titulus

Motivation in language

huius textus situs retis mundialis

http://www.christianlehmann.eu/publ/motivation_in_language.pdf

dies manuscripti postremum modificati

09.09.2010

occasio orationis habitae

–

volumen publicationem continens

Gallmann, Peter & Lehmann, Christian & Lühr, Rosemarie (eds.), *Sprachliche Variation. Zur Interdependenz von Inhalt und Ausdruck*. Tübingen: G. Narr (Tübinger Beiträge zur Linguistik, 502).

annus publicationis

2007

paginae

100-135

Motivation in language

Attempt at a systematization

Christian Lehmann

University of Erfurt

1. Introduction

The question of motivation arises primarily with regard to human acts and actions. They are motivated by the goals that human beings pursue with them. Motivation is therefore not something that could be ascribed directly to linguistic systems (more on this in section 5.1). It is therefore little wonder that the issue of motivation in language practically did not come up in those schools of structural linguistics for which language was a static self-contained system. It did play a role in Praguean functional structuralism and, in particular, in Roman Jakobson's linguistics. The present study owes much to his pioneering work.

The aim of this article is to provide a comprehensive conceptual framework for sensible talk about motivation in language. No original empirical analyses are presented, few of the examples adduced are new. Instead, much term-dropping will be necessary in order to integrate all the relevant concepts into the picture. Iconic motivation of the linguistic sign will be taken as an uncontroversial case of what is meant by motivation in language, although we do have to ask what the proper place of iconicity is within the overall framework.

The following terms will be used: *Sign* will designate something perceptible in its function of evoking something else. This is essentially what Saussure calls the *signifiant* of a sign; and in order to avoid misunderstanding, we will sometimes say *significans* instead of *sign*. The concept of meaning will be decomposed as follows: *Content* will designate whatever the sign evokes or achieves, i.e. as a generic cover term. *Designatum* is a technical term for the meaning of a sign (in one sense), i.e. something that the sign represents or stands for. The content comprises the designatum, but also other information conveyed and associations triggered by the sign, as we shall see in section 2. Finally, the *significatum* is the language-specific semantic value corresponding to a significans.

The question of motivation in language is the following: On what basis does the sign code its content? Relating the question to the partners of communication, it means: On what basis does the speaker code the content by that particular sign; on what basis does the sign evoke its content in the hearer? In this sense, a sign is motivated to the extent that a principle can be identified that relates it to its content, to the speaker and to the hearer.

The notions of convention, arbitrariness and iconicity have been at the core of the issue since it was brought up in Plato's *Kratylos*. These notions have always been applied to the relationship between the sign and its designatum. There have only been sporadic attempts at widening the scope. In dealing with iconicity, Givón 1985, in the section on the nature of the designatum (1.2), relates the designatum to the two fundamental functions of human language, cognition and communication, attributing to the former two "major functional

realms coded by language", viz. the lexicon and propositional semantics, while attributing to the latter a third functional realm, discourse-pragmatic functions. This is an important step in the right direction, although it seems doubtful whether discourse-pragmatic functions should be considered part of the designatum; they are certainly part of the content.

In terms of Keller 1995, we must free ourselves from a purely representational semantics, a view of semiosis that regards it as a replacement of some mental objects by a set of perceptible objects that are conveyed and then decoded. Paraphrasing Keller, semiosis is the attempt on the part of the sender to influence the receiver by conveying such perceptible signals to him as are apt to make the receiver infer what the sender has in mind (cf. also Kirsner 1985). The desired influence on the receiver comprises mental and emotional attitudes as well as actions and behavior in the broadest sense. Some of these reactions of the receiver concern a designatum, but others concern other aspects of the content of the sign.

Semiosis is an activity of rational beings, men for short. Such activities are based on rational decisions, i.e. decisions that are motivated by some more general principle. Therefore, there is an initial supposition that the use of a particular sign for a particular purpose is motivated. For instance, if I drive a car in a foreign country and see a traffic sign that I have never seen, I interpret it on the basis of the initial supposition that it is motivated, i.e. that it bears some principled relation to its content. Semiotic motivation in this sense is the default common-sense assumption both at the level of parole and at the level of langue. A totally arbitrary decision would be one on an aleatory basis; such decisions or acts are rare in human beings.

In discussions of semiosis and motivation, Peirce's (1932, §5) threefold classification of signs is usually invoked:

- A sign that represents an object by virtue of some similarity with it is an **icon**;
- a sign that represents an object by virtue of some factual, esp. causal connection with it is an **index**;
- a sign that represents an object by virtue of a convention is a **symbol**.

