

The “modal grid” underlying Language, Communication,
Translation and the Learning of a New Language

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Abstract

Most modern linguists emphasize the fact that, as De Saussure states it, the “bond between the signifier and the signified is arbitrary.” Although this emphasis may prompt one to fathom that language use as such is completely arbitrary, there are diverse considerations supporting the view that language is also co-determined by an underlying, constant framework. The latter reveals the two basic dimensions of human experience, reflected within language in the presence of verbs, nouns (and property terms; attributes). Verbs and property terms are made possible by the multiple functional domains of our experience related to the *how* of things and not to their concrete *what*. These aspectual (ontic) domains actually serve as points of entry to our experience of and reflection upon things and events within reality, expressed in *linguistic patterns*. As constant cadres (frameworks) these points of entry make possible (co-condition) the rich variability found in different languages. De Saussure already had to concede, in an almost contradictory fashion, that there is both an element of mutability and immutability attached to language. It will be argued that the horizon of the functional conditions of language ultimately underlies meaningful communication and that acknowledging it enables a new approach both to *translation* and the *learning of new languages*. In conclusion a remark about methodology is made.

The metaphor of the “modal grid” employed in the title of this article aims at giving an account of indispensable *ontonomic* conditions for language and communication. Scholars within the field of the communication sciences may find the metaphor *modal grid* and the term *ontonomic* as non-familiar.¹ We start by explaining the meaning of the term *ontonomic*. In a later context we shall give an account of the metaphor *modal grid*.

“On” (ὄν) is the Greek word for *what exist, what is* – and “nomos” (νόμος) is the Greek word for “law” in the broad sense of the term (not restricted to its *jural* meaning). The most familiar word derived from the root “on” is the philosophical study of what is, namely *ontology*. Whereas the term *ontology* acquired an

¹ It is found within certain contexts related to the discipline of theology, but the meaning here intended is completely different from those meaning-nuances.

encompassing scope applicable to whatever there is, its equivalent *cosmology* appeared to be restricted to the limited perspective of a *physical* account of the origin and genesis of the (physical) world.

Traditionally *ontology* is therefore related to “being” – intending to capture the concrete existence of whatever there may be. Since Aristotle the discipline within which ontological questions is raised bears the name *metaphysics* and a contemporary author such as Loux refers to things that are – and immediately relates them to the question what the categories are in terms of which we think about what is real, about *reality* (see Loux, 2002:16). The moment categories enter the scene we are confronted with the basic human ability to understand and to *conceive*, to acquire *concepts* and on that basis to be able to *classify*. The first question that will turn out to be of crucial importance for an understanding of language, communication and translation is:

What is entailed in acts of classification and categorization?

Think of our first experiences as human beings. As we begin to explore our self-consciousness we realize that we live within a family and that there are sleeping rooms in the house. The normal daily routine of going to bed in the evening and getting up again the next morning presupposes our cognitive ability to *identify* the bed and to *distinguish* it from other furniture in the bedroom. Without knowing what a bed is and without realizing that a chair is not a bed, one may find one's pants in the bed and oneself hanging over the chair. Identifying and distinguishing this bed from the chair over there presupposes an understanding of the general (*universal*) attributes of chairs and beds, enabling us to conceptualize the categories of *chairs* and *beds*.² In other words, observing a bed *as* a bed rests on the concept of a bed (implying, amongst others, the property: “something to sleep on”). Likewise, noticing a chair as a

² Plessner mentions that the overarching ordering found in collective names used by human beings is absent in the case of animals. This follows from the fact that animals do not dispose over the mediating medium of distance, the mediated immediacy of language to things. For that reason they lack an interest in information (Plessner, 1975:380). [“Dinge im Sinne eines Sammelnamens, wie wir ihn überordnend gebrauchen, kennen sie al solche nicht. Es fehlt ihnen dazu das vermittelnde Medium der Distanz, die vermittelte Unmittelbarkeit der Sprache zur Sache. Daher das mangelnde Interesse an Information.”]

chair depends on the prior concept of a chair (implying, amongst others, the property: “something to sit on”). In these minimal indications, enough is found to highlight the fact that classifying this chair and that bed into the categories of chairs and beds, requires both *similarities* and *differences*. Both chairs and beds are cultural artifacts, in our comparison captured by the anonymous reference to “something” – the moment of similarity between them, for they are *things* in an *ontic* sense. But although we are referring in both instances to “something,” the two “things” are different, for the one is a chair and the other a bed.

