of words).

Within the aspect under consideration we therefore have identified three structural elements which are strictly correlated with each other. On the norm side we have the command to signify (justifying the phrase: *semiotic aspect*), on the factual side we have a subject-object relation embracing both lingual and semantic elements. An overarching brief designation of all three elements is best found in calling this mode the *sign mode (signifying aspect)* – although it may sometimes be necessary to use the terms *semiotic, lingual* or *semantic* when the entire structure of the sign mode is intended.[1] These distinctions may provide a broader basis for the way in which Pinker approximated the correlation between norm side and factual side in his work dedicated to *words and rules* (see Pinker 2001).

We may therefore conclude that the delimiting angle of approach of linguistics as an academic discipline is given in the *sign mode* of reality.[2]

3. The coherence of the sign mode with other aspects of reality

The second above-mentioned question asked: How does this aspect cohere with the other aspects of reality? We shall first sketch some features of the historical development of linguistics in order to highlight how aspects that are foundational to the sign mode were distorted in being

---

[1] In his earlier work, Beyond Expression, Weideman distinguishes between complex linguistic concepts and then, inter alia, mentions "the categorial relation of lingual norm and lingual fact" as well as "the categorial relation between lingual subject, i.e. the human being who produces language in response to lingual norms, and lingual object, which is the concrete language that is produced in this response" (Weideman 2009:27).

[2] Bühler came close to what we have in mind with the *sign mode* where he speaks of the "sign-nature of language" ["die Zeichennatur der Sprache" (Bühler 1934:33.] The English translation phrased it as the "significative nature of language" (Bühler 1990:40). However, Bühler is not acquainted with the distinction between aspects (functional modes of being) and concrete entities. Therefore he does not realize that language, owing to its entitary structure, in principle functions in all aspects of reality, including the sign *mode*.

elevated to exclusive modes of explanation – and then we shall proceed by briefly pointing out how Weideman's philosophical paradigm accounts both for the *uniqueness* of the signifying mode and for the *coherence* between the sign mode and the non-lingual aspects of reality, before we investigate some of the unique features of language.

3.1 One-sided trends in the history of linguistics

One way of exploring an answer to this question is to look at the history of linguistics. The remarkable fact of this history is that it reflects the pervasive influence of successive philosophical stances which caused a one-sided interpretation of the sign mode and its coherence with other modes of reality. The advance of the modern natural sciences initially experienced what has been called the mechanization of our world view (see Dijksterhuis 1969). The era of *Enlightenment*, the 18th century, with its reification of *conceptual thought*, paved the way for diverse *naturalistic* orientations in the development of the science of linguistics during the 19th century.

Franz Bopp investigated the grammatical forms and their inflections, initially focused upon the verb and eventually regarding all parts of grammar. Verburg designated the method employed by Bopp in the first place as a *quantitative word analysis* and from it Bopp concluded to a quantitative construction of words and languages. Bopp described the origination of a language as a *mechanical* process of construction – in line with *Enlightenment rationalism*. Although not belonging to the same school of thought, the Frenchman De Brosses wrote a work on the mechanical features of the formation of language and the *physical* principles of Etymology.[3] Bopp, for example, advanced a specific view in respect of whether or not the Ablaut (a system of regular vowel variations also known as *apophony*) originally carried a meaning (as Grimm advocated with reference to analogical examples from Sanskrit). The effect of his physicalist approach is clearly seen in the way in which he responded to this problem, because he advanced a linguistic *theory of gravity*.

Bopp employs the example of a pair of scales and holds that in the case of the light suffix the preceding stem form is *heavy* while in the opposite case, when the suffix is *heavy*, the stem form is *light*. Being *heavy* or *light* is dependent upon the vowels which are employed. For example, "a" is *heavy* and "i" is *light*. Bopp continued to argue against the view of Grimm, namely that the *Ablaut* is of a later origin and that it did not reflect any modifications in meaning. The scientism of Bopp was continued in the line of Schleicher up to the positivism of the "Jung Grammatici." Grimm and von Humboldt belonged to a different line of development, namely the line of Rousseau to Herder which resulted in romanticism and classicism, encompassing von Schlegel, J. L.C. Grimm and von Humboldt (cf. Verburg 1951:14-16).[4]

Von Schlegel opposed Bopp in emphasizing that language is not words connected *mechanically* but "throughout structured organically." In the Indian and Greek languages "every root is truly that what the name says, like a *living germ*." Verburg remarks: "Von Schlegel's vegetative-

---

[3] See Verburg 1951:14. The French title of the book is: "Traité de la Formation *mechanique* des Langues et des Principes *physiques* de l'Etymologie".

[4] Eventually Jac. Grimm, by positing his famous law of sound displacement [*Lautverschiebung*], restored the fame of the scientistic language theory in the form of a mechanistic physicalism.

naturalistic view of language here clearly lies in front of us; the crux of his language theory, the theory of the root, as scientific theory here replaced Herder's speculation regarding the origin and this root is thought of in a fully biotic sense" (Verburg 1951:17).

This biologistic trend achieved greater heights in the thought of Schleicher. In 1873 he published a work on the *Darwinistic Theory of the Science of Language* with emphasis on the law for language, the sound law, which functions without exception [*ausnahmslos*] with blind natural necessity [mit blinder Naturnotwendigkeit].[5] Karl Bühler and Wilhelm Wundt both explored the sensitive-psychic mode of explanation. The latter reduced language to a psycho-physical perspective, understood as an *Ausdruckbewegung* (an *expression movement*), and the former, in his *Sprachtheorie* (1934), also developed a representational theory of language (see Bühler 1934 and 1990). Behaviourism reduced language to a mere "tool" against the pragmatistic background of animal psychology, aimed at eliminating any form of introspection. This view saw in language an "instrument" – Bühler explicitly advances an "organon model" of language (Bühler 1934:24 ff. and Bühler 1990:30 ff.). Owing to its psychologistic orientation the 1927 work *De Laguna* likewise became known as *psycho*-linguistics.