This classification has seemed irreducible to most semioticians;[1] and most have rushed to the next step of confining the discussion of motivation of signs to iconicity and investigating the extent to which any kind of sign, i.e. those signs that are primarily indices and, chiefly, symbols, are nevertheless iconic. This will not be done in what follows. First, it must be asked why there should be exactly three different relations that a sign can bear to the object it represents. Second, Peirce appears to be mistaken about the nature of the relata of these three basic relations. It is too gross a simplification to relate the sign to an 'object' in all three cases. If someone cries in pain, the sign is, in Peirce's terminology, an index; but what is the object it represents?[2] Moreover, many signs, including those with abstract or grammatical meanings, do not in principle represent any object at all, unless 'object' is to be taken as co-extensive with what was above called 'content'.

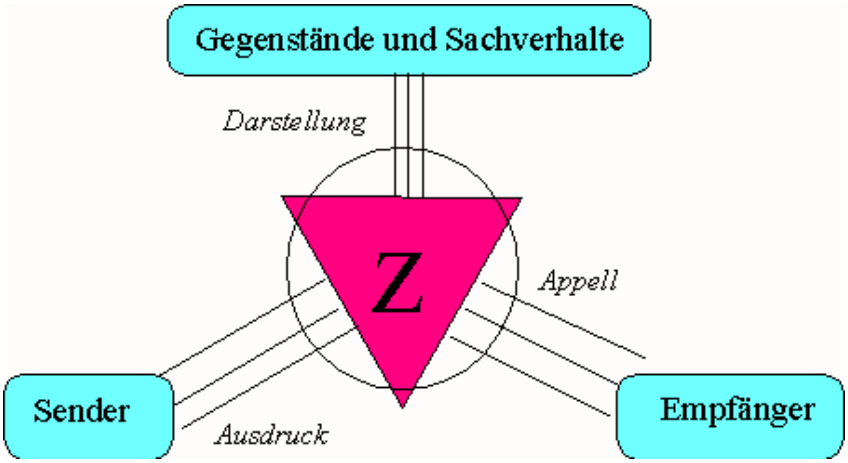
[1] explicitly so in Keller 1995, ch. 10

[2] The word *pain* represents the concept 'pain'; and the expression *my pain* represents a particular object falling under this concept. A cry of pain does nothing of all this; it is rather a perceptible process triggered by an inner process.

2. Semiosis

A good starting point for a theory of semiosis is provided by Karl Bühler's (1934) model, reproduced in S1.

S1. Bühler's (1934) model of semiosis



The model relies on three essential components of semiosis, viz. sender, receiver and referent or what was above called the designatum. We will have to add another component below, viz. other signs; but at the moment we will concentrate on the model as it is. In it, the sign has constitutive relations to the three main components of semiosis:

1. It **expresses** an aspect of the sender; in this capacity it is a **symptom**.
2. It **appeals** to the receiver; in this capacity it is a **signal**.
3. It **represents** a designatum; in this capacity it is a **symbol**.

It is important to appreciate the conceptual hierarchy here: The process of semiosis and its three essential components are taken as basic. From these, the three relations of the sign are derived. Finally, three kinds of sign are defined on the basis of these relations.

Furthermore, it now becomes a little clearer how the notion of 'content' differs from the notion of 'designatum': the relation to the designatum is only one of the constitutive relations of the sign. The latter also acts as a symptom of the sender, and that is part of its content; and it also establishes communication with the receiver, and that is another part of its content. The content of a sign is, thus, the total of its designative, symptomatic and appellative functions.

3. Motivation in semiosis

The three kinds of signs are not to be taken as three non-intersecting classes, but as three ways in which a sign can function.[3] A given sign may share aspects of all three kinds of signs. Thus, if in the following we speak of a symptom etc., we are not referring to a sign that is exclusively constituted by a relation to the sender, but instead to that aspect of the nature of the sign which makes it a symptom.

Now the three constitutive relations of the sign are qualitatively different:

1. How can the sign express the (inner) state of the sender? It can do this because the sender produces the sign. He is the source of the sign and consequently has a **causal** relation to it.

[3] Keller (1995:118) speaks of "Interpretationsverfahren von Zeichenausdrücken".

This is the most direct way the sign can achieve this, so that we can leave the involvement of the receiver and the designatum out of consideration.