Categorizing and discerning similarities are normally reflected in language, in the *designation* of what has been subsumed under a particular category and on that basis it can be *communicated* to (shared with or even translated for) others. It seems natural to assume that things (i.e. natural and social entities) exist out there, i.e. that they have an *ontic* nature. Stones, clouds, planets, galaxies, flowers, trees, dogs, cats, human beings, artifacts, and societal collectivities are all concretely existing things displaying an ontic nature. However, conceding that there are concretely existing things (and processes) does not settle the subsequent issue: what is the *status* of these categories themselves? Are they merely inventions of the human mind, constructions of our understanding, or do they have an ontic existence too?

In the tradition of the early Greek thinker Parmenides we find categories such as *unity, truth, beauty* and *goodness* in the thought of Plato. Aristotle, in turn, commences his work *Categoriae* by postulating the existence of a primary substance that is purely individual and supposedly lies at the basis of all the accidental categories – namely *essence, quantity, quality, relation, place, time, position, state, activity* and *passivity*.³ During the middle ages this Platonic and Aristotelian legacies were continued until a radical reorientation emerged since the 14th century. Descartes (1596-1650), for instance, claims that number and all universals are mere *modes of thought* (*Principles of Philosophy*, Part I, LVIII – see Descartes, 1965a:187). This

³ See Aristotle, 2001:195 (*Topics*, 103 b 21-23; see also Aristotle, 2001:10, i.e. *Categories*, 2 b 15-17). However, this entire scheme is embedded in the primordial and ultimate dualism between *form* and *matter* in his thought. The effect of this dualism is that he distinguishes between *accidentia* related to matter (such as *quantity*) and others related to form (such as *quality*).

conviction holds that only concrete entities are real but that their properties are *human constructions*.

In spite of this switch an essential element of the classical Greek legacy remained in force. Plato started by assuming a transcendent world of *static being* populated by immutable ontic forms (*eidè*) copied in the world of becoming (*genesis*). During the early Middle Ages Neoplatonism mediated the transformation of these static *eidè* into the original designs present in the *Divine Intellect* according to which visible things were formed. With the transition to the Renaissance and the rise of modern humanism these ideas (universal forms) in the *Divine Mind* became immanent to the human mind – known as *idea innate* (innate ideas). Descartes adhered to the *a priori* nature of these innate ideas, supposedly present in human understanding prior to any experience.

Language acquisition – an a priori human faculty: Chomsky

The view that language represents an *a priori* human faculty derives from a revival of the notion of *idea innate* (innate ideas) during the 20th century in the thought of the linguist Noam Chomsky. Stegmüller employs a neat comparison in order to explain Chomsky's understanding of this issue. He compares acquiring / mastering a language with the complexities involved in studying differential geometry and quantum physics.⁴ Whereas it would seem to be far-fetched to believe that a two-year old boy is mastering the said disciplines, no one considers it strange to hear that such a boy is mastering his mother tongue.

The remarkable element in this story is that Chomsky advanced a number of empirical arguments supporting his conviction that learning an ordinary language cannot be accounted for merely in terms of an empirical process. What is at stake is the mastery of a grammatical structure and linguistic rules from an apparently insufficient amount of linguistic data and to this Chomsky adds that even a child can generate more sentences than there are seconds in the life of any average person. Keeping in mind the comparison between mastering a complex scientific theory and learning a language, one should imagine that differences in intelligence would be significant in

⁴ The explanation in the text is derived from the account given by Stegmüller (1969:530-533).

the former case, but strangely enough the same does not apply to language acquisition, for large differences in intelligence result in negligible differences in linguistic competence. Furthermore, the linguistic experience to which the child is exposed is not only limited but also largely degenerate, and notwithstanding this the child masters the principles and rules governing the formation of meaningful sentences and the interpretation of linguistic utterances. Perhaps even more remarkable is the fact that language is learned during a stage in which the child is not capable of achieving anything comparable. The absence of any direct instruction and above all the fact that many children succeed in learning to speak without actively participating in talking activities ought to be mentioned as well. Besides, once the basic linguistic competency is mastered the child can creatively generate meaningful sentences never heard before – ruling out any idea that language merely emerges through acts of imitating what is heard. All-in-all these considerations are used by Chomsky in support of his claim to that an *a priori* element is inherent to the faculty of language-acquisition.

In order to appreciate this claim properly we need to investigate the idea of an ontic *a priori* dimension of human experience.

