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**Autor:** Seiler, Hansjakob

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HANSJAKOB SEILER*

# OBJECT, LANGUAGE, AND COMMUNICATION

To the memory of Thomas A. Sebeok

This paper ultimately seeks to show how language is related to communication. At first, however, and for the greater part, it is dealing with matters concerning language particular. It purports to show how diversity among languages is related to universality in language. The concrete topic of this demonstration will be the cognitive-conceptual notion of object corresponding to its different manifestations as collections, masses, individuals, etc. The approach is dynamic and constructivistic and proceeds on three levels: 1. the cognitive-conceptual level, i.e. the level of the *repraesentandum*; 2. the level of General Comparative Grammar; and 3. the level of the individual languages. Level 1 with its concept of "object", which is not specifically given beforehand, has to be "reconstructed" in a hermeneutic circle by combining inductive and abductive procedures. Level 2 represents the "menu" from which each individual language makes its particular selection.

The central tool in the task of relating diversity to unity is the ordering of different techniques of representation in a continuum on each of the three levels. The two essential principles motivating the ordering are indicativity/individualization (pointing) vs. predicativity/generalization (defining), respectively.

Communicative aspects in language move to the foreground with increasing dominance of the indicative or deictic principle.—The theoretical and methodological groundwork thus established may then be tentatively applied to problems of communication beyond language.

*Keywords*: Apprehension, dimension, techniques, indicativity, predicativity, continuum, metalanguage, *tertium comparationis*, rationality

*University of Cologne,Linguistische Forschungsstelle, Lenzburg CH,
hjseiler@bluewin.ch

## Introduction

The paper is based on the results of extensive previous research with publications on Object and Language.[1] We shall proceed as follows: In the first part we shall uncover the ways in which a universal cognitive-conceptual content of object(s) is construed and we shall demonstrate the ways in which such construal is represented in individual languages. This is a complex task for which we use the cover term *apprehension,* thereby following the usage of some medieval thinking (see below, section 2). In the second part, with a shift of perspective onto communication, we shall examine first the role of communicative aspects in the domain of *apprehension* and then the possibilities of applying our theoretical and methodological instrumentarium to communicative behavior beyond language, specifically to intercultural communication.

## 1. Theoretical prerequisites

The question how the cognitive-conceptual content of object(s) is represented by the means of language is a question of universality in language. It cannot conclusively be answered by one-sidedly inductive generalizations on the basis of a multitude (how many?) of different languages. An abductive procedure is needed instead, combining deduction and induction. We first aim at an hypothetical, intuitive insight into the conceptuality of object(s). We further assume that language and language behavior are goal-directed: a means for representing such cognitive conceptuality. The task is carried out on different levels of abstraction. Three levels are required: 1. The level of cognitive-conceptual content particular, in our case: the content "object(s)". 2. The level of General Comparative Grammar (GCG). This represents a "menu" of different "techniques", all

[1] Previous research has been carried out at the University of Cologne (Institut für Sprachwissenschaft) by a project group named UNITYP (Universalienforschung und Typologie) directed by this author and funded by the Deutsche Forschungsgemeinschaft, whose generous help is herewith gratefully acknowledged. The major publications on the topic appeared in the collection *Language Universals Series (LUS)* and are as follows: Seiler and Lehmann (eds.) (1982); Seiler and Stachowiak (eds.) (1982); Seiler (1986); and, within a comprehensive synthesis of language universals research: Seiler (2000: 160 f.)

serving the purpose of representing content of level 1. 3. The level of individual languages with their particular choice among the possibilities afforded by the "menu" of level 2.

Observation and generalization teach us that the series of different techniques of level 2 can be ordered according to similarities and differences in a consecutive, continuous way, which we call a *dimension*, in our case the *dimension* of *apprehension*. It further teaches us that this ordered *dimension* of different *techniques* must have a common denominator, which we can define. We can then replace our initially posited cognitive-conceptual content "object(s)" by this more precise definition. Thus, we move among the three levels in a hermeneutic circle, combining induction and deduction. Then, we can go on in pointing out evidence for our framework and for our procedure. In particular we must show how in individual languages (level 3) certain problems can be better understood than before. One of the strongest arguments for the well-foundedness of our framework will consist in the observation of language history: Language change moves along the continua of *dimension*s and *techniques*. Language change correlates with variation. Variation in language correlates with invariance, hence with universality. We recognize universality through variation. We come to understand the concept of object(s) through its various representations in language.

## 2. The concept "object" (level 1)

Along with "event", "state", "object" is certainly one of the fundamental concepts. To the layman it seems to be self-evident: Trees, chairs, apples are objects. He can enumerate them or touch them, handle them. We shall see that handling can in fact be a criterion of linguistic relevance in some languages. But things are not as simple as that. How about "road", "air", "wine", "destruction", "John"? Are they objects? And if so, in what sense could they be thought of as objects?

A scientific theory seems to be required. But which science would be duly qualified? Physics? Philosophy? Psychology? It seems that all of them have a bearing on the conceptualization of objects. Would this mean that, to know objects fully, we would have to wait for the staging of an interdisciplinary research project that would integrate the findings of these different disciplines? We think not. One thing seems to be clear: No matter

which science is dealing with objects, at the beginning there always is and must be some sort of *a priori* conceptualization of what an object could be. In a way, such conceptualization stands both at the outset and at the end of the respective investigations. Let us hear what some outstanding thinkers have to say about the subject.