2. How can the sign represent the designatum? If we abstract away from the involvement of the sender and the receiver in semiosis, the only direct relation that the sign can bear to the designatum is one of **similarity**. In the absence of any particular (social or semiotic) act on the part of sender and receiver, the only basis on which a sign can represent a designatum is a relation of similarity between the two.
3. How can the sign appeal to the receiver? It is true that the receiver may have empathy with the sender and thus interpret the sign on the basis of its symptomatic relation to the sender; and equally that the receiver may perceive the similarity of the sign with the designatum and therefore interpret it on the basis of this relation. But if, again, we abstract away from these relations and concentrate on the specific relation of the sign to the receiver, the only basis on which the receiver takes the sign as coding something else is because he partakes in a relevant **convention**. The basis on which a sign can appeal to the receiver and which is proper to its relation to the receiver is the convention which makes it a sign.[4]

These relations[5] are summarized in T1:

T1. Sign functions

sign type	**relates to**	**component of semiosis**	**by virtue of**
symptom	expresses	sender	causality
symbol	represents	designatum	similarity
signal	appeals to	receiver	convention

As is obvious, these three sign functions are related to Peirce's above-mentioned three kinds of signs in a direct way that may be represented by mapping Bühler's sign functions onto Peirce's classes of signs as shown in T2:

T2. Bühler's (1934) and Peirce's (1932) sign types

Bühler	**Peirce**
symptom	index
symbol	icon
signal	symbol

The first thing to note here is the incompatibility of Bühler's and Peirce's terminologies. If we accept the associations proposed for Bühler's three signs functions, we are faced with the following terminological clash: It is true that the Peircean term 'index' has been so often misunderstood that many (e.g. Keller 1995) have opted for using Bühler's term 'symptom' instead. The other two horizontal associations, however, have never been made. Rightly so, because the criteria are completely independent of each other. Bühler talks about the relations

[4] Peirce (1932, §5) did anticipate this, too, in saying that the symbol is a kind of rule.

[5] The relations themselves appear as 'causal, associative and rule-based relationship' in Keller 1995, ch. 10; but Keller does not refer them to the three constituents of semiosis.

that the sign bears to each of the components of semiosis, while Peirce talks about different relations between the sign and the object.

I have already indicated above that Peirce must be mistaken about the basis of his distinctions. The relation that makes a sign an index (Bühler's symptom) is really its relation to its source, which is, in the case of human semiosis, the sender. And the convention that makes a sign a symbol (Bühler's signal) is not really a relation between the sign and the object, but instead a relation between the subjects of semiosis and the sign.

On the other hand, Bühler's terminology cannot be used to dub the relations of cause, similarity and convention that the sign bears to the three components of semiosis. We will therefore continue to use Bühler's terminology in its original sense and add the three kinds of relations as attributes where appropriate.

We can now give a partial answer to the introductory question: "On what basis does the sign code its content?" The answer so far is: It codes its relation to the sender on the basis of a causal relation with him; it codes its relation to the designatum on the basis of some similarity with it; it codes its relation to the receiver on the basis of some convention in which he partakes. A sign may be motivated by any or all of these three relations. The relation of similarity to the designatum has always been regarded as a relation of (iconic) motivation. The relation of symptomaticity to the sender is easily seen as one of (causal) motivation. The conventional relation to the receiver is one of motivation in a special sense: It is not, of course, a motivation for a speech community to associate the sign with its designatum (or with the sender, for that matter). It is, however, a motivation for the receiver to interpret the sign as directed towards him and prompting him to react in some way (cf. note 4).

4. The nature of the significans

4.1. Composition of the significans

As we are concentrating on linguistic signs, the primary mode to be considered is the acoustic mode. Perception in this mode is more sensitive to the time dimension than the other perceptual modes. The sign is therefore essentially structured in **two dimensions**, the simultaneous (or vertical) and the successive (or horizontal) dimension. On the vertical axis, bands of frequency that differ in intensity are superimposed to create sounds that differ in loudness, pitch and timbre. On the horizontal axis, each of these parameters may take contrasting values, so that loudness is followed by silence, high pitch by low pitch, high timbre by dark timbre and so on. Any given value may extend over a longer or shorter duration in partial independence of the other parameters, and it may change continually or abruptly. The sequence may also display **patterns**, for instance a certain sound being repeated or alternating with another sound. Such a pattern may be compounded by the duration of its parts, so that, e.g., a machine-gun-like iteration may be distinguished from a moderate alternation of two sounds.

The two dimensions of phonetic structure are related to the **double articulation** of the linguistic sign[6] in complex ways:

- At the level of the **second articulation**, where distinctive units are combined into significative units, the two acoustic dimensions and their respective parameters are made

[6] According to Martinet 1957, the first articulation of the message is its composition out of significative units (signs), while the second articulation is its composition out of distinctive units (sounds).

almost full use of. As a consequence, the significans of a morpheme has been described as a two-dimensional matrix, where subsequent phonemes are composed of simultaneous phonological features. Horizontal patterning occurs at this level, too, but it presupposes a certain amount of sequential complexity and thus requires more successive phonemes in a morpheme than would mostly be necessary for the latter's distinctiveness.

- At the level of the **first articulation**, where significative units are combined into complex significative units, the sequential dimension prevails:[7] most components of a significative combination follow each other in time. There is, however, some simultaneous combination of significative units: morphological processes of internal modification, of accent and tone shift belong here, but also syntactic-prosodic processes such as intonation and stress.