The influence of a logistic understanding of language caused the wide-spread identification of *concept* and *word*. Although Kant neglected the category of *language*, Cassirer, from the Baden school of neo-Kantian thought and perhaps best known for his three volume *Philosophie der symbolischen Formen*, conceived of language as a (qausi-Kantian) form of thought, impressed upon reality (see Cassirer 1946:12,37,97).

The science of linguistics did not succeed in avoiding the powerful effects of 19th century *historicism*. In 1886 the first edition of Paul's *Principles of the History of Language* appeared (the fifth edition was published in 1920). His first remark in the *Introduction* reads: "Like every other product of human culture is language an object of a historical reflection" (Paul 1920:1). He considers psychical organisms ["psychischen Organismen"] as the true bearers of historical development (Paul 1920:28) and he distinguishes "between law-conformative process and historical development" ["zwischen gesetzmässigem Prozess und geschichtlicher Entwickelung"] (Paul 1920:10). Distinct from (universal) natural laws Paul introduces a kind of (historically changeful) *type law* ("periodic lawfulness") holding only in a limited sense during specific periods of historical development ["immer nur auf eine in einer ganz bestimmten Periode vollzogene historische Entwickelung"] (Paul 1920:69). For this reason a *sound law*, for example, does not stipulate what recurrent always has to happen under certain universal conditions, because it merely establishes uniformity within a group of specific historical appearances.[6] In the *Foreword* to the fourth edition Paul objects therefore to the view found in

---

[5] Under the spell of organicism and the Darwinian idea of natural selection words were assumed to be involved in a struggle for existence and a survival of the fittest. Assonance and alliteration would result from a need of the larynx. In passing we may mention that Wilhelm Waetzoldt later on published a work on the *Work of Art as Organism* and he qualified it as "An aesthetic-biological Investigation " (see Waetzoldt 1905 and Malherbe 1947:71-72). Already in 1942 Malherbe highlighted the abuse of the ter 'organic' (see Malherbe 1943).

[6] "Das Lautgesetz sagt nicht aus, was unter gewissen allgemeinen Bedingungen immer wieder eintreten muss, sondern es konstatiert nur die Gleichmässigkeit innerhalb einer Gruppe bestimmter historischen Erscheinungen" (Paul 1920:68).

a work of Van Ginneken, on *Psychological Linguistics*, where he attempts to derive language development fully from a few basic universal propositions (Paul 1920:vii).

In his language theory Paul ultimately proceeded from the historicistic assumption that language does not conform to universal laws but is subject to continuous historical change and development, at most understandable in terms of patterns of specific historical periods. He holds that an effective reflection on language is impossible without accounting for the way in which it was established in a historical sense. When the basic meaning [*Grundbedeutung*] of a word is determined a *historical* fact is established. Likewise, when related forms are compared in order to derive a shared basic form [*Grundform*] then once again a *historical* fact is established.[7] Bühler remarks that "we should return to the feature historical, which Paul detects and stresses above all others as an indelible character of the object of the sciences of language" (Bühler 1990:5). The fact that Paul at the same time was aware of the basic problem in the historicistic emphasis on change at the cost of constancy, enhances his intellectual reputation and relativizes his historicistic stance. In the *Introduction* he also refers to factors that are uniformly present amidst all change ["die im allem Wechsel gleichmäßig vorhandenen Faktoren"] (Paul 1920:1). Bühler also noticed this ambiguity in the thought of Paul, for after he mentioned Paul's emphasis on history he alludes to statements in which persistence prevails and then writes: "No, here Harclitus goes to the Eleatics and quite properly takes account of something other than a river into which one can step twice,[8] he describes something of 'what is unchanging and constant amid every change' " (Bühler 1990:5).

3.2 Functional conditions for language

From the preceding overview it is clear that the history of linguistic theories successively explored non-lingual modes of explanation in their attempt to account for the meaning of language. We started with the physicalism of Bopp, proceeded by pointing at organiscistic, Darwinistic, psychologistic, logicistic and historicistic approaches. Each one of these *ismic* orientations did see something worthwhile, something we still have to account for. In fact in respect of language they discerned the co-conditioning role of aspects such as the *physical, biotic, sensitive-psychical, logical-analytical* and *cultural-historical*. But instead of trying to explain the meaning of the signifying mode from the perspective of anyone of these non-lingual aspects, the challenge is to elucidate both the uniqueness and the mutual coherence prevailing between these aspects.

In various academic disciplines the meaning of the aspects of number and space is overemphasized, resulting in what is known as atomistic (individualistic) and holistic (universalistic) orientations. In reacting to an atomistic semantic view, Paul is justified in rejecting the semantic view of Steinthal, namely that words do not have multiple meanings (Paul 1920:76-77). Yet according to Bühler, similar to all "his contemporaries, Paul is decidedly

---

[7] "Bestimmt man aber eine Grundbedeutung, die aus der andere abgeleitet sind, so konstatiert man ein historisches Faktum. Oder man vergleicht die verwandten Formen untereinander und leitet sie aus einer gemeinsamen Grundform ab. Dann konstatiert man wiederum ein historisches Faktum" (Paul 1920:21).