An ontic a priori dimension: the modal grid of reality

De Saussure is particularly known for his view that language is an arbitrary construction and that the bond between the *signifier* and the *signified* is equally arbitrary. Consequently, according to him also the “linguistic sign is arbitrary,” He holds the view that the word “symbol” is not appropriate as a designation of the “linguistic sign,” because

[O]ne characteristic of the symbol is that it is never wholly arbitrary; it is not empty, for there is the rudiment of a natural bond between the signifier and the signified. The symbol of justice, a pair of scales, could not be replaced by just any other symbol, such as a chariot (De Saussure, 1966:68).

In a letter to J. Gallois (by the end of 1672), Leibniz pursued the tradition of Aristotle and Boethius when he used the term “symbol” as synonymous with “nota.” As an

arbitrary sign, it serves as a genus concept for linguistic expressions and written signs, including mathematical signs. The epistemology of the 18th century combined this view of an arbitrary sign with the theory of *symbolical knowledge (cognitio symbolica)*. Meier-Oeser mentions the “organon” of Lambert (1764) in which an ambivalence can be observed regarding the purely arbitrary nature of the sign on the one hand and its co-determination by relations or analogies (*sensory image* and *symbolic knowledge*) on the other. He also refers to Kant, who conceived the symbol as “a sign of signs” – although Kant opened up another avenue by associating a symbol with *allegory* and *metaphor* (see the Meier-Oeser, 1998:718-720).⁵

Of course there are also other thinkers in the 20th century who used the term *symbol* in the sense of *freely chosen signs*. Some of them are of the opinion that language is the particular characteristic that distinguishes humankind from animals. By means of language humanity owns and utilizes a consciousness of the *past* and the *future*, a consciousness including the knowledge of the individual person's limited lifespan.⁶ Animal communication does not refer to the past or the future. It refers to the vital here and now. For this reason, animal signs strictly have one content only for every single sign.

Cassirer (cf. 1944) introduces the well-known distinction between *signals* and *symbols*. The former belongs to the *physical world of being* and the latter is a part of the *human world of meaning*, the world of *human culture*. Von Bertalanffy says that symbolism “if you will, is the divine spark distinguishing the most perfectly adapted animal from the poorest specimen of the human race” (Von Bertalanffy, 1968:20). In order to identify symbols, he uses three criteria:

- (i) Symbols are representative, i.e., the symbol stands in one way or the other for the thing symbolized;

⁵ Roelofse points out that *symbolism* differs from ordinary connotative meanings as well as from myths “in that it allows only for [a] specific interpretation. ... It is, one may say, totally culturally determined” (Roelofse, 1982:89).

⁶ The Neodarwinian evolutionist Dobzhansky considers the awareness of death as typifying the distinctive characteristic of human beings. Some thinkers are even of the opinion that the ability to commit suicide is typical of the unique nature of being human.

- (ii) Secondly, symbols are transmitted by tradition, i.e., by the learning processes of the individual in contrast to innate instincts;
- (iii) Finally, symbols are freely created (Von Bertalanffy, 1968:15, cf. 1968a: 134).

Language positions itself in-between the *grasp* of the hand and the *purview* of the eye – the eye as the “organ of making-something-immediately-present”. Thus, in various respects, the hand and the eye become *dispensable* (cf. Hofer & Altner, 1972:203; see Plessner, 1975:378). Animal communication, according to Plessner, does not know a “mediation through objects” (Plessner, 1975:380, cf.379). Surely, this phenomenon is particularly remarkable, since, in the domain of human sensitivity, the sense of seeing and the sense of touching dominate that of smelling (cf. Haeffner, 1982:16). Plessner also points out that animals are not interested in an object as such and likewise not in information as such (Plessner, 1975:377).

Yet in spite of the emphasis one can lay on the idea of an arbitrary sign, human language is nonetheless constantly embedded in a horizon of possibilities that provide the overall *framework* within which the relativity of arbitrary sign-creation is positioned. If language is constituted by the use of signs then it is inevitable that anyone using language ought to use signs – in other words, in order to be involved in language at all it is *necessary* (and not arbitrary) to employ signs. The element of arbitrariness only concerns the creation or choice of alternative signs. Moreover, since language embraces the multi-aspectual universe it also cannot “escape” from the functional possibilities conditioning the world. For example, every language contains words designating the multiple shapes and forms in which our (numerical) awareness of the *one* and the *many* manifests itself. Every language has its own words, but none of them can ever escape from having quantitative terms. The inevitability of having numerals (number terms) is constant, what is variable is the alternative (“arbitrary”) ways in which numerals are designated in different languages.

The same applies to spatial relations. Not only is there no single language that does not *signify* spatial relations, such as different kinds of extension (e.g. *distance* as one-dimensional extension, *surface* as two-dimensional extension and *volume* as three-

dimensional extension), for in addition to this our spatial awareness of size (e.g. large and small) is found in the use by *diminutives* (see Jenkinson, 1986).