4.2. Elementary structural relations

At both levels of double articulation, larger units are composed of smaller units. Units of the significans, no matter whether distinctive or significative, have elementary structural properties and contract elementary structural relations with each other. These properties and relations are determined by the ways the units relate to the two dimensions. We start by the parameter of **complexity**:

On both axes, the number of elements combined determines the level of structural complexity. On the vertical axis, a sound that has an additional fourth formant (a sibilant noise) in addition to the other formants is, *ceteris paribus*, more complex. Similarly, a morpheme modified by apophony or one whose tone matters is, ceteris paribus, more complex than a morpheme not so modified or a toneless morpheme. The expression of a sentence bearing an interrogative intonation contour at its end is more complex than the expression of a sentence without such a contour. Thus, structure on the vertical axis may be assessed by the property of complexity.

On the horizontal axis, the parameter of complexity is essential, too. It is determined by the number of units of a lower level that combine to form a unit of the next higher level. For instance, a syllable with a consonant cluster in the onset is, *ceteris paribus*, more complex than a syllable starting with a single consonant. A word-form reducing to a mere stem is less complex than a word-form containing an inflectional suffix; and so on.

Structural relations are contracted by any two units of the same kind (distinctive or significative) that are combined on an axis. On the vertical axis, there are no such relations. The possibilities of combining units of the same kind on the vertical axis are too limited to allow for structural differentiation within simultaneity.

On the horizontal axis, various elementary structural relations may be distinguished. The first is **sequential order**. The distinction here is simply whether A follows B or B follows A.[8] For instance, a partial reduplication may either precede (*ta-tam*) or follow (*tam-ta*) its base. Similarly, a subordinate clause may precede or follow its main clause. In the phonetic medium, sequential order is a question of sooner or later in time. In the graphic medium, the spatial relation is a bit more complex, as it derives from the relation 'coming first vs. later in

[7] This was called 'linearity of the significans' by Saussure (1916).

[8] The third logical possibility is, of course, simultaneity (or some sort of coincidence); but that has just been treated as a relation on the vertical axis.

the reading direction'. For a western alphabetic script, for instance, 'later' means to the right or below. In figurative representations, there is, of course, no strict sequential order.

Another elementary structural relation on the horizontal axis is **distance**. In the onomatopoetic expression *tick-tack*, the two syllables are adjacent, in the German expression *holterdipolter* 'helter-skelter', the two morphemic units (*holter* may be regarded as a variant of *polter*) are distantiated by a submorphemic unit *di*. Similarly, in the English clause E1, the syntagm *the vase* is in proximity of the verb *put*, while the syntagm *on the table* is at a distance. In the German translation equivalent E2, it is the other way around.[9]

E1. that John [[put the vase] on the table]

E2. dass Hans [die Vase [auf den Tisch stellte]]

The last structural relation to be considered on the horizontal axis is **correspondence in internal composition**. This relation underlies diverse forms of patterning. If another token of the same type follows, we have **repetition**, which underlies reduplication, as in Indonesian *orang-orang* (man~PL) 'men'. A more abstract form of correspondence obtains if different items of the same category are combined at the same level, as in coordinative constructions of the kind *cold and windy and rainy*. If an item composed of AB is combined with an item consisting of BA, we have **symmetry**. This obtains in syllables such as *pop* or German *ziehst* /tsīst/, but is rather rare (and often even proscribed) at the phonological level. In syntax, the stylistic figure of chiasm is an example, as in the saying E3,

E3. One should eat to live and not live to eat.

with identity of the components involved, or, at the level of categories, in E4.

E4. leges supplicio improbos afficiunt, defendunt ac tuentur bonos

LAT 'the laws threaten the bad ones with punishment; the good ones they defend and protect' (Cic. leg. ii. 13).

From this it becomes clear that the significans is structured much more richly on the horizontal than on the vertical axis. This structure plays different roles in the different types of signs, but it is most important in icons, as we shall see in section 5.4.3.

5. Kinds of semiotic motivation

5.1. Langage, langue, parole

The first consideration that bears on the issue of motivation in language is the distinction between *langue* and *parole*. Parole comprises linguistic acts and actions. Actions as such are goal-oriented and therefore motivated. Every utterance has a place in a means-end hierarchy where any given act is a means towards some superordinate goal and, at the same time, a direct intermediate goal for some subordinate acts that are a means towards it. An utterance that is unmotivated or not sufficiently motivated somehow falls short of normal expectations for utterances.