[8] See Diels-Kranz 1960, B Fragment 91.

individualistic in his views and makes an honest effort in the *Principles to* perform the task of bridging the gap [between individual and society] – a task incumbent on all monadic approaches"(Bühler 1990:4).

Within the discipline of linguistics an example from the sub-discipline of semantics illustrates the dilemma between atomism and holism. Antal, who appreciates a word as the basic sign-unit of language also attempts to deny multiple meaning nuances of a word. He protects the *unity* of the word by transposing the multiple meaning-nuances to the *denotata* (Antal, 1963:53, 54, 58). Weideman argues that the meaning of number, by contrast, is analogically reflected within the structure of the lingual mode: "When, from a uniquely lingual point of view, we look at the numerical dimension of our world, we see a *unity within a multiplicity of lingual rules and lingual facts*" (Weideman 2011:5-6). Weideman highlights the quantitative analogy within the structure of the sign mode with reference to the *plural* in English: "The lingual sound system and lingual form system interact, or become a unity within a multiplicity of (in this case: two) interacting systems. The regularly available sounds (/z/, /s/ and /iz/) interact with the forms to create additional lingually meaningful units. We observe here not only a multiplicity of rule systems at various levels, but also a multiplicity of factual lingual units that are governed by these systems" (Weideman 2011:6).[9]

An *analogy* is present when two aspects or entities are similar in that respect in which they differ. For example, whereas both mathematical space and physical space are extended (similarity), the former is continuous and infinitely divisible, while the latter is not continuous (it is bound to the quantum structure of matter) and is therefore not infinitely divisible (see Hilbert 1925:164). Inter-aspectual analogies are also designated as *modal analogies*. They differ from the following three analogies designated by *metaphors*: (1) analogies between different entities (E–E: "the nose of the car"), (2) between entities and functional aspects (E–A: such as the "mental space")[10] and (3) between aspects and entities (A–E: referring to *life* in a reifying way. Metaphors falling within categories 1, 2, and 3 may be replaced by different ones. But modal functional (inter-aspectual) analogies cannot be replaced – at most they can

---

[9] A Referee pointed out that this explanation is "premised on an early structuralist view of atomic, indivisible sounds" resulting (owing to an alternative view advanced by Trubetzkoy) in a "discredited view of phonology". However, from a *meta-perspective*, transcending both these contrasting views, it is clear that each one of them could only be articulated by implicitly employing a quantitative analogy. Stating that "the English plural represents minor surface variations" or speaking of "feature combinations" still highlights a *lingual multiplicity*.

[10] In their work on "mental spaces" Dancygier and Sweetser special attention is given to *conditional statements and mental spaces* – in the sense of this option 2 (see Dancygier and Sweetser, 2006:2917, 164-165). Speaking of *epistemic space*, if it is understood as an inter-modal relation between the logical-analytical aspect and the aspect of space, could be an instance of a spatial analogy within the logical-analytical aspect (see Dancygier and Sweetser, 2006:17), on a par with spatial analogies within the sign-mode (such as the semantic domain of a word) –also an A-A relation (see Strauss, 2009:155-15 In their work on "mental spaces" Dancygier and Sweetser special attention is given to conditional statements and mental spaces – in the sense of this option 2 (see Dancygier and Sweetser, 2006:2917, 164-165). Speaking of epistemic space, if it is understood as an inter-modal relation between the logical-analytical aspect and the aspect of space, could be an instance of a spatial analogy within the logical-analytical aspect (see Dancygier and Sweetser, 2006:17), on a par with spatial analogies within the sign-mode (such as the semantic domain of a word) –also an A-A relation (see also Strauss, 2009:155-156).

be substituted with synonyms (for example when continuous extension – the core meaning of the spatial aspect – is 'synonymized' by words and phrases such as *being connected, coherent*).

Particularly in semantic field theory atomism was also rejected. This trend includes the thought of Trier and Geckeler. They see a word as a true *Ganzheit* (whole) embracing its multiple meanings (meaning-nuances) as *genuine parts*. The signifying function of words is made possible through opposing words within their immediate environment, fulfilling the role of delimiting meaning (Trier, 1973:1, 5 ff., 15; Geckeler, 1971).

The basic meaning of a spatial whole is embodied in spatial relations which display the feature of being connected (i.e., being continuous and coherent, allowing for an infinite divisibility, already acknowledged by Aristotle,[11] as well as the awareness of *large* and *small*). Consider, for example, the nature of diminutives in ordinary language. This phenomenon makes an appeal to our awareness of the opposition large and small, originally found within the aspect of space. This phenomenon can only be comprehended if it is realized that there is an unbreakable inter-modal coherence between the spatial and the sign modes of reality (see Jenkinson, 1986:55).[12]

The general theory of modal aspects discerns, in addition to the numerical and spatial modes, the following aspects that play a foundational role in the meaning of the sign-mode: the kinematic aspect of rectilinear (constant/uniform) motion, the physical aspect of energy-operation (change), the biotic aspect of life, the sensitive mode of feeling, the logical-analytical mode of indentifying and distinguishing, and finally the cultural-historical aspect in which the free formative fantasy of humans is located.