Clearly, the numerical and spatial aspects are not the *product* of language for they underlie and make possible what language can achieve by exploring (in a lingual way) the possibilities offered by them. Similarly, every language captures the intimate connection between what is enduring and what is altered. Within the disciplines of mathematics and logic this connection is designated with the words “constants” and “variables.” The reality underlying these terms concerns the issue of *constancy* and *change* – where our awareness of constancy primarily relates to the kinematic aspect of pure (uniform) motion and our awareness of change first of all concerns the operation of energy in a physical sense (when energy operates it causes changes – the source of our awareness of causality). Once again: these two aspects also *condition* – in the sense of making possible – our experience of persistence (constancy) and change (variability), an experience that is distinctly articulated by every unique language.

At this point we may pause for a moment in order to explore this issue from a different angle. Geckeler (1971:242) points out – in connection with synonyms and antonyms – that the following question poses an unsolved problem for the discipline of linguistics: what is the reason why for certain lexical units there are contrary opposites (antonyms) immediately available – such as ‘old/young’) while it is impossible for others (e.g. ‘book’ / ‘?’)? W.J. de Klerk (1978:114) in addition remarks that most adjectives appear in dichotomy pairs, for example short-long, poor-rich, small-wide, ill-healthy, and so on. In a different context J. Lyons (1969:469) holds the following view: “The existence of large numbers of antonyms and complementary terms in the vocabulary of natural languages would seem to be related to a general human tendency to ‘polarize’ experience and judgment – to ‘think in opposites’ ”.

Various distinctions are needed in order to resolve these issues. Let us begin with that between *modes of existence* and the *multi-modal* existence of (natural and social) entities and events. From the Latin root the term *mode* designates a *functional way* of being, the manner in which something operates or functions. Distinguishing between the numerical, spatial, kinematic or physical function of entities is made possible by

the fact that these facets belong to a unique dimension of reality, the dimension of (universal and constant) modal aspects. They condition the existence of concrete entities and processes in the sense that all of them have typical functions within every aspect. Whereas the dimension of modal functions relates to the *how* of reality, the dimension of entities relates to its concrete *what*. The important point is that once an entity is identified, in response to the question *what* it is, subsequently statements can be made concerning its *how*. For example, after having identified this *book* one can continue by saying something about its weight (mass – physical manner of existence), its price (economic mode of existence), its size (spatial function), and so on. Within each modal aspect functional oppositions are natural – such as *large* or *small* within the spatial mode, *strong* or *weak* within the physical, *healthy* or *ill* within the biotic, *cheap* or *expensive* within the economic, *beautiful* or *ugly* within the aesthetic. A proper understanding of the dimension of modal functions therefore immediately resolves the problems raised by Geckeler, De Klerk and Lyons.

It seems as if logical thinking – exploring amongst other things the relation between a subject and a predicate – and language – structuring sentences on the basis of verbs/adjectives and nouns – are both *formally* determined by the dimension of modes (reflected in predicate and verbs/adjectives) and entities (reflected in the subject of a statement and in the use of nouns). The qualification *formal* accounts for the fact that modal properties may be the *subject* of a statement or utterance while entities then take on the role of a predicate, verb or adjective. It is noteworthy to refer in this connection to the fact that some languages reveal a tendency to be structured by ‘substantives’ (e.g. Persian), whereas others (e.g. old Greek and German) tend to be governed by a verb structuring.⁷

One may use the metaphor of the *modal grid of reality* in order to capture the foundational role of the dimension of modal aspects with regard to logical thinking and the use of language. In the absence of a diversity of aspects logical analysis – identification and distinguishing – would collapse. As points of entry to reality the modal aspects enable meaningful classifications, e.g. by distinguishing between different kinds of entities, such as physical things (“matter”), living entities (plants,

⁷ With multiple stipulations and derivations on the basis of their verbs (see Coseriu, 1978:43).

animals and human beings), sentient creatures (animals and humans), cultural objects [differentiated in multiple categories, such as analytical objects (test tubes), lingual objects (books), social objects (furniture), economic objects (money), aesthetic objects (works of art), jural objects (jails), ethical objects (engagement rings, wedding rings), and so on.]

The ultimate issue is therefore whether or not we are willing to acknowledge the foundational role of the dimensions of aspects and entities. The metaphor of the *modal grid* of reality focuses on whether or not there are, prior to any human intervention or construction, a given (ontic) multiplicity of aspects, modes or functions of reality. Furthermore, since these modal aspects co-condition the existence of concrete entities *functioning* within them, language and communication are bound to reflect this functional diversity.