The goal of an utterance is something specific to the speaker and the speech situation. The linguistic discipline concerned with this is pragmatics and speech-act theory. The goals pursued by linguistic acts bear a complex relation to the functions of language qua *langue* and

[9] Cf. Askedal 1993, §5 for this kind of example.

langage. The relation between *langue* and *parole* is the relation between the virtual and the actual, but also the relation of the general and abstract to the specific and concrete. Thus, goals that recur in acts of *parole*, in the communicative activity of a speech community, may be integrated into its *langue*, may shape the linguistic system. This does not so much concern the extralinguistic intentions that speakers pursue with their utterances, because these may be as varied as human life. It is more true of such goals that are subordinate or partial goals in linguistic activity, such as identifying, introducing or resuming a referent or specifying the way that it is engaged in a situation. Such goals play a role in the motivation of a particular utterance, but they recur in language activity with such regularity that they are fundamental to it and therefore assume the status of **functions of language**.

The total of the fundamental cognitive and communicative tasks that languages are designed to solve constitutes the communicative and cognitive domains that an onomasiological analysis takes as its point of departure. To the extent that they pertain to *langage*, they are universal. To the extent that they can be established as universal, they can provide the tertium comparationis for typological studies (cf. section 7) and can be used in linguistic explanations that try to motivate linguistic structure by its function.

Language activity, however, only occurs in the form of a *langue*. Cognitive and communicative tasks, whether universal or not, can only be solved under the historical circumstances that obtain in a particular speech community and in a particular *langue*. The ways in which such tasks are solved in a speech community, i.e. in which they are solved again and again in the *parole* of its members, sediment in the system of its *langue*. Asking for the motivation of the structures of a *langue* thus means asking for the means-end relation in which these structures may appear as the means. This, in turn, implies recourse to language activity and to its center, the speech situation. This is the ultimate reason why a theory of motivation in language has to start from semiosis, as we did in section 3.

If utterances are normally motivated by some intention, and if the linguistic system is a sedimentation of the structures exhibited by utterances, it would seem to follow that the linguistic system and its structures are, quite in general, motivated, too. In a certain sense, this is indeed so. However, the linguistic system persists like any sedimentation; it is not only created in linguistic activity, but also shapes and limits its form. Linguistic structures may fossilize, so that the factors that once motivated them become irrelevant. In this way, their only remaining motivation may be that they correspond to an existent convention. Otherwise, they may be unmotivated or even dysfunctional. In probing the possibilities of motivating linguistic structure, it is therefore relevant to distinguish between such structural means and strategies that are productive and such others that are fossilized and no longer applied to new material.

5.2. Motivation by convention: symbolicity

In section 3 we have seen that a sign may be motivated by any of the relations that it holds to the components of semiosis, the sender, the receiver and the designatum. We will first review these in more detail and then come to the relation of the sign to other signs.

The motivation of a sign by a convention involving the hearer can be treated briefly here. It bears repeating that, in the broad sense, this is a kind of motivation, too. If a hearer says: ‘What should motivate me to interpret this as a sign and refer it to a certain designatum? (I do not see that it comes forth as a symptom from a sender, neither do I recognize a similarity between it and some possible designatum.)’, then an appropriate answer might be: ‘the mere

fact that, as a member of your speech community, you partake in a convention by which this is a sign that designates such and such, should motivate you'. One may think of certain (non-iconic and non-indexical) traffic signs as a case in point. However, this kind of motivation does not involve the s t r u c t u r e of a sign. Consequently, little of relevance for linguistics may be said beyond this. Therefore, we shall distinguish between motivation s.s. and motivation s.l. and speak of motivation s.s. only with respect to (Peircean) icons and indices.

5.3. Motivation by causality: symptomaticity

Animals that engage in some relevant activity produce perceptible behavior that either prepares or accompanies that activity.[10] For instance, a dog that is going to attack first shows its teeth. A man who is carrying a heavy burden groans. Other members of the same species know these causal relationships. If they see the bare teeth or hear the groan, they can infer that the producer of this behavior is going to attack or must be toiling heavily. The same goes for speaking with heightened intensity and disturbed regularity, which hearers can take as a symptom of enhanced adrenaline production and disturbed temper of their source.

So far these are natural symptoms like the smoke that refers to fire on the basis of a causal relation. However, animals who know these relationships and the interpretive mechanism can produce the behavior that counts as a symptom in order to trigger the interpretation on the part of the receiver. Thus somebody who carries a light weight may groan so that others perceive him to be toiling hard. The behavior then becomes semiosis. The symptom that is produced intentionally passes over into a genuine sign. It may then be conventionalized. There are also symbols, viz. interjections, that are conventionally used as symptoms. For instance, German *huch!* (~ 'whoops/eek!') conventionally symbolizes unpleasant surprise, but does so only deictically (cf. Wilkins 1992), i.e. with respect to the source of the expression, and in this respect it is a symptom.

Since symptomatic signs directly originate in non-semiotic behavior, they are the most primitive signs. The consequences for a theory of the evolution of language will not be probed here. It is, however, important to note that to the extent that symptoms are signs, they are no longer natural symptoms, thus, not really symptoms properly speaking (cf. Keller 1995, ch. 13).