Suppose we start with recognizing the key role of *words* within language, as it is emphasized by Reichling in his famous work, *Het Woord* (see Reichling 1967). As a *lingual unit* (quantitative analogy) words may display less or more meaning-nuances, i.e., a multiplicity of different meanings. All of them fall within the *semantic domain* (spatial analogy) of a specific word. Without persistence (continuity, lingual constancy – kinematic analogy), it would be impossible to establish *changes* in lingual meaning (lingual changes – physical analogy). This important insight already formed part of Plato's philosophy, because in order to avoid the changefulness of the world of becoming (accessible to the senses), Plato wanted to account for knowledge we can hold on to. For the sake of upholding the possibility of knowledge he therefore postulated the essential being of things, their *static eidos* – which is not subject to change (see his dialogue *Cratylus*, 439c-440a). The fundamental insight of Plato does not require a static *eidos* interpretation, because in terms of the theory of the modal aspects the issue at hand is the foundational position of the kinematic aspect in respect of the physical aspect. Galileo explored Plato's insight in his discovery of the *law of intertia* while Einstein made it into a cornerstone of the special theory of relativity by postulating an upper limit, namely the velocity of light in

---

[11] In following Anaxagoras it is self-evident for Aristotle that "everything continuous is divisible into divisible parts which are infinitely divisible" (Physica, 231 b 15 ff.; cf. Aristotle 2001:317).

[12] In a different context I have argued that there are four basic *analogy types*. Whereas three of them may be designated as *metaphors*, the fourth one, namely *modal analogies*, should be understood in terms of what is systematically articulated as backward-pointing analogies (retrocipations) and forward-pointing analogies (anticipations) (see Strauss 2011 and note 17 below).

a vacuum – whatever moves moves relative to this constant, which means that Einstein in the first place developed a theory of *constancy* (see Strauss 2011a).

When constancy is appreciated as a kinematic analogy within the modal structure of the physical aspect, then it is pretty easy to comprehend the kinematic and physical analogies exemplified in the expressions *lingual constancy* and l*ingual dynamics* (change). The fundamental link between these two aspect did not escape the attention of F. de Saussure. He states: "the principle of change is based on the principle of continuity" (De Saussure 1966:74 cp. Kant 1787-B:227).[13]

This sheds a significant light on Derrida's view of language, because he introduces his idea of *trace* and *différance*, according to Cilliers, "to prevent these two terms from acquiring fixed meanings" for it is "by their very instability that they allow us to say something more general about language" (Cilliers 1998:44). Nonetheless it is clear that the *instability* of varying meanings is still crucially dependent upon an element of *constancy*, which is found in the fact that both the terms "trace" and "différance" are persistently spelled in exactly the same way in any specific language!

Although Harbemas does not use the expression *lingual constancy*, Habermas definitely recognizes the *constancy* of alphabet letters as the sign substrate of lingual meanings: "Already on the level of the sign substrate of meanings, it must be possible repeatedly to recognize the sign-type in the diversity of corresponding sign events as the same sign."[14]

Biotic phenomena, in their original vital-organic sense, display an integrated process of differentiation, which is analogically reflected in *lingual life* where language differentiates into diverse word types and other larger signifying lingual units (sentences, paragraphs, texts). But if *lingual differentiation* is not kept in balance by *lingual integration*, the *lingual system* may disintegrate and collapse. This is analogous to the *biotic functioning* of living entities (such as plants, animals and human beings). Living things display their subjection to the biotic order of life in the succession of birth, growth, maturation, ageing and dying. It is only when the similarities between biotic phenomena and lingual phenomena are over-emphasized that we may arrive at the untenable position of an *organicistic* understanding of language, discussed in an earlier context, according to which language itself becomes an organism in the biotic sense of the term.

Once the signifying abilities of lingual subjects are considered, the connection between the mode of sensory feeling and the lingual aspect also surfaces. Language-use requires the necessary *lingual sensitivity* for the multiple nuances of the world *to be signified* and of the language serving this purpose. This structural element coheres with the equally indispensable moment of *lingual identification* and *lingual distinguishing* which highlights the logical-

---

[13] Kant still connects this insight with the distinction between "substance" and "accidents": "Therefore is everything that changes, enduring, and only its condition changes" ["Daher ist alles, was sich verändert, *bleibend*, und nur sein *Zustand wechselt*"] (Kant 1787-B:230).

[14] "Schon auf der ebene der Zeichensubstrats von Bedeutungen muß der Zeichentypus in der Vielfalt korrespondierender Zeichenereignisse als dasselbe Zeichen wiedererkannt werden können" (Habermas, 1998:26-27).

analytical analogy within the modal structure of the sign mode. One may link this distinction to the difference between *concept* and *word*. For example, if the words *circle* and *square* encompassed everything entailed in their corresponding *concepts*, it simply would have been *contradictory* to use the metaphor of a *boxig ring*, because from a purely logical-analytical perspective the concept of a *square circle* is *illogical* (a more elaborate account is found in Strauss 2011:16 ff).[15] In general it should be pointed out that typical semantic phenomena, such as synonymity, ambiguity and metaphoricity), enjoy a *semantic freedom* which cannot be tolerated within a logical-analytical context. From this example we may conclude that the outcome of a *correct* logical identification and distinguishing plays a *foundational role* in language, yet leaving room for transcending the restrictions of logicality by exploring the use of language in a metaphorical way.

Finally, the *formative* substrate represents the cultural-historical aspect as the immediate predecessor of the sign mode in the order of succession of the various aspects. Although one may first of all think about the historical development of any specific language, or even about the general tendency to move from synthetic to more analytical languages, this consideration merely focuses on the *external* coherence between the sign-mode and the function of language within the cultural-historical mode. The *internal* coherence concerns historically variable ways in which linguistic forms take shape. Differences in grammar and syntax directly follow from the historical foundation of the lingual aspect.