The significance of this insight for an understanding of language and communication is dependent upon another important distinction, namely that between *concept* and *word*. Scholars tend to confuse or even identify concept and word (see for example Rossouw, 2003:17 ff.). A concept has its (logical) *content* and a word has its (lingual) *meaning*. Words may designate whatever there are – aspects, entities and processes and even concepts. But a word is not a concept. A concept unites a multiplicity of universal features (and it is “blind” for what is unique and individual). Consider the concept *human being* or the concept *triangle*. The universality of the features constituting a human being make it possible to recognize (identify) a human being wherever one encounters one. Likewise, when the terms *line*, *angle*, (closed) *surface* and *three* are combined in the unity of the concept *triangle* the universality of these traits makes it possible to recognize a triangle wherever and whenever it is encountered. A concept in this sense transcends every word and every language. For that reason a concept cannot be *translated*. One understands the concept of a triangle or one does not understand it – irrespective of the lingual sign employed to designate it. The English word *triangle* can be translated into other languages, for example into Afrikaans (*driehoek*), German (*Dreieck*), and so on. There are multiple words for this concept, but the universality of the concept precludes the idea of its “translation.”

A number of years ago the claim was made at an international conference in Vienna (on the comparison of Chinese medicine and Western medicine) that the Chinese do not have the concept *culture*. During discussion time I asked the speaker if the Chinese language does have translations for words such as *power*, *formation*, *control*, and *fantasy* and a phrase such as the *free formative fantasy of human beings* – to which the answer was affirmative. Yet all these words are in some respect synonymous to the English word *culture*, indicating that the Chinese do have a *concept* of culture but merely lack a translational equivalent for the English word *culture*!

The lingual ability to signify presupposes the analytical ability to identify and distinguish – and identifying something amounts to nothing but acquiring a *concept* of it. Lingual communication explores this foundational relationship in various ways, first of all through direct conceptually based interaction. Yet the inherent ambiguity of all language does not warrant a straight-forward claim to *literal* language or the simple distinction between literal and metaphorical language use. By its very nature linguistic expression is *ambiguous* and requires *interpretation*. A well-known case may illustrate this point. As an example of an allegedly *literal* sentence the following one was presented: “The cat is on the mat.” The fact that this apparently “literal” sentence still required *interpretation*, was underscored by the following reaction: “Oh, I know exactly what it means: The poor hippy is once again in the office of the boss!” What is striking about this example is that both sentences contain words making an appeal to familiar *concepts*. There is no doubt about what the concept *cat* or the concept *mat* is all about, just as there is no doubt about what the concept of a (military) *general* or a *lion* entails. Yet, the moment language is at stake the conceptual level is transcended, making possible an expression such as *the Lion of Western Transvaal* (General De la Rey). In a purely logical sense it is contradictory to affirm that a human being is a lion, but within the context of language it is perfectly permissible to generate expressions such as these.⁸

⁸ Although everyone senses that the concept of a *square circle* is contradictory, we accept the lingual expression of a *boxing ring* (that is actually “square”).

Within ordinary language words reflecting modal qualities (properties) are always embedded in a context where concrete things and events are discussed. To this extent all language and communication, in spite of the richness in variation owing to the operation of the free formative fantasy of human beings, is bound to the horizon of modal (aspectual) possibilities. This does not merely imply terms derived from the core (primitive)⁹ meaning of particular aspects, but also interconnections between various aspects, evinced in partial similarities and partial differences (known as analogies).¹⁰ Many composite phrases capture inter-modal analogies – such as *emotional life* (an analogy of the biotic meaning of life within the sensitive mode of feeling), *social distance* (spatial analogy within the social mode), *economic trust* (a fiduciary analogy within the economic aspect), *aesthetic integrity* (a moral analogy within the aesthetic facet), *energy constancy* (a kinematic analogy within the physical mode), and so on. What might have seemed, at first sight, to be mere *arbitrary constructions* of human language, in fact turns out to be instances of analogical linkages underlying similar composite phrases found in all languages, once more underscoring the *conditioning* role of the modal grid of reality regarding language and communication.