One of the tasks that the speaker faces in symbolizing and linearizing his thought is to convey it in a given communicative situation, where certain circumstances are part of the physical speech situation, others are established in the universe of discourse, yet others are coming up in his head and require orderly coding. The process of semiosis itself shapes the sign. Most of what is relevant here is treated in linguistics in the area of **functional sentence perspective** alias information structure.[11] For instance, the sequence 'topic – comment' in sentence structure reflects the fact that the speaker first 'sets the stage' and then introduces the protagonists and the action. Or else, a constituent may be fronted and given enhanced intensity. This is a universal symptom of a certain kind of expressiveness: the referent of the constituent is "on top of the speaker's mind", it is the most urgent and important thing he wants to convey (cf. section 5.4.3.2).

---

[10] Cf. Givón 1994, §4 on evolution of animal signals and their analogical structure.

[11] Cf. Givón's (1994:55) "Pragmatic principle of linear order". Jakobson (1965) speaks of 'communicative dynamism' here.

Such phenomena have often been subsumed under iconicity. However, what is reflected here in linguistic structure is not some feature of the designatum, but actually some factor of communication itself. One may ascribe it to the relation between the sender and the receiver. However, here as with the other symptoms mentioned above, we are dealing with conventionalized symptoms. The direct causality of genuine symptoms is mitigated and controlled by the desire to communicate. Once we accept that linguistic symptoms are almost never symptoms in the literal sense, it seems most appropriate to classify such phenomena of 'communicative packaging' under symptomatic motivation.

5.4. Motivation by similarity: iconicity

5.4.1. Introduction

Communication is not the transmission of perceptible surrogates instead of non-perceptible thoughts, but the transmission of perceptible things that provide a hint towards what the sender wanted to convey (Kirsner 1985, Keller 1995). The sign thus only directs the receiver towards its designatum, by alluding to some of the latter's features.

This is true both at the level of *langue* and at the level of *parole*. At the former level, a sign evokes its designatum by the value that it has in the language system and in use. We may equate this with both Saussurean *signifié* (for us, significatum) and *valeur*. The words *Morgenstern* and *Abendstern* provide a well-known example: Neither of them represents the designatum directly. They do, however, evoke the idea of a celestial body that is visible last in the morning or first in the evening. This triggers an inference that arrives at the designatum Venus. Thus, features not covered by the significatum are completed by encyclopedic knowledge. At the level of *parole*, the sign including its significatum is being used in order to evoke a particular referent associated with the current universe of discourse. The personal pronoun *he*, e.g., has the significatum 'male being identifiable either in the speech situation or in the universe of discourse (by rules of deixis and anaphora)'. At a particular point in some discourse it may refer to 'the Pope'. Again, features not contained in the significatum are completed by inference.

The sign is motivated by its relation to that feature of its designatum by which it evokes the whole designatum. The designatum, however, has more than this feature. It may be represented by more than one sign, each taking up a different feature. Each of the signs may be motivated, but the motivations differ and may be mutually incompatible, as again shown by *Morgenstern* and *Abendstern*.[12]

A sign (a significans) can never hope to fully represent a designatum. The designatum is just too complex and too variable.[13] To the extent that an icon (a Bühlerian symbol) represents its content, it does so via its significatum. In the following subsections, we will see how iconicity connects a significans with its significatum and then its designatum.

5.4.2. The relata of iconic motivation

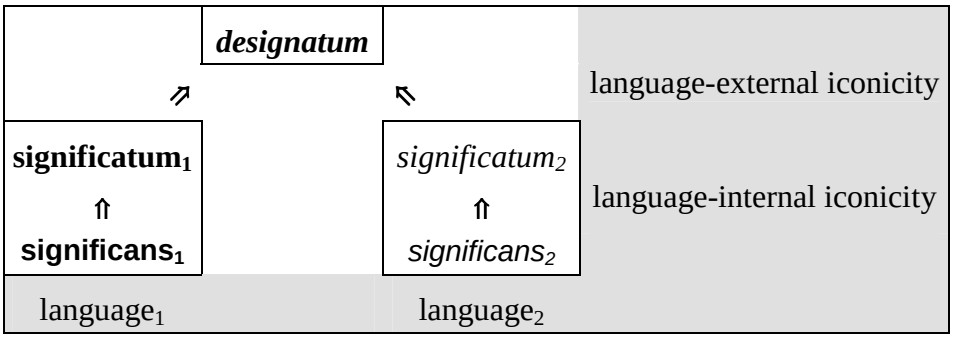
If we distinguish between the significatum and the designatum of a sign, what exactly is it whose association is (or is not) iconically motivated? Take the word *cuckoo* as an example. Its

[12] Radden & Panther (2004, section 2) analyze the terms for 'screwdriver' in different languages in the same spirit.