*Apprehension*, from Latin *apprehendere* "to seize, to grasp (a thing, material or immaterial)" has been used as a term since antiquity.[2] It acquired particular importance in medieval philosophy. Thomas Aquinas speaks of apprehension in the sense of mental operations, and he distinguishes two kinds: One is "simple and absolute (*simplex et absoluta*), since it passes judgment immediately and without further scrutiny of the apprehended; the other is scrutinizing (*inquisitiva*), since by rational activity (*ratiocinando*) it investigates what is good and bad, useful and harmful".[3] This is a clearly dichotomizing approach to the problem. Aristotle was even more explicit on this point: (speaking about perception and understanding) "It is also not possible to understand through perception. For although perception is with reference to a 'such' and not to a 'this', to be perceived necessarily relates to a 'this' and a 'where' and a 'now'".[4] Furthermore: "For some of the things, which are said to come-to-be, signify a 'this' (*tóde*), others a 'such' (*toiónde*), and others a 'so much' (*posón*)."[5] As we shall see, this comes remarkably close to our two, linguistically established, complementary principles of predicativity (~ "a such") vs. indicativity (~ "a this") which together constitute the invariant of the dimension of *apprehension*.

If we combine these basically intuitive insights of the philosophers with our empirical findings to be discussed in the next sections we may posit the following operational schema of *apprehension* on the cognitive-conceptual level (level 1).

[2] See Ritter (ed.), 1971: 459 ff.
[3] S. theol. I, 9. 85a.5; De veritate 9.14a.1.
[4] Anal. Post., A 31.87 b 25 (Bekker).
[5] Gen. et corr. A 3.319a (Bekker).

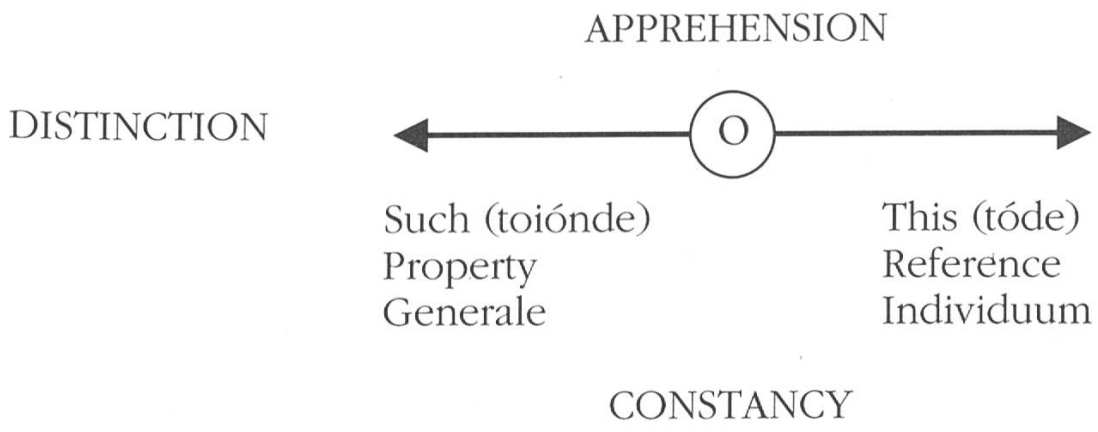



Fig. 1: *Apprehension*: on the cognitive-conceptual level

O stands for Object(s). *Distinction* and the arrows in opposite directions indicate that the concept is essentially and primordially constituted by the distinction between "Such" and "This". Moreover, the arrows are to be understood dynamically, i.e. in the sense of two opposing "pulls": When O moves in the direction of a "Such", this does not mean that it is entirely devoid of referentiality. When it moves closer toward a "This", this does not mean that property aspects are entirely absent. This mental motion back and forth is the way that variation in the concept of object(s) comes about. With dominant Reference, the object appears as an Individuum; with dominant Property it appears as a Generale. The concept of object(s) would be incomplete without the notion of *constancy*. The work of Jean Piaget shows us this in a particularly impressive way. "To possess the concept of the object", he writes (Piaget, 1947/1974: 122, 127), "means to assign the perceived figure a substratum of substance such that the substance (cf. the Aristotelian *tóde*, Hj.S.) and the figure indicating the substance (cf. the Aristotelian *toiónde*, Hj.S.) continue to exist even outside the perception space." When an infant is first presented with a desired object which is subsequently covered with a cloth, the infant does not attempt to remove the cloth. In fact, it behaves as if the object had ceased to exist as soon as it disappeared from the perception space. As a matter of fact, the permanence or constancy of the object is a product of the intelligence and constitutes one of the first fundamental invariances.

In concluding this section we should underline once more the tentative, provisional character of this attempt to determine object(s) on a cognitive-conceptual level. It will have to stand the test of its usefulness as a *tertium comparationis* in the comparison of languages. It should also be kept in mind that this level is not "outside language" or "extralinguistic".

It is an essential part of the linguistic process: that which is to be represented by the means of language (= *repraesentandum*).