Let us consider a sentence chosen at random: “Does life in the United States actually show signs of moral and cultural crisis, or does a closer look reveal the continuing resilience of the world's most successful and self-renewing democracy?”¹¹ In terms of the *modal grid* that conditions what is said, we can identify the following words presupposing different modal aspects: *life* (the biotic mode – here taken as an analogy within human interaction – *social life*); *show* (sensitive aspect); *signs* (lingual mode);

⁹ The core meaning of an aspect brings to expression its *irreducibility*, which is reflected in its indefinability, explaining why it is also designated as *primitive*. Korzybski underscores that one cannot define *ad infinitum*: “We thus see that all linguistic schemes, if analysed far enough, would depend on a set of ‘undefined terms’. If we enquire about the ‘meaning’ of a word, we find that it depends on the ‘meaning’ of other words used in defining it, and that the eventual new relations posited between them ultimately depend *on the ... meanings of the undefined terms*, which, at a given period, cannot be elucidated any further” (Korzybski, 1948:21).

¹⁰ When the difference is shown *in* what is similar, we encounter an analogy. Language and communication explores different kinds of analogies – see the text below.

¹¹ Quoted from Skillen (1994:14).

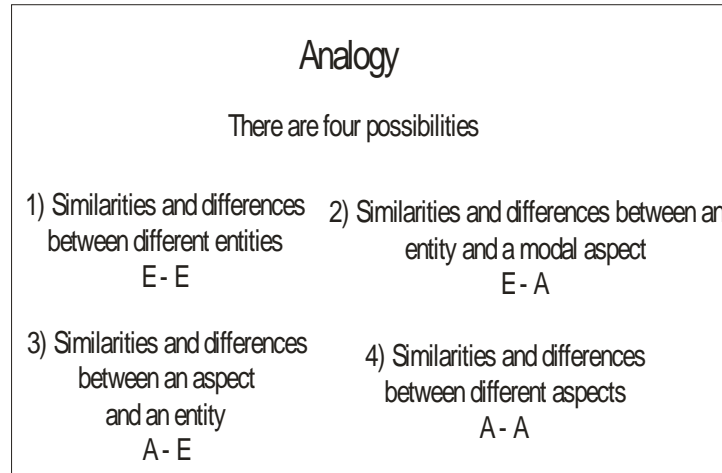
moral (the ethical aspect); *cultural* (the cultural-historical mode); *continuing resilience* (the equivalent of the intimate connection between *constancy* and *change* – derived from the kinematic and physical aspects); *closer* (reflecting the spatial meaning of *nearby* as opposed to *far away*); *look* (the metaphorical use of an observational term derived from the sensitive mode); *most* (derived from the quantitative meaning of *more* and *less*); *successful* (effective – figuratively derived from the physical cause-effect relation); and *self-renewing* (reflecting the interconnection between persistence and change found in thermodynamically open systems).¹² In addition there are of course entity-directed words present in the sentence – such as “United States,” “world,” and “democracy” – also reflecting a distinct dimension of reality, namely the dimension of (natural and social) entities, events and processes.

The misleading impression of the *unconditioned* creative powers of language and communication is particularly enhanced by contemporary views on the nature and role of metaphors. Yet also in this case it should be pointed out that ultimately metaphors explore possibilities provided by the interconnections between the dimensions of aspects and entities (see the Sketch below). They explore analogies (1) between *different entities* (E–E: “the nose of the car”); (2) between *entities* and *functional aspects* (E–A: such as the “web of belief”); and (3) between *aspects* and *entities* (A–E: a widespread example is found in evolutionary biology, where the biotic facet – with *life* as its core functional meaning – is treated as if it is an entity, for example when biologists speak of the “origin of life” instead of the genesis of *living entities*; (another example is when we speak of the “social glue” of society).

Metaphors falling within categories 1, 2, and 3 may be replaced by totally different ones. But modal functional (inter-aspectual) analogies cannot be replaced – at most

¹² In the early thirties of the 20th century Ludwig Von Bertalanffy recognized the shortcomings in the prevalent physical understanding of closed systems by realizing that both certain physical processes (such as a fire, glacier or an idling car) and biotic phenomena (like growth and staying alive) cannot be accounted for in terms of a theory of *closed* systems. He introduced the notion of *open systems*, designated by him with the German term *Fliessgleichgewicht* (a flowing, dynamic equilibrium, in English designated as the *steady state* – see Von Bertalanffy, 1973:165).

they can 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* or even the expression *the whole-parts relation*).



Implications for translation as inter-lingual communication

Acknowledging the co-conditioning role of the modal grid of reality for language use and communication does have practical implications for translation and for supporting the development of a linguistic competence within another language. In order to master a new language a number of skills are needed, amongst them the required vocabulary, specifically directed to the names of the diversity of things populating the universe. But in addition to this (abstracting for a moment from the implied grammar) a working knowledge is required regarding the “point-of-entry-terms” derived from the modal grid of reality.