[13] Givón (1994:62) speaks of "the *paucity* of iconic coding dimensions."

significans bears an iconic relation to its significatum. The significatum is something like 'thing characterized by the sound [kʌˈkuː]' and, moreover, delimited by the paradigmatic relations of the lexeme. The designatum of the lexeme is, of course, that particular zoological species. Here we see that linguistic iconicity is a twofold or mediate relation, as visualized in S2.[14]

S2. Iconicity as a mediate relation



The relation between the significans and the significatum is regarded as iconic from a point of view inside the specific language system. The relation between the sign and its designatum is, so to speak, the second half of the relation. The designatum, however, is outside and independent of language. This relation is therefore iconic to the extent that the significatum corresponds to an independently verifiable feature of the designatum. Suppose, e.g., that one language called Venus the morning star, while another called it the evening star. Each of the two significata corresponds to a feature of the designatum that can be verified outside linguistics. Consequently, although the signs of these two languages are different, each is motivated. We will come back to the combination of linguistic methods with methods of other disciplines (cf. section 5.4.4). Inside linguistics, we have a clue that a linguistic sign corresponds to an independently verifiable feature of the designatum if signs of different languages are similar. The choice method of finding this out is language comparison.

5.4.3. Kinds of iconic motivation

We are now ready to ask: What are the aspects of a designatum that can be represented iconically by diverse media, but in particular the auditory medium? In principle, these may be substantive and structural aspects of the designatum.

Starting with the **substantive aspects**, we may first ask to what extent the significans of a sign may be isomorphic to its significatum. Assume a structure of the significans as a two-dimensional matrix of phonological features as outlined in section 4, and a structure of the significatum such that it is, likewise, composed of (semantic) features. Would it be theoretically possible for the signs of a language to be completely motivated as far as the relation of significans and significatum is concerned (cf. Lehmann 1974)? This would mean that the significans of a sign consists of phonological features each of which correlates with

[14] The relata of significative relations are many. In the case of spatial information, Givón (1994, §4) sees an iconic relation, viz. proximity iconism, between the denotatum and the concept, the latter taken as a neurological representation.

one of the semantic features that form its significatum. This Gedankenexperiment fails for a number of reasons.[15]

- First, the phonological features of such a language would, by definition, not be distinctive, but significative features. Thus, the language would lack double articulation and would, for this reason alone, not be suited as an unlimited communication system.
- Second, the number of phonological features is insufficient to match the semantic features needed in human languages.
- Third, constraints on the combination of phonological features are very different from constraints on the combination of semantic features, so that such a two-dimensional matrix of phonological features would be unpronounceable.

In other words, this kind of wholesale sound symbolism is impossible for human language. Consequently, substantive isomorphism between significans and significatum can only involve selected features. Since the significans is manifested as an acoustically perceptible event, it may be similar to its designatum if that is an audible event, too. This kind of iconicity is **onomatopoeia**. It is found in sound words such as *click, rustle* and the like. This is a field that has been researched rather extensively, although not always with a proper theoretical and methodological foundation; see section 5.4.4.

If the designatum is not an audible event, but perceptible by some other sense, then a similarity between the acoustic signal and the visual, olfactory or tactile designatum may obtain. Such a similarity is provided by synaesthesia, and the semiotic relationship based on it is **sound symbolism**, as it is typically found in ideophones such as *hush*.

Turning to the **structural aspects** of the designatum that may be represented iconically, we come to what has been called **diagrammatic iconism**. Its kinds essentially follow from the elementary structural relations obtaining in the significans as summarized in section 4.2. They are well-known from the literature on iconicity (e.g. Haiman 1985[N], Haiman (ed.) 1985) and need only be mentioned here.

5.4.3.1. Complexity

Complexity of the significans may reflect complexity of the significatum and, indirectly, conceptual complexity. Complexity iconism, or quantitative iconism, is the domain of **markedness theory**. In English conjugation, e.g., the past tense *lived* is morphologically more complex than the present *live* by an additional suffix, and it is semantically more complex since it has the additional feature of past reference. At the syntactic level, a relative clause, as in *man who is friendly*, has a more complex significans than a non-clausal attribute as in *friendly man*, and on the semantic side, it has a selective, restrictive or even focusing force which the simple attribute lacks.

At the morpheme level, Zipf's law on the correspondence between complexity of the significans and the amount of information may be recalled (cf. Lehmann 1974, 1978). An example involving onomatopoeia combined with quantitative isomorphism is provided by a pair of sound verbs such as German *zischen* 'hiss' vs. *knirschen* 'gnash': The roots are /ʦiʃ/ and /knirʃ/ respectively, with the second one more complex both in its onset and in its coda and, moreover, more heterogeneous in its composition. The first one designates a sequentially

[15] Cf. Touratier 1979:141 for a similar argument.

homogeneous noise with a shapeless timbre, the second one a sequentially heterogeneous noise with a composite timbre.