## 3. Objects and the representational function of language (levels 2 and 3)

### *3.1 Traditional Grammar*

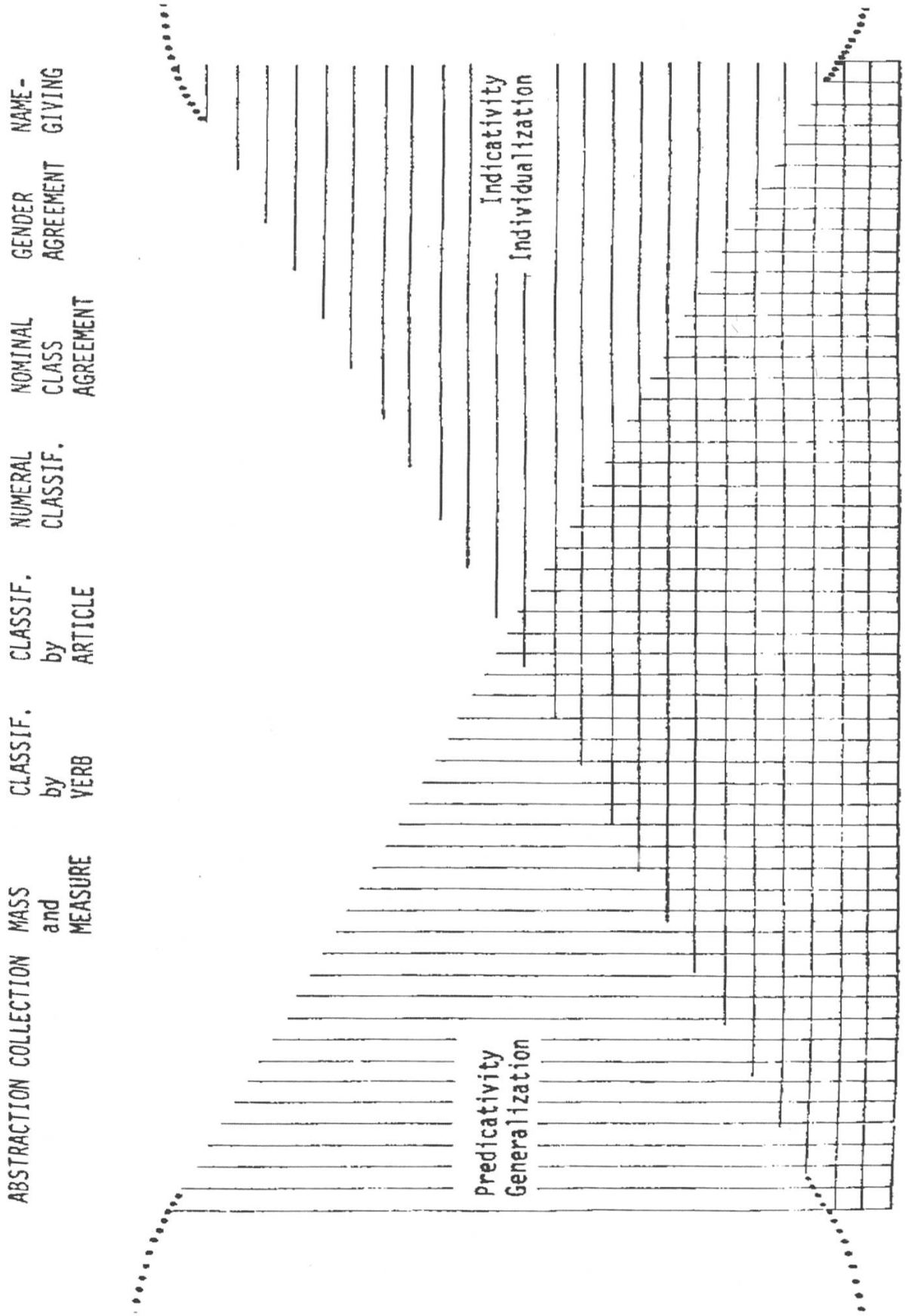
Traditional Grammars, including Generative Grammar, in line with their one-sidedly categorical thinking, assign the substantive noun (N) the role of representing objects. Different subcategories of N would reflect different kinds of objects: Individual nouns (*horse*), collective nouns (*group*, *bunch*), mass nouns (*water*), abstract nouns (*destruction*), particular nouns (*John*). No clear insight into the relation between these subcategories is available thus far. Is the above enumeration complete? Are these the means that the English language would provide for the purpose of representing objects? How about other languages – in principle all languages? In what follows we shall find that the representation of objects is a goal or purpose to be fulfilled by every language, where much more "machinery" is involved beyond those few categories of N. For this to happen, let us proceed *in medias res*.

### *3.2 The Dimension of* Apprehension *(level 2)*

(See Fig. 2)

This two-dimensional schema is a simplification or rather a projection out of a more-dimensional property space. On top in the horizontal we find a line of positions, whose names resemble the above-mentioned category names without being coextensive with them. Thus, we have *abstraction* (in italics) instead of abstract nouns, *collection* instead of collective nouns, etc. This change in terminology just as well as the entire schema conveys the idea that *apprehension*, the representation of things by the means of language, is not a categorical thing but a system of operations. In popular wording: Something is being done (mentally). The schema tells about the What? and the How? One can move along in the sense of a program from "left" to "right" or in the reverse. These mental trajectories are determined by two negatively correlated gradients. We speak of a *continuum* with a gradual increase of one gradient and a correlated grad-

Fig. 2: The Dimension of *Apprehension*



ual decrease of the other. The possibility of an ordering of phenomena of language in the form of a *continuum* involves two things: 1. a common functional denominator of the phenomena in question – which in our case would precisely be *apprehension*; 2. certain ordering principles. Two converse principles are at work, which we respectively call *predicativity* vs. *indicativity*. "Predicativity/Generalization" in the schema means that an object is being apprehended by predicating about it, its properties, manifestations and the like. Predicativity is syntactically manifested as relationality. A relation is general, not individual. The predicated object is a generalized object. "Indicativity/Individualization" means: The object is apprehended by pointing it out; to indicate means to point (deixis). The pointed-out object is an individualized object. It seems easy to recognize in these two converse principles the Aristotelian opposition between a "Such" (*toiónde*) and a "This" (*tóde*).

The curves with their asymptotic shape indicate that there are no absolute maxima nor minima. Rather, each position participates in both principles, although with inverse proportional dominance: The more predicative apprehension of an object correlates with lesser indicative apprehension, and vice versa. This is indicated by the hatchings. There is an intermediate area around the classifying techniques where the two principles are about equal in force. This is a critical area; specifically the point where the proportional dominance changes demands special attention. We call it the "turning point". A further question remains: What happens at the end of the curves? An answer to this will be suggested below (section 4).

The schema is supposed to portray the bandwidth of variation with regard to the fundamental theme of *apprehension* – and this both in the comparison of languages and within an individual language. Note that the meanings of the linguistic phenomena assigned to the respective positions are different. But the schema is devised in such a way that diversity appears as related to a unity. The content of the various positions will be explicated further on (sections under 3.3.), but two things may be stated at this juncture: 1. The positions are ordered in such a way that two adjacent ones share a maximum of linguistic properties. 2. Each position encompasses not only one but an entire series of linguistic phenomena. This, once again, constitutes a bandwidth of variation which can again be ordered according to the same principles of predicativity vs. indicativity, respectively. We name these positions *techniques*: In a way analogous to the overarching *dimension* they reflect what speakers do and how it is done.