Suppose an English speaking person chooses to learn German. Of course there is a close link between these two languages owing to the fact that both are Germanic languages. This shared background, for example, will be particularly supportive in the of mastering many similar words, such as (English/German): house / Haus; school / Schule; knee / Knie; nature / Natur; philosophy / Philosophie; state / Staat; investment / Investierung. Once a sufficient number of familiar nouns (and some others not so similar) is known the possibility to talk about things is dependent upon the employment of what we have called “point-of-entry-terms,” i.e. terms derived from the different modal aspects in which concrete entities function. Since every concrete

entity and process in principle functions within each modal aspect,¹³ knowledge of aspectual terms provides access to the possibility of speaking about all entities and processes.

Generally speaking, in learning a new language it is therefore crucial to obtain modal functional terms (and their analogies within other modes) in order to be able to master this element of a lingual competency within the language that is learned. A few examples will suffice. The *one* and the *many* (in German: *Einheit* and *Vielheit*) is found in many related quantitative terms, such as *more*, *less*, *few*, *little*, *some* and so on. Likewise the awareness of spatial continuity comes to expression in (the above mentioned) related terms such as *coherence*, *connectedness*, and the *whole-parts relation*. Furthermore, *persistence*, *on-going*, *uniformity* (uniform flow), and so on reveal the core meaning of kinematic constancy, just as *energy-operation*, *cause* and *effect (causality)*, *functioning* and so on reveal the irreducible meaning of the physical mode of reality.

Once this is realized, namely that we need knowledge of such modal terms and the skill (linguistic competence) to employ such terms in actual speech, the task of learning a new language obtained a huge advance. Suppose I need to speak of the fact that within human life things are constantly changing, then I need to have at my disposal the required German terms for *on-going* (namely “konstant,” “ständig” and “immer”) – and then it is easy to employ one of them (for example by saying “das die Sachen sich ständig ändern”). The method implied by this insight, regarding the learning of a new language, is to obtain a “modal thesaurus” specifying the alternative and related modal terms found within each aspect of reality, for once they are known

¹³ Physical entities are subjects within the first four aspects of reality (number, space, the kinematic and the physical). Living entities are also subjects in the biotic aspect. Sentient creatures in addition have a subject function within the sensitive mode and only human beings have subject functions within the normative aspects (the logical, cultural-historical, sign mode, social, economic, aesthetic, jural, moral and certitudinal). Material things (i.e. physical entities) have object functions in all the post-physical aspects, plants in all the post-biotic aspects and animals in all the post-sensitive modes. Cultural objects also have object functions within all the normative aspects, i.e. those aspects in which accountable human beings function, either in conformity with or in violation of underlying principles.

the learner of the new language has the freedom to employ them in a way fitting the lingual context.

Acknowledging the modal grid of reality amounts to an exploration of a new kind of thesaurus, one constituted by the original meaning of a modal aspect and other modal aspects in which we find *analogies* of the original aspect. A few examples will illustrate what is intended with such a *modal thesaurus*.

It is clear that our awareness of the *one* and the *many* brings to expression the core meaning of quantity, captured in ordinary questions about *how many*? It is *natural* to count any *multiplicity* of entities, events, thoughts or whatever is distinct. For that reason mathematicians coined the practice to refer to the numbers employed in acts of counting as the *natural numbers*. Suppose we switch to the spatial aspect. Within this aspect of reality there are multiple analogies of the original meaning of number to be found. Whereas it is clear that one can extend the succession of natural numbers (1, 2, 3, ...) beyond all finite limits (there are always more to come), this “beyond limits” of the literally without-an-end (infinite) is turned *inwards* by space, for any extended spatial continuum could be divided, once again sub-divided, and so on indefinitely. This amounts to the *infinitely divisibility* of spatial continuity. Although an infinite succession is original within the numerical aspect, the spatial reality of infinite divisibility analogically reflects this original numerical meaning within the aspect of space.

Furthermore, the mere concept of spatial *distance* also reflects the coherence between space and number, because distance is always specified by a *number*. Yet the number specifying the distance (say of a line-stretch) has a spatial meaning, merely pointing back to the original meaning of number. As the *measure* of spatial extension distance (as numerical analogy) is not identical to spatial extension. For that reason a line is not the *shortest distance* between two points – it is at most the shortest *connection*. Since spatial extension embraces different dimensions (a line is an instance of one-dimensional extension, a surface of two-dimensional extension, volume three-dimensional, and so on), it is once again striking that these different *orders of extension* cannot be specified except on the basis of “borrowing” the numbers one, two, three and so on (1, 2, 3, ...) from the quantitative mode. Therefore, within the

aspect of space numerical analogies appear that are “coloured” by the meaning of continuous extension – such as *dimension*, distance – subdivided in specified terms such a *length* (1-dimensional extension), *surface* (2-dimensional extension), and *volume* (3-dimensional extension).