Of course this distinction should not be seen as a concession to the historicistic approach to language which we met in the view of Paul who reduced language to language in historical development. The untenability of historicism is seen from the fact that it reaches the opposite of what it aims for. Precisely because the meaning of the sign-mode is irreducible to the historical mode is it possible to speak of lingual history (equivalent to economic history or legal history). But if language, economics and law are intrinsically historical in nature, there is nothing left that can *have* a history. This is the irony of historicism, since if everything is history, there is nothing left that can *have* a history! Only when a distinction is drawn between the historical and sign-modes will it be possible to arrive at a meaningful account of lingual history, such as is embodied in the etymology of words or the genealogical connections between diverse languages (the *phylum* of Indo-European languages count about 3 billion native speakers – see http://en.wikipedia.org/wiki/Indo-European_languages).

Verburg correlates with the pre-lingual functions of reality certain linguistic sub-structures, following the modal order from later to earlier: linguistics, grammar (syntax, morphology), semantics (lexicology), phonemics, organic phonetics, acoustic phonetics, quantitative phonetics, and distribution (Verburg 1965:92).

From another angle it is also clear that the various modal aspects of reality co-condition the use of language. Since De Saussure advanced the view that the "bond between the signifier and the signified is arbitrary" (see De Saussure, 1966:67) philosophers and linguists tend to neglect

---

[15] In a lingual context the focus may be restricted to merely one element of the meaning nuances of the word "circle," namely "an enclosed space."

the equally significant fact that the modal aspects constitute a functional horizon reflected in *every possible language* (cp. Strauss 2009:332 ff.). [16]

This explains why all languages contain number words (such as the *one* and the *many*, *singular* and *plural, plenty, much, multiple, diversity* and *endless/infinite*).[17] The ontic meaning space, in turn, in all languages enables terms such as *large* and *small* (compare *diminutives*), *close-by* and *far-away*, and so on. Kinematic terms relate to (uniform) motion (such as *constancy, persistence* and *endurance*). Words reflecting structural features of the physical aspect are *cause and effect, energy-operation, validity, force,* and *entropy*), functional biotical phenomena are captured in words such as *life, growth, differentiation, integration, goal-directedness* and *adaptation*), while the meaning of emotional relations are reflected in terms such as *feelings, emotions, perceptions, awareness, consciousness* and *sensitivity*). Regarding the normative aspects logical relations fulfil the same role, compare terms such as *inference, contradiction, discern, abstract, analyze, argue,* and *statement*). Cultural-historical terms include words such as a *free formative imagination, power, control, imaginitivity, revolution, reformation,* and *mastery*). With the lingual or sign mode we associate words such as *expression, meaning, significance, sign, allusivity* and *interpretation*); social relationships are captured as *courtesy, tact, kindness, friendship, peer, pal, partner* and *[as]sociation*); the meaning of the economic aspect surface in words such as *frugality, sparing, wasteful, stewardship, credit* (economic trust), *profit* and *the avoidance of excess*; aesthetic terms are *pretty, gorgeousness, beauty, harmony* and *splendor*); the meaning of the jural aspect comes to expression in words like *retribution, fault, guilt, unlawfulness, illegality* and *just[ice]*); we know moral terms such as *troth, love, integrity, respect* and *sincerity*); and finally we are also acquainted with certitudinal expressions (*reliability, trustworthiness, certainty, fiduciary, trust, credo* and *faithfulness*).[18]

4. The intertwinement of the dimensions of aspects and the dimension of entities

Since aspects are modes of being which condition the ways in which concrete (natural and social) entities are functioning within them, they cannot act themselves. Naturalist understandings of human *action* reduce them to something exclusively *physical*. However, the question how something purely physical can produce a non-physical linguistic meaning remains unanswered on such a naturalistic standpoint – apart from the fact that the conditions for being physical are not themselves material or physical, just as little as the conditions for *being green* are themselves green. An integral understanding of human subjectivity has to account for the fact that the human

---

[16] I have discussed the views of Lakoff elsewhere (see Strauss 2009:143-146), by showing that the position assumed by him focuses on the problem of 'words' and 'thoughts' without considering the relationship between the logical-analytical aspect and the sign mode (see Strauss 2009:143-147). The idea of conceptual metaphor hides such a consideration (see also Gavins and Steen, 2003:30 ff., 99 ff.).

[17] Note that the concern here is with the underlying concepts designated by number words (either using nouns or verbs) – and not merely *words* from a particular language. Words can be translated, whereas concepts cannot be translated, they could only be *apprehended* (albeit often mediated by using related words).

[18] That the lingual exploration of metaphors is also bound to the horizon of aspects and entities is argued in Strauss 2011. Metaphors explore analogies between *entities and processes*, between *entities and modal aspects*, and between *aspects and entities*. Analogical connections between modal aspects are not metaphors because they are irreplaceable (at most exchangeable by synonyms) – they are also designated as retrocipatory and anticipatory analogies.

being has active functions within all aspects of reality. In addition to the physical subject function of human beings they also function as subjects within the biotical and sensitive-psychical aspects of reality. This implies that the human body embraces an organic structure (including the brain as organ) as well as a sentient structure (including human consciousness) and that these sub-structures serve as the foundation for the typical normative structure of being human. The latter accounts for all the typically *normed* abilities of being human. The material sub-structure of the human body is physically qualified, the organic sub-structure has a biotic qualification and the sensitive sub-structure is qualified by the sensitive mode of reality. However, the qualifying normative structure, embracing all the normative subject functions of being human – namely the logical-analytical, cultural-historical, lingual, scocial, economic, aesthetic, jural, moral and certitudinal (see Weideman 2011:158) – is not qualified by any aspect. A human person can alternatively act under the guidance of any normative vista, without being fully absorbed by it. Focusing on a *scientific problem* could be succeeded by *buying* something, by *visiting a friend*, or by *appreciating an artwork*.[19] Although the normative structure is the qualifying structure of the human body, in itself it is therefore *unqualified*.