### *3.3. The sequence of* techniques *(levels 2 and 3)*

For each *technique* we should like to show two things: 1. Justification of its position relative to its neighbors according to the two principles of predicativity vs. indicativity and to the criteria of similarity and difference. 2. Justification of its internal order according to the same principles and criteria. We shall begin with the two extreme *techniques* at the opposite ends of the *dimension*.

#### *3.3.1 Abstraction*

The abstract noun *destruction* cited under 3.1 is derived from the verb *to destroy*. Abstract nouns are generally derived from verbs or adjectives. Verbs and adjectives are predicates, they assert. To the extent that this would hold for languages other than English as well we can say that within the *techniques* of *abstraction* predicativity is dominant: The object is in principle constituted by predication:

(1) Destruction is an activity, and at the same time a result.

A predicate establishes a relation, it is general, not individual, as the example shows. As a relational expression the predicate opens so-called slots to be filled by arguments. The slots may be left empty, as in (1). But they may gradually be filled:

(2) The destruction of the city had far-reaching consequences.

Here the slot for the patient of *to destroy* has been filled. Consequently, (2) is less general, more individualized than (1). Further still:

(3) The destruction of Carthage by the Romans in the year 146 B.C. had far-reaching consequences.

Here, the slots of both agent and patient plus an optional slot for "time" have been filled – which is still more individualized, referring to a well circumscribed object – a "this" – than (2). We thus find within this *technique* an intralanguage continuum which spans from predicative/generalized to indicative/individualized. The continuum has its circumscribed place within the overall continuum of the *dimension*

A wealth of interesting phenomena pertaining to the relation between abstract noun and slot fillers could be mentioned here. The interested reader should be referred to two substantive presentations.[6]

[6] Iturrioz (1982: 49-65) and (1984); Seiler (1986: 26-41).

### *3.3.2 Namegiving*

This *technique* may be viewed as the converse of *abstraction*. *Namegiving* guarantees *apprehension* by direct connection between linguistic expression and apprehended object. It is comparable to a labeling device. Nothing in principle is predicated about the object's properties, functions, etc. This direct and immediate connection is brought about by the act of *namegiving* , which is a performative, deictic act (indicativity!), which in many cultures is ritualized by specific ceremonies such as baptism, initiation rites, etc. The importance of this pragmatic, and, we should add, communicative, act thus appears most clearly in these "externalized" forms. Here we have the clear indication that "something is being done" – both mentally and physically. The act fully determines all subsequent uses of the name, which is independent of situation or context. O. Leys, exemplifying with the name of *Socrates,* says: "... at the origin there is the act of namegiving, and all those who ever mentioned the Athenian philosopher by his name are, so to speak, linked with that act by an invisible historical chain" (Leys, 1979: 61).

To illustrate the above-mentioned, non-predicative aspect of *namegiving* it may suffice to cite such "profession names" as *Baker*, *Smith*, *Webster*, etc. which do not convey the idea that the person in fact practises the profession.

However, now emerges the aspect of variation within the *technique*, which, in spite of its dominant indicativity leaves room for a certain amount of predicativity: In many cultures the given name is supposed to show predicativity, i.e. to have meaning with regard to desired properties of its bearer. Thus, in Ancient Greek:

(4) Aristo-tēles
best -goal:possessing
"the one who has the best goal"

is certainly a name that was supposed to "have meaning" – at least at the time and on the occasion of namegiving. Yet, in name use the originally intended semanticity may have tapered off. We have testimony for this in a number of inscriptions from Thessaly. They contain lists of names, and many of them show compound forms with *Aristo-* "best" as first member. Two variants occur, one showing the full form of the compound, just as in (4). The other shows an abbreviated first member, as in:

(5) Ast-agóras
? -market

the total meaning thus being unclear, and semanticity reduced by this mutilation. Interestingly, we also have testimonies to the fact that the first member of (5) has afterwards erroneously been connected with the word for "town": *astu* (Leumann, 1930: 65 f.). We thus witness two "pulls" in opposite directions: one toward predicativity as in (4), the other toward indicativity, as in (5).

Another important aspect of the semanticity of *namegiving* concerns metalinguistic predication. The perennial debate about the meaningfulness of particular names (e.g. Kripke 1972 vs. Jakobson 1957/1971) can be resolved in terms of levels. Particular names show semanticity on the metalinguistic level: "The general meaning of a particular name cannot be defined without reference to the code. In the code of English, 'Jerry' means a person named Jerry. The circularity is obvious: the name means anyone to whom the name is assigned" (Jakobson, l.c. 131). This trait connects *namegiving* with the immediately preceding *techniques* of noun classgender agreement and of classifiers. It exhibits the trait in its fullest amount, while the amount is decreasing as we move "leftwards" in the *dimension*. This progressive shifting of language activity onto the plane of metalanguage (or, in the reverse, away from it) will in a further section (5.1) be placed into the context of language and communication.

### *3.3.3 The sequence of* techniques *between the "extremes"*

A presentation in summary fashion will be given here. The interested reader may be referred to the works cited in footnote 1, especially to Seiler (1986), chapter 4. Particular attention will be paid to the empirically documented continuous progression from dominant predicativity/generalization to dominant indicativity/individualization both within the overall *dimension* and within each *technique*. Examples will be drawn from English, German, and from a number of non-Indo-European languages.

*Collection*

(6)(i) eine Herde...?: Kühe, Elefanten, ...
(ii) ein Rudel...?: Hirsche, Wölfe, ...
eine Herde von Kühen
eine Kuhherde
zwei Stück Vieh; two heads of cattle

Examples (6)(i) and (ii) show that such words as *Herde*, *Rudel* are relational calling for complementation: We ask *eine Herde was?* or *wovon?* We

have seen that abstract nouns, too, are relational in demanding complementation; *collection* thus connects with *abstraction*.