Within the next aspect of reality, the kinematic (movement) aspect we also discern numerical analogies, intimately cohering with spatial analogies. The (relative) *speed* of a moving body is expressed by a number on the basis of assessing the mutual dependence of distance and time (if one travels 100 km in two hours the average speed was 50 km per hour). Perhaps the most important instance of a numerical analogy within the kinematic aspect is highlighted in Einstein's theory of relativity where the *velocity* of light (in a vacuum) is postulated as a constant (300 000 km per second). The physical concept of *mass* (compare the amount or quantity of energy) reveals a numerical analogy within the physical aspect, while the mere concept of *organic* life entails the inter-dependent functioning of a *multiplicity* of organs, demonstrating the inevitable presence of a numerical analogy within the biotic aspect. Enough to illustrate the general point regarding a “modal thesaurus” – within every post-arithmetical aspect one encounters a different domain of numerical analogies.

That there are so many different words and languages indeed display an element of arbitrariness, of lingual freedom in the formation of a specific language. Yet what crystallized within each particular language is always co-conditioned by the modal grid of reality and the web of interconnections found between the aspects present within this dimension of reality (analogical references). Since these conditions are constant and universal they are necessary in the sense that without them language as such becomes impossible. For that reason we have argued that the *modal grid* of reality underlies language, communication, translation and the learning of a new language (inter-lingual communication).

Remark on methodology

Normally methodological considerations disregard the fact that scientific knowledge merely deepens and discloses our non-scientific experience of reality in its diversity. For that reason prior to the development of a method in service of the investigation of reality every special scientist must already have a non-scientific insight into the nature

of her field of inquiry. The designed method could never provide or substitute this presupposed knowledge. The unique nature of whatever is investigated determines every method aimed at acquiring knowledge about it.

Neopositivism assigns to the “scientific method” a privileged status. The assumed “exactness” of this “scientific method” (observation, formulating hypotheses and testing them in order to obtain confirmed hypotheses or theories) is accredited with the capacity to serve as the *only* gateway to *all* scientific knowledge. However, as the Frankfurt school clearly realized, even the “most exact” methods may be misleading:

To be sure, even the most rigorous methods can lead to false or meaningless results, if they are applied to problems for which they are not adequate or which they deal with in a distorting manner. (Adorno and Horkheimer, 1973:122; cf. Van Niekerk, 1986:39).

The basic question is simply: Does the method determine what we want to know scientifically, or is the method itself dependent upon the nature of that what we want to know? Only a complete denial of the given orderliness in reality could give priority to scientific methods. Neeman is astutely aware of the shortcomings in the “method primacy” of positivism. According to him, the positivistic philosophy of science starts with a basic assumption analogous to the gospel of St. John: “In the beginning was the method” (Neeman, 1986:70).

With reference to Popper's falsificationism as a reaction to positivism Neeman states:

The new ontology therefore was not a consequence of this method. Much rather, this method emerged in the first place as a result of new ontological assumptions (Neeman, 1986:72).

According to him, it was exactly this dogma of the primacy of method that precluded the emergence of a useful natural scientific praxis, “it led to one-sided criteria of rationality accompanied by the mistaken position of positing its own starting points as absolute while denouncing those of the opponent as irrational” (Neeman, 1986:70-71).

Instead of trying to reduce everything within reality to fit the requirements of a specific method, we first have to find out along which lines we can get to an

understanding of the given order diversity within creation. This is exactly the aim of what should be designated as the *transcendental-empirical method* explored in the current article. The appeal to the *ontic status* of the various modal aspects of reality implies that one has to establish what ultimately *makes possible* our experience of numerical relationships, spatial, relationships, and so on. And we argued that language, communication and translation are made possible (in the sense of being co-conditioned) by these foundational modes of experience. The word *transcendental* is employed in order to capture this underlying role of the aspects of reality. Since they make possible what we can experience within the diversity of reality, they serve as the foundation co-conditioning our *empirical* world – explaining why we designate this method as the *transcendental-empirical method*.

Scientific reflection is always confronted with the *orderliness* (or: *disorderliness*) of reality. Accepting this ontically given datum of experience, the transcendental-empirical method ‘retroduces’ back to the presupposed order for our experience. Our guiding theoretical hypothesis therefore conjectures an irreducible but mutually coherent multiplicity of modal aspects encompassing the functional conditions for all things, events and societal collectivities.

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