Every sub-structure has its own internal sphere of operation which externally serves the "body-plan" as a whole. Paul displays a glimpse of this distinction in his discussion of the chief task of a theory of the principles of a cultural science, aimed at establishing the universal conditions under which the physical and psychical factors, while conforming to their own typical laws, succeed to co-operate in service of a shared goal.[20]

4.1 Do humans have "speech organs"?

Paul refers to the physiological processes involved in speech actions and the stimulation of the motoric nerves activating human "speech organs" (Paul 1920:17). This widely held view does not recognize that human speech is a phenomenon exceeding the service of any specific human *bodily organ*. Language is a capacity of *being human* and not merely an *organ-ability*.[21]

In fact animals fall short of human language because they display inherent anatomical limitations in this respect. The typical anatomy of humans entails a high position of the human larynx at birth, followed by its gradual descent after the post-natal period (cf. Portmann, 1973:423). Since this does not occur in the anthropoids (Orangutan, Chimpanzee, Gorilla and Gibbon) they lack the human ability to speak. The high position of the larynx in the human infant provides a way for drinking milk that is separate from the windpipe, thus allowing the baby to breathe while drinking. But owing to this anatomical condition the human infant cannot speak, similar to all mammals. Laitman observes:

> This high position permits the epiglottis to pass up behind the soft palate to lock the larynx into the nasopharynx, providing a direct air channel from the nose through the

---

[19] Whereas the realms of material things, plants and animals are uniquely qualified by a distinct modal aspect (qualifying function), the argument here is that humans are not uniquely qualified by a distinct modal aspect – illustrated by mentioning successive typical human acts which are *guided* (not qualified!) by different modal aspects.

[20] "Es ergibt sich demnach als eine Hauptaufgabe für die Prinzipienlehre der Kulturwissenschaft, die allgemeine Bedingungen darzulegen, unter denen die psychischen und physischen Faktoren, ihren eigenartigen Gesetzen folgend, dazu gelangen zu einem gemeinsamen Zwecke zusammenzuwirken" (Paul 1920:7).

[21] An extensive analysis of this point is found in Strauss 2009 (see pages 121 ff.).

nasopharynx, larynx and trachea to the lungs … In essence, two separate pathways are created: a respiratory tract from the nose to the lungs, and a digestive tract from the oral cavity to the esophagus. While this basic mammalian pattern – found with variations from dolphins to apes – enables an individual to breathe and swallow simultaneously, it severely limits the array of sounds an animal can produce … While some animals can approximate some human speech sounds, they are anatomically incapable of producing the range of sounds necessary for complete, articulate speech (Laitman 1985:282).

Once the larynx completed its downward movement it can no longer lock into the nasopharynx which entails that the respiratory and digestive pathways cross above the larynx. Although this enables the possibility of suffocating the expanded pharynx grants humans a rich variety of speech sounds. Goerttler even mentions that in the third month after conception, a distinctively human structural element develops (the vocal chord 'blastem' – Goerttler 1972:250).

If a speech organ is seen as a part of the human body exclusively existing for serving the production of speech sounds, then strictly speaking there are no *human speech organs*. Candidates like the lungs, larynx, mouth cavity, palate, teeth, lips and nose cavity would fulfill their basic functions even if human beings never uttered a word (Overhage 1972:243)! The subtle cooperation of heterogeneous organs, such as the mouth, larynx and brain, which are cooperating in the production of human speech sounds, obstructs if not totally rules out a causal evolutionistic explanation for this astounding phenomenon. Is it possible to fathom all the mind-blowing changes needed to produce the conditions required for the formation of truly human language? Overhage is fully justified in claiming that such "an unfathomable process of change affecting so many differently structured organs and organ complexes, closely correlated with each other, should have proceeded harmoniously as a total change, if it was to come to the unprecedented perfection of human speech" (Overhage 1972:250).

4.2 Is language an apriori capacity?

The classical epistemological problem regarding the priority of what is considered to be *apriori* or *aposteriori* could be illustrated by looking at the way in which Stegmüller explains Chomsky view regarding language acquisition. Does it arise from imitating competent users of a language (*aposteriori*) or is there also an inherent (*apriori*) capacity to be acknowledged? Once again the problem touches upon a wider philosophical context, free will versus determinism – currently preferably captured by discussions over "cognitive determinism." In this analysis we have to reject determinism because it does not appreciate the contrary logical – illogical as presupposing an accountable, freely choosing human will, which at once points at a *linguistic meaning* which requires choice and needs interpretation.[22] Stegmüller explains how Chomsky

---

[22] Compare Stegmüller 1969:530-533 and Strauss 209:327-328. In passing we may remark that Tomasello, in his work on the origins of human communication (2008), does not consider the distinctions and arguments developed in this article. He does not consider the *anatomical restrictions* of animals regarding (human) language, he does not contemplate the issue of a freedom of choice and accountability, and he does not account for the *normed* foundations of human language, evinced in the co-conditioning role of the logical mode through which post-logical normative contraries obtain their legitimacy – normative contraries analogically echoing the logical– illogical contrary, found in contraries like *clarity – obscurity, polite – impolite, frugal – wasteful, beautiful – ugly, legal – illegal,* and *moral – immoral*. It should also be noted that the anatomical restrictions preventing animals from producing language is acknowledged across the boundaries of different schools of thought.

reverted to the Cartesian legacy of apriority in order to explain the acquisition and mastering of a language. He compares it with the complexities encountered when studying differential geometry and quantum physics. Hypothetically Stegmüller mentions the strange event of a two-year old boy who is involved in mastering the mentioned disciplines and compares it with the normal report of a boy mastering his mother tongue. What is remarkable in this story is that Chomsky brought to the fore *empirical* arguments supporting his view that learning an ordinary language exceeds a purely empirical account.