Examples (6)(iii) and (iv) should show a certain syntactic flexibility between apposition, attribution and composition. *Abstraction* showed flexibility as well, but to a higher degree than in *collection*: Here we find not as many relational nouns, type *Herde*. Example (6)(v) as compared with (i) to (iv) exhibits a different variant in the linguistic construal of a collection. In (i) to (iv) a plurality, *Kühe*, is comprehended by means of a collectivizer: *Herde*. This is a way of generalization. In (v) we start from a collective noun: *Vieh* and single out an individual: individualization.

A certain classificatory effect can be observed in examples (6)(i) and (ii): *Kühe, Elefanten* are "collectivized" by *Herde; Hirsche, Wölfe* by *Rudel*; *Fische, Bienen* by *Schwarm*, etc. This in a way anticipates the subsequent classificatory *techniques* (more on this under section 4).

*Mass and Measure*

The syntactic structures resemble the preceding. However, the opposition between generalization and individualization is less prominent. Measuring is the significant operation here, and counting is established by way of measuring:

| | | |
|---|---|---|
| (7)(i) | ein Pfund…?: | Brot, Butter, Honig |
| (ii) | ein Liter…?: | Milch, Wasser, Wein |
| (iii) | zwei Mass...?: | Bier |
| | zwei Glas...?: | Wein |
| (iv) | zwei Gläser Wein | |

Examples (7)(i) and (ii) show relationality and generalization as before; (iv) conveys the idea of two individualized glasses as opposed to the generalized, comprehensive turn in the second example of (iii). Once again we find some classificatory effect: We say *ein Pfund Brot* and not **ein Liter Brot*, etc.

*Classificatiory techniques*

Our *dimension* exhibits three classificatory *techniques*.[7] They are positioned in the middle range of the continuum. The object in these languages is apprehended by classifying it, i.e. by saying something about it. This is doubtlessly an aspect of predicativity, which, however, tapers off

[7] A very thorough exploration about classifiers in the languages of the world is by Alexandra Aikhenvald (2000).

as we move rightwards in the *dimension*. In those particular cases classification is not so much about the object but rather about the expression designating the object – which is a metalinguistic aspect.

The relevant phenomena are found outside of our Western European languages. There, classification is mandatory in those instances where the object is either counted or otherwise manipulated. Both procedures can only apply to individualized objects – which thus constitutes the aspect of indicativity/individualization.

*Classification* by *Verbs*

The *technique* has a specific distribution. It is found primarily in the American (Sub-) Continents. Individualization is expressed not in the noun but on the verb in its relation to the noun. Let us take the verbal notion "to *Handle*". In Acoma, a language of the Keresan family in New Mexico, nine noun classes can be distinguished, and the distinction is signaled by nine different verb stems, all of them denoting "to *Handle*":

| | | |
|---|---|---|
| (8)(i) | -ut' | to handle things in a basket |
| (ii) | -ust'- | " " " liquid |
| (iii) | -uisd- | " " " in a sack or box |
| (iv) | -áamáaku- | " " grainlike objects |

The same nine noun classes are distinguished in parallel fashion for other verbal notions such as "being placed" and the like. It is interesting to note that class distinction, which manifests the generalizing principle, is used for expressing individuality. We also note that all the nouns in this *technique* are about masses – which shows the connection to the preceding *technique*.

*Classification* by *Articles*

This is closely related to the foregoing and probably historically derived from it. It is areally limited to certain languages of North America, mostly Siouxan. Our example is from Ponca (Oklahoma/Nebraska)

| | | | |
|---|---|---|---|
| (9)(i) | nî | ¢ã | "the water (e.g. a handful)" |
| | water | sitting ~ round | |
| (ii) | nî | k'e | "the water (i.e. extended, river)" |
| | water | horizontal ~ long | |
| (iii) | nî | ge | "the water (i.e. spread around, rivers)" |
| | water | spread ~ many | |

We note a certain range of variation: (i) may be understood as a verb of positioning: "sitting" (predicative). (ii) and (iii) are purely nominal. Our "Turning Point" (see 3.2) divides dominant verbalness (predicativity) from dominant nouniness (indicativity), which prevails in the following *techniques*.

*Numeral Classification*

How is numeration or counting related to classification? The question arises in several subdisciplines of cognitive science. We must refrain from going into this any further[8], and confine ourselves to discussing the linguistic facts and their role within the *dimension*.

The distribution of this *technique* covers an area that may roughly be described as circum-Pacific. It comprises languages of South-East Asia, New Guinea, Australia, Oceania, and the American subcontinents – mostly of the West Coast. Correspondingly, we encounter a broad spectrum of variation in this *technique*. Yet, counting is the major objective everywhere. In contrast to current procedure in our Western languages it is not possible there to directly connect the numeral with the counted noun. A classifier must intervene. The English expression "three rings" would be rendered in Thai as follows:

(10) wǎeaen sǎam wong "three rings"
ring 3 circle

In phrases like this the classifier is a noun, which represents a notion both superordinated and inherent with regard to the counted noun – just as the notion "circle" is inherent in the notion "ring". The classifier does convey a certain amount of predicativity. However, since it represents a semantic property that is inherent in the counted noun anyway, the amount of predicativity is rather small.

The overall function of constructions as in (10) is clearly to represent the object as individualized in order to make it accessible to counting. Outside the context of counting the noun in Thai has a status that we may qualify as neutral between individualization and generalization. Thus an expression like

(11) dèk wâay nàam
child swim

[8] See Seiler (1986), section 4.6.1.

may, according to context, assume the following interpretations: (i) children swim (in general); (ii) children swim (some); (iii) the children swim; (iv) a/the child swims. The noun *dèk* "child" really represents the pure concept. Moreover, it is neutral with regard to number, i.e. there is no distinction between singular and plural. This holds for almost every classifier language. The aspect of neutralization substantiates our view (3.2) of the classificatory *techniques* occupying an intermediate area, an area of transition.

As in the other *techniques* we find here variation in assertive value, i.e. between predicativity and indicativity. An extreme case of non-predicativity is reported for Garo, a Tibeto-Burmese language of Western Assam (Adams & Conklin, 1973: 2), where "...*stone, ball, eye, coin* and *fruit* are all included in one class based on their roundedness. This class also includes *banana*, although it is not round (like oranges, mangos, etc.) because all other fruits are in this class".

An extreme case for predicativity is reported for Tzeltal, a Maya language of Yucatan (Berlin, 1968: 39 f.). There are 528 classifiers in this language, and one and the same noun may be combined either with this or with other classifiers, which thus adds to predicativity. This contrasts with Thai, where a given noun always takes the same classifier (low predicativity).

*Agreement* in *Noun Class/* and in *Gender*

These techniques also exhibit classification and thus organically connect with the preceding. However, classification here assumes a different value.

The phenomenon of noun classes is found in certain languages of the Caucasus, but predominantly in Africa, "the continent of noun class systems". Gender languages are Indo-European and Afro-Asiatic (Semitic, Egyptian, Berber, etc.). The great majority of the languages of the world does not show gender, which is therefore neither necessary nor self-evident but rather the exception.

Both *techniques* share the following two constitutive traits: 1. agreement, and 2. the linkage with number. As for agreement, it involves the following two *punctuation.* All the nouns of such a language are divided into classes. An appropriate marker may but does not have to appear on the noun. However, those words in the sentence that relate to the noun, as, e.g., adjective, pronoun, participle, verb, must carry a marker that indicates the class of the noun. An example from Swahili (Bantu):

(12) ki- kapu ki- kubwa ki- moja ki- lianguka
CL7- basket CL7- big CL7- one CL7-fell
= "one big basket fell"
(CL7 = marker of class 7)

It seems plausible to compare an agreement of the sort with referential indices in formal logic. In both systems the purpose is to indicate constancy of the object within a running text. This, of course, reminds us of J. Piaget's findings about the child's acquisition of the constancy of an object. This is not only a psychological, but also an eminently communicative function. Class distinction serves the purpose of creating referential indices. Given this purpose it is of lesser import *how* classes are being distinguished. Classes may comprise totally heterogeneous members. Classifier *-ki-* in Swahili may apply to material objects such as "wood", "tree", "chair", but also immaterial ones like "language": *ki-swahili, ki-mbundu,* etc.

This trait, which we already found with *Numeral Classification* and in reinforced manner in the cases just cited is present once more in the *technique* of *Gender Agreement*. The following facts should be kept in mind: 1. In a gender language like German every noun must belong to a gender: masculine, feminine, or neuter. 2. Gender distinction is in a relation to biological sex. 3. Only a very small percentage of the objects around us are sex differentiated: the animate ones.

From these initial conditions we draw the following conclusion: The primary goal of gender classification is not to predicate about properties of the represented object (low predicativity). It rather consists in indexing (high indicativity), which, in turn, indicates constancy or continuity within the text. Gender classification shows semanticity on the metalinguistic level, which means that the meaning of gender cannot be defined without reference to the code: "The word *Tisch* in German shall be a member of the class masculine." With regard to this metalinguistic property the *technique* clearly connects with the following and last one, *namegiving* . We thus have completed the circle.

Last remark: As with all the other *techniques* there is variation along the predicativity-indicativity continuum. Contrasting with the low predicativity as a general trait of gender, there are some areas where gender does say something about the apprehended object: One is poetry, the other is politics. The so-called feminist linguists fighting for equal rights and either knowingly or unknowingly ignoring the unmarked-marked

relation between masculine and feminine are eloquent testimony to the highly communicative aspect of gender marking.

## 4. Evidence

Our proposed continuous ordering of *techniques* within a *dimension* and of phenomena of individual languages within a *technique* may stand on its own feet, as far as plausibility and consistency are concerned. Yet, some questions may nevertheless arise:

1. Is the *dimension* with its sequence of *techniques* complete, or must phenomena from languages hitherto not considered be integrated? In an earlier publication (Seiler, 1995: 312) I discussed this at some length and stated that the dimensional framework is open for the inclusion of further positions. An instructive confirmation occurred a few years ago: In a study entitled *Kollektion, Numeralklassifikation und Transnumerus,* Barbara Unterbeck (1993) produced evidence from Korean and other Southeast Asian languages for the necessity of intercalating a separate *technique*, called *Transnumerus*, between *Numeral Classification* and *Agreement* in *Noun Class//Number.* Such a necessity arises when the inclusion of such a *technique* would be in accordance with the criteria and principles stated initially (section 1) and would not produce unnatural scaling.

2. How can we recognize unnatural scaling? Take the case of personal pronouns, especially third person. If particular names can be included, why not personal pronouns? The answer is that the criteria and principles initially stated would not permit us to find a proper position without interrupting the continuous flow of the *dimension.*

3. The initial claim was that the framework of the *dimension* portrays "what speakers/hearers do", i.e. what is going on in their heads. How can this be substantiated? Our strongest arguments come from the observation of language change. Such changes occur preferably, if not exclusively, along the positions of the *dimension* or of the *technique.* A few examples must suffice. The historical derivation of classificatory articles from classificatory verbs has been mentioned above (3.3.3). The Modern German suffix *-heit/-keit* yields collective nouns: *Christen-heit* "Christianity", *Mensch-heit* "mankind", etc. The earlier forms were independent nouns: Old High German *heit* "rank, status", Gothic *haidus* "manner". When these substantive nouns reached the stage of being suf-

fixes, they began to be "shifted" back and forth among the relational *techniques*. Thus Modern German *Schön-heit, Frei-heit* have the meaning of abstract nouns. The change went from *collection* to *abstraction*. On the other hand, the suffix *-ung* of Modern German derives abstract nouns, but occurs with a secondary collective meaning as in *Regier-ung,* "government (as a collective)", *Leit-ung,* "direction (as a collective)", and "shifted" even further on, appearing in such individual nouns as *Leit-ung,* "line cable, (water-) tap".