What happens when a child learns a language?

First of all the grammatical structure and linguistic rules have to be mastered and this is accomplished from an apparently insufficient amount of linguistic data. Chomsky adds that even a child can generate more sentences than there are seconds in the life of an average person. Comparing getting into a complex scientific theory and being involved in learning a language, one may assume that differences in intelligence would be significant. Yet, large differences in intelligence does not result in significant differences in linguistic competence. Moreover, even though the linguistic experience of the child is both limited and largely degenerate, the child nevertheless succeeds to master the principles and rules governing the construction of meaningful sentences and the interpretation of linguistic utterances.

What is perhaps equally peculiar is that the language is learned at a stage in which such a child is incapable of achieving anything similar. Add to this that no direct instruction is involved and that many children learn to speak without ever actively participating in lingual communication. Finally, when the basic linguistic skill is mastered the child can generate meaningful sentences never heard before. This rules out any idea that language merely emerges from imitating what is heard. The over-all picture is that Chomsky is correct in his claim that an a priori element is inherent in the human faculty of language-acquisition.[23]

Although the human language ability is founded in the biotic and sensitive sub-structures of the human body, it cannot be reduced to a mere natural disposition, for the important reason that human language always presupposes a *freedom of choice*. Accompanied by the concomitant multiple possible meanings given to words, which in turn always require interpretation, implies that language is one of the multiple normative abilities of being human (cf. Nida 1979:203; De Klerk 1978:6; and Lyons 1969:89). It presupposes the responsible free human activity, which requires accountable choices. Eibl-Eibesfeldt categorically states that that "which, by contrast, regarding animals, is generally designated as 'language', exclusively moves within ... the domain of interjection, of the expression of moods lacking insight."[24]

---

[23] Pinker investigates the problem of a *language instinct*. He is critical of the idea of a spelling gene, a read-a-book gene, a politeness gene, and so on – and then declares that the "everexpanding toolkit of the geneticist and neurobiologist is mostly useless (see Pinker 1994:298-299). Compare the above-mentioned view of Overhage regarding the absence of *speech organs* in humans (see Overhage, 1972:243).

[24] "Das, was man beim Tier dagegen im allgemeinen als »Sprache« zu bezeichnen pflegt, bewegt sich, ..., ausschließlich auf dem Gebiet der Interjektion, der uneinsichtigen Stimmungsäußerung" (Eibl-Eibesfeldt, 2004:214).

5. Concluding remarks

Arguing for *modal abstraction* as distinctive feature of scholarly activities entails that the philosophical paradigm of Weideman provides a sound argument for the inevitable *philosophical foundation* of all special sciences, including the discipline of linguistics (which is exemplified in the history of this academic discipline). It also reveals a remarkable sensitivity for the *uniqueness of* and *coherence between* the various modal aspects of reality, ultimately expressed in the intention to develop a non-reductionist ontology. The latter aim, on the one hand, appreciates what was discovered by one-sided (reductionist) approaches in the history of linguistics as a discipline, while at the same time, on the other, it enables an incorporation of the underlying states of affairs within the perspective of a non-reductionist ontology. By expanding this perspective to include the intertwinement of modal aspects and (natural and social) entities and processes, the uniqueness of language and the human ability to speak were highlighted.

REFERENCES

Antal, L. 1963. *Questions of Meaning*. The Hague: Mouton.

Aristotle. 2001. *The Basic Works of Aristotle*. Edited by Richard McKeon with an Introduction by C.D.C. Reeve. (Originally published by Random House in 1941). New York: The Modern Library.

Bühler, 1934. *Sprachtheorie. die Darstellungsfunktion der Sprache*. Jena: Gustav Fischer.

Bühler, 1990. *Theory of Language, the respresentational function of language*. Philadelphia: John Benjamins Publishing Co.

Cassirer, E. 1946. *Language and Myth*. New York: Dover Publications.

Cilliers P. 1998. *Complexity and Postmodernism: Understanding complex systems*. London: Routledge.

Dancygier, B. & Sweetser, E. 2006. *Mental Spaces in Grammar*. Cambridge: University Press.

De Klerk, W.J. 1978. *Inleiding tot die Semantiek*. Durban: Butterworth.

De Laguna, G.M.A. 1927. *Speech: its function and development*. New Haven: Yale University Press.

De Saussure, F. 1966. *Course in general Linguistics*. Edited by Charles Bally and Albert Sechehaye, London: McGraw-Hill.

Descartes, R. 1965. *A Discourse on Method, Meditations and Principles*, translated by John Veitch, Introduced by A.D. Lindsay. London: Everyman's Library.

Diels, H. and Kranz, W. 1959-60. *Die Fragmente der Vorsokratiker*. Vols. I-III. Berlin: Weidmannsche Verlagsbuchhandlung.

Dijksterhuis, E.J. 1969. *The mechanization of the world picture [Mechanisering van het wereldbeeld]*. London: Oxford University Press.

Eibl-Eibesfeldt, I. 2004. *Grundriß der vergleichenden Verhaltensforschung, Ethologie. 8th revised edition*. Vierkirchen-Pasenbach: Buch Vertrieb Blank GmbH.

Eibl-Eibesfeldt, I. 2004. *Grundriß der vergleichenden Verhaltensforschung, Ethologie*. 8th revised edition. Vierkirchen-Pasenbach: Buch Vertrieb Blank GmbH.