4. It was said (section 1) that the level of General Comparative Grammar (cf. Fig. 2) with its continuous range of *techniques* is the "menu" from which each individual language "makes its proper choice"; and it is now added (2. above) that language change "moves" along the sequence of such a continuum – which means that the continuum must virtually be in the heads of speakers/hearers – as tacit knowledge, as it were. But how does this work; in other words: how is continuity preserved, when one or more *techniques* are not represented in a language? Take our Western European languages, where classificatory *techniques* seem to be absent. Isn't there a gap between *Mass/Measure* and *Gender* of individual nouns? Answer: This is where the *techniques* with their continuous range of phenomena come in. In languages like German or English we find, quite marginally, to be sure, constructions that resemble *Numeral Classification* :

(13) = (6)(i) eine *Herde* Kühe, but not *ein Rudel Kühe
ein *Rudel* Wölfe, but not *eine Herde Wölfe
(v) zwei *Stück* Vieh, two *heads* of cattle

We also find marginal instances of *Classification* by *Verbs*:

(14)(i) The *clothes* are *hanging* in the closet (and not *the clothes are standing in the closet)

The *blankets* are *lying* in the closet (and not *the blankets are hanging in the closet)

To conclude this analysis with a somewhat programmatic statement: In every individual language reflexes of all possible techniques of representation can be found, though some of them quite marginally, and not as independent *techniques* of level 2.

5. In our comments on the geometricized representation of *apprehension* (Fig. 2) we raised the question about the ends of the curves. Where do they lead to? I have suggested (Seiler, 1986: 137 f.) that the ends would join by twisting them 180°, i.e. in an eternal loop or Möbius strip.

Factually this would mean that there are substantial affinities between the "extreme" *techniques* of *abstraction* and *namegiving*, respectively. For detailed evidence and discussion see Seiler (loc.cit.). One detail must be sufficient here: In many languages and cultures abstract nouns are used as particular names: Russian shows names for females such as *V'era* "faith", *Nad'e ž̌da* "hope", *Ljubov* "love", etc. In late Latin it was common to give daughters abstract names used as "cognomina": *Concordia, Victoria, Eutychia*, etc. *Abstraction* is the sole *technique* within the *dimension* of *apprehension* which may eventually be substituted for *namegiving* .

## 5. Communication

The framework as outlined thus far was not explicitly devised to cope with problems pertaining to communication. It was the felicitous circumstance of a personal contact with the *Facoltà di Scienze della comunicazione* at the *Università della Svizzera Italiana* in Lugano, and especially with the Editors of the present Journal, Professors Eddo Rigotti and Peter Schulz, that oriented my thinking in the direction of widening the scope toward communicative aspects.

The fields of language and communication are not coextensive. Some remarkable statements on the subject may be found in a paper by Jacques Moeschler, published in the first issue of this Journal (Moeschler, 2001: 102 f.) cited here in abbreviated form: "... diventa abbastanza difficile caratterizzare il linguaggio per la sua unica funzione di comunicazione"; "... il linguaggio deve prima di tutto... essere considerato nella sua funzione cognitiva...". "Il linguaggio non è la comunicazione e la comunicazione non è il linguaggio"; "... il linguaggio non è un sistema il cui emerge e la cui evoluzione siano determinati della comunicazione, ma del quale uno dei diversi usi è la comunicazione verbale."

The statements can be accepted unconditionally. However, further questions must be asked: 1. What is this "funzione cognitiva"? What does cognitive-conceptual content look like? 2. What are the pathways leading from those contents toward encoding in a language? 3. What is the place of communication in the perimeter of those pathways?

In the preceding sections we have tried to give some answers to questions 1 and 2. We shall now broach the question number 3.

### *5.1 Communicative aspects in language*

We have seen that in the *parcours* of the *dimension* of *apprehension* from "left" to "right" communicative aspects move into foreground in parallel with increasing dominance of the principle of indicativity/individualization. The *technique* of *namegiving* at the extreme "right" end shows this in a particularly evident way.

We have also seen that with increasing dominance of the same principle language activity shifts from object language onto the plane of metalanguage. Again, the *Technique* of *namegiving* exhibits this in paramount fashion.

The neighboring *techniques* of *Noun Class/Gender* and of *Numeral Classification* also exhibit a clearly recognizable component of metalinguistic activity, albeit with decreasing dominance as we "move" from "right" to "left": Classification in both *techniques* refers not so much to properties of the designated object as to properties of the code: "The word *Tisch* in the code of German shall be assigned the value 'masculine'" (above, 3.3.3).

Metalinguistic activity seems to be characterized by an emphasis on interaction between speaker and hearer; and this, to our mind, is what verbal communication is about. Compare the situation of namegiving and name use (above 3.3.2). Compare also the situation in other fields of language behavior, as, e.g., the ubiquitous requests from hearer to speaker to repeat a word or a phrase not clearly heard or understood. Or the no less ubiquitous requests for "explaining", i.e. paraphrasing the meaning of a word or sentence.

If we said that communicative aspects get foregrounded the more we move from predicative, generalizing, defining behavior toward indicative, individualizing, interactive ways of establishing speaker-hearer relationship, this by no means implies that the communicative component would be absent from the more predicative *techniques*. It simply means that prominent indicativity, parsimonious in generalizing expressions, leaves room for *techniques* that emphasize interactive, bi-directional behavior from speaker to hearer and from hearer to speaker. The above is to be understood as a first approximation toward a better understanding of the mutual relationship between language and communication.

### *5.2 Communication beyond language*

Can the theory and the methodology as devised for language proper be profitably applied – *mutatis mutandis* – to communicative behavior beyond language? If it can, this would be a case of exaptation, i.e. a case of new problem solving for which the theory and methodology were not originally devised.[9] In what follows only a few suggestions may be advanced, and this, once more, with reference to an article that appeared in this Journal.

One outstanding area of communicative behavior concerns intercultural communication based on intercultural understanding. Peter Schulz (2001: 81-100) examines the question in how far rationality can be conceived as a condition for such an understanding. After careful and detailed scrutiny of the meaning of the expression *rational* and of the various readings of rationality he discusses the opposing stances of rationality in a relativistic vs. an absolute sense. Relative validity of rationality means that the question whether or not it is rational to have opinion P depends on such factors as cognitive condition, beliefs, moral values as well as on certain rules proper to an individual or a population. The related principle of interpretative charity is formulated as follows: "Interpret others so that their statements are reasonable in the light of their own convictions and traditions." For the cultural relativists the rules of rationality are exclusively dependent on the particular culture or context. Any claim to universality is denied.—The opposing view, which appears to be favored by Schulz, is in search of universal standards of rationality (op.cit. 87). The author is right in calling into question a view to the effect that the rules of logic would suffice as universal standards. Stronger substantive commonalties would be needed (p. 96). He also quite appropriately emphasizes the role of purpose and goal in rational behavior (p. 92).—The article ends with a question cited here in full (p. 97): "Are there certain anthropological constants – desires, interests, and *goals* [emphasis Hj.S.] – which are themselves independent of culture? If one could answer this question in the affirmative, then intercultural communication would be rational to the extent that these fundamental constants would be considered as standards of description and communication with another culture."

[9] See Gould and Vrba (1982: 4-15). I am indebted to my friend Dr. Thomas L. Markey, Tucson, Arizona, for having brought this work to my attention.

My comments and suggestions, tentative and provisional as they are, should be understood as a tribute to the stimulating ideas and questions contained in Schulz's work.

First of all, there seems to be some plausibility in the assumption that there is no difference in principle between understanding different cultures and understanding different languages. Understanding different languages means comparing different languages, e.g. one's own and a foreign language. Such a comparison presupposes a standard of comparison, a *tertium comparationis*. In the first part of this paper (section 2) we have shown how such a *tertium* can be arrived at, substantiated and ultimately justified. I suggest to proceed in an analogous way in the quest for a *tertium comparationis* in intercultural understanding and communication. Such a *tertium* might appropriately be called rational, rationality. Its status would be truly universal. It could not be established by fiat. Any preexisting framework such as logic or the rules and contexts of one's own culture would be inadequate. Instead, an abductive procedure would be required, as with languages, moving in a hermeneutic circle and combining aprioristic positing of hypotheses and inductive empirical testing.

For an illustration I should like to take up an example given in Schulz's paper (p. 85): Herodotus' discussion of incompatibilities in intercultural understanding.[10] All populations, says Herodotus, if they were given the possibility of choosing the best among the totality of all possible (social) rules, would surely choose the rules of their own people. He exemplifies it by reporting an experiment conducted by King Dareios with regard to funeral customs. Dareios confronts some Greeks in his vicinity and some members of a tribe of India, asking them to name the price for which they would be willing to apply to their dead ones the rules and procedures that are in force among the respectively opposite population: Would the Greeks eat the corpses of their fathers – would the Indians cremate their dead ones? The answer, of course, is emphatically negative in both cases.

How would an anthropologist go about in dealing with these data? He would probably try to understand both parties and demonstrate the well-foundedness of their respective practices on the basis of their respective cultural context. But how is this possible, how can he do it if Herodotus' thesis is correct when he states, in citing Pindarus that "custom is the king of everything"? He must have recourse to a superordinated instance, and he does so, probably most of the time, without knowing it. The instance is to

[10] Herodoti Historiae, ed. C. Hude. Oxford. Book III, 38. 3-4.

be sought on a level of neither one of the compared cultures; it is on a level, which, for want of a better term, we might call cognitive-conceptual.

But then, the further question, the central one, arises: What do we know about this level? It is not given us in any specific way. Here it is that combined inductive-abductive procedure comes to play: We provisionally posit on this level a concept, call it "funeral rites". We then begin to assemble data pertaining to that concept. Ample material can be gathered from the anthropological literature on all cultures around the globe. But now the job is no longer that of an anthropologist who describes funeral customs of a particular population. It is a comparative job processing the data on ideally all possible "funeral rites" in the sense of an order. The order would be according to similarities and differences, which means the order of a continuum, still more precisely: the order of a *Dimension*.

This proceeds on a level which we might call typological, and which is hierarchically below the cognitive-conceptual. But, as with our linguistic work, a common functional denominator will emerge in the course of this ordering. This, in turn, will enable us to replace "funeral rites" on the cognitive-conceptual level by some much more precise notion – a notion to be understood in the sense of a goal to be reached or a task to be fulfilled by every culture. The mere disposal or doing away of corpses would certainly be too narrow a goal; it must rather be sought in the realm of spirituality.

Now, regarding our exemplary case and in view of our endeavor to find a rational *tertium comparationis*, what do we have at our disposal? We have the means of comparing the different funeral customs: Some cultures consume their corpses, others cremate them, others bury them, still others like the ancient Magi and Zoroastrians[11] neither eat nor cremate nor bury them but leave them unburied to be torn by bird or dog. Given a sufficient number of such differing customs we can construct an order among them and consider them as variants corresponding to an invariant. The observation of diachronic changes among these variants will serve as an essential confirmation of our initially hypothetical set-up: this, again, in parallel with our linguistic methodology. Another helpful parallel might be afforded by observations made elsewhere[12] to the effect that

[11] Herodotus, Book I, 140.1. See also the interpretation by E. Benveniste (1929: 25).

[12] E. Holenstein (1985: 133 f.): "Strukturen, die in einer Kultur sehr stark ausgeprägt sind, lassen sich (mindestens ansatzweise) in (nahezu allen) anderen Kulturen ebenfalls finden."

customs that are dominant in one culture may be present marginally in other cultures (see our discussion above, section 4, point 3).

To execute an inquiry along the lines as in the above would, of course, be far beyond the purport and the limits of this paper. We nevertheless hope to have shown an approach and a direction for others eventually to follow. Thus we conclude by somewhat modifying Pindarus' dictum: Variation is the king of invariance – and invariance is the king of variation.

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