Frege, G. 1892. Über Sinn und Bedeutung. In: *Zeitschrift für Philosophie und philosophische Kritik*, NF 100, 1892, S. 25-50.

Gadamer, H-G, and Vogler, P. 1972. *Neue Anthropologie*, Vol. II. Stuttgart: Georg Thieme.

Gavins, J. and Steen, G (Eds). 2003. Cognitive Poetics in practice. London: Routledge.

Geckeler, H. (Editor.) 1978. *Strukturelle Bedeutungslehre*. Darmstadt: Wissenschaftliche Buchgesellschaft.

Geckeler, H. 1971. *Strukturelle Semantik und Wordfeldtheorie*. München: Fink.

Goerttler, K. 1972. Morphologische Sonderstellung des Menschen im Reich der Lebensformen auf der Erde. In: Gadamer and Vogler, 1972, Volume 2 (pp.215-257).

Habermas, J. 1998. *Faktizität und Geltung. Beiträge zur Diskurstheorie des Rechts und des demokratischen Rechtsstaats*. Frankfurt am Main: Suhrkamp edition (first edition 1992).

Hersh, R. 1997. *What is Mathematics Really?* Oxford: Oxford University Press.

Hilbert, D. 1925. Über das Unendliche, Mathematische Annalen, Vol.95:161-190.

Jenkinson, A.G. 1986. *Die Diminutief in Afrikaans*, Deel 1. In: SA Journal of Linguistics, Year 4, Nr.2, April (pp.39-62).

Kant, I. 1787. *Kritik der reinen Vernunft*, 2nd Edition (references to CPR B). Hamburg: Felix Meiner edition (1956).

Laitman, J.T. 1985. Evolution of the upper respiratory tract: The fossil evidence. In: Tobias, 1985:281-286.

Lakoff, G. & Johnson, M. 1999. *Philosophy in the Flesh. The Embodied Mind and Its Challenge to Western Thought.* New York: Basic Books.

Lyons, J. 1969. *Introduction to Theoretical Linguistics*. Cambridge: University Press.

Malherbe, D.F. 1943. Organies – biologiese begrip misbruik. In: *Tydskrif vir Wetenskap en Kuns*, 4(1):11-18 Julie.

Malherbe, D.F. 1947. Kuns – Selfstandig en Afhanklik [Art, Independent and Dependent]. In: *Philosophia Reformata*, 2nd Quarter (pp.67-85).

Nida, E.A. 1979. *Componental analysis of meaning*. The Hague: Mouton.

Overhage, P. 1972. *Der Affe in dir*. Frankfurt am Main: Josef Knecht.

Paul, P.H. 1920. *Prinzipien der Sprachgeschichte*. Halle: Max Niemeyer.

Pinker, S. 1994. *The language instinct: the new science of language and mind*. New York: Penguin.

Pinker, S. 2001. *Words and rules: the ingredients of language*. London: Phoenix.

Plato, 1973. Edited by E. Hamilton and C. Huntington: The Collected Dialogues of Plato; Including the Letters. Princeton: University Press.

Portmann, A. 1973. Der Weg zum Wort. In: *ERANOS* Vol 39, Leiden.

Reichling, A. 1967. *Het Woord. Zwolle* (1967²) (1935 – Nijmegen: Berkhout).

Stegmüller, W. 1969. *Main Currents in Contemporary German, British and American Philosophy.* Dordrecht: D. Reidel Publishing Company, Holland.

Strauss, D.F.M. 2009. *Philosophy: Discipline of the Disciplines*. Grand Rapids: Paideia Press.

Strauss, D.F.M. 2011. Metaphor: The intertwinement of thought and language. In: *KOERS* 76(1)2011:11-31.

Strauss, D.F.M. 2011a. "Relasiebegrippe in die lig van die vraag of Einstein in die eerste plek 'n 'relatiwiteitsteorie' ontwikkel het", Suid-Afrikaanse Tydskrif vir Natuurwetenskap en Tegnologie 30(1), http://www.satnt.ac.za/index.php/satnt/article/view/28.

Tobias, P.V. 1985 (Editor). *Hominid Evolution*. New York: Liss.

Tomasello, M. 2008. *Origins of Human Communication*. Cambridge, Massachusetts: The MIT Press.

Trier, J. 1973. *Aufsätze und Vorträge zur Wortfeldtheorie*. Edited by von Anthony van der Lee and Oskar Reichmann, The Hague: Mouton.

Verburg, P.A. 1951. Enkele lijnen en feiten in de ontwikkeling der taaltheorie. In: Zuidema & Popma 1951:13-32.

Verburg, P.A. 1965. Delosis and Clarity. In: *Philosophy and Christianity*. Essays dedicated to professor dr. Herman Dooyeweerd. Amsterdam: North Holland Publishing Company.

Waetzoldt, W. 1905. *Das Kunstwerk als Organismus, Ein ästhetisch-biologischer Versuch*. Leipzig: Du?rr'sche Buchhandlung.

Weideman, A. 2009. *Beyond Expression. A systematic study of the foundations linguistics*. Grand Rapids: Paideia.

Weideman, A. 2011. *A Framework for the study of linguistics*. Grand Rapids: Paideia and Pretoria: Van Schaik.

Zuidema, S.U. and Popma, K.J. 1951. *Wetenschapelijke Bijdragen door leerlingen van dr. D.h. Th. Vollenhoven*. Franeker: T. Wever.

ABOUT THE AUTHOR

Danie Strauss

Email: dfms@cknet.co.za