5.4.3.2. Sequential order

The sequence of units in the significans may reflect the sequence of units in the designatum.[16] Literally, we are speaking of temporal sequence. Iconicity is made use of in such expressions as E5.

E5. Linda, Sue and Jill arrived in this order.

If the designatum involves some order of entities which is not temporal, a metaphor similar to the sound symbolism mentioned above is involved. This may be seen in an expression such as E6.

E6. The president and the secretary of state arrived.

They may have arrived simultaneously, but the order of mention reflects their conceptual order, viz. their rank (cf. Jakobson 1965:350f). Many kinds of conceptual relations may claim to be diagrammatically reflected in sequential order.[17] On top of all, there is the sequential order imposed by functional sentence perspective, e.g. by the ordering principle 'topic – focus – extrafocal clause'. As we saw in section 5.3, this order has nothing to do with properties of the designatum, but instead reflects the sequence of steps in which the sender is conveying it. It is therefore much more a symptomatic than an iconic sign. This is one example to show that what is conveyed – the content – does not reduce to the designatum (cf. section 2).

It thus becomes clear that the structural relation we are talking about, i.e. the binary distinction of B either preceding or following A, is much too poor to adequately render the wide range of semantic and communicative relations that require to be coded. Haiman (1985[N]:2) calls this 'the most serious limitation of "linear iconicity": the problem of competing motivations for expression in a limited medium.'

5.4.3.3. Distance

The distance of two units in the significans may reflect their distance in the designatum. This is literally so in E5, where – regarding the relations of *Linda* to *Sue* and *Linda* to *Jill* – the temporal distance in the (spoken) significans corresponds to the temporal distance in the designatum. When E7 is written, it displays spatial distance iconism.

E7. Linda, Sue and Jill stood in a row.

More often, however, it is conceptual, not spatial or temporal distance that is meant. The alternative between expressing the undergoer as a direct object, as in E8 from Yucatec Maya, or as an incorporated object, as in E9, illustrates what is meant.

---

[16] Again, Jakobson (1965) may be the first to adduce Caesar's *veni, vidi, vici* in this connection.

[17] Another of Jakobson's (1965) examples is the combination of subject and object, which in the overwhelming majority of languages occur in this order, reflecting the direction of causality or flow of energy in a situation.

E8. t-in chuy-ah le che'-o'b-o'
YM PAST-SBJ.1.SG sew-CMPL DEF wood-PL-D2
'I linked the sticks'

E9. h chuy-che'-nah-en
YM PAST sew-wood-CMPL-ABS.1.SG
'I made a palisade'

In E8, the act of sewing is applied to a specific set of sticks. In E9, instead, a unitary action of making a palisade is referred to, in which the sticks are not individuated, but are rather an ingredient of the action.[18]

Another example of distance iconism may be found in causativity (cf. Comrie 1985). Most languages have a choice among alternative causative constructions such as those in E10.

E10. a. Linda killed John.

b. Linda caused John to die.

In E10.a, Linda directly acts on John in a way that makes him die. In E10.b, she just does something which is the cause of his death. There is a unitary situation in E10.a in which both agent and patient are directly involved, whereas there are two situations in E10.b, linked by causation. The structure reflects this semantic distinction, as there is one clause in E10.a, but two in E10.b, with all the other structural differences following from it. In particular, the two predicates of causing and of dying are fused into a single verb stem in E10.a, which shows that fusion constitutes the proximity pole of distance iconism. For Van Valin & LaPolla 1997:480f, this iconism in causative constructions is just a special case of distance iconism in complex sentences, where the intimateness of the semantic relation between two propositions is reflected in the closeness of the structural bond between them.

Distance and complexity are interrelated. Consider syntagms A and B, representing two cognitive entities that may be related to different degrees. In the construction AB, the syntagms are close; in the construction AXB – where X expresses the relation between A and B –, they are distant. At the same time, the relation between A and B is expressed by a more complex sign in the second case than in the first. Take E11 as an illustration.

E11. a. Erwin trat seinen Bruder.
'Irvin kicked his brother.'

b. Erwin trat nach seinem Bruder.
'Irvin tried to kick his brother.'

In E11.a, the patient of the action is affected, and this is coded by its direct object status in immediate adjacency to the verb. In E11.b, the patient is not quite reached by the action. There is, thus, some conceptual distance, and this is coded by its prepositional object status. In this way, the noun phrase is both at a greater structural distance from the verb, and the prepositional phrase is structurally more complex than the noun phrase of E11.a. See Kirsner 1985 for an analysis of similar relations in Dutch benefactive constructions.

[18] This example may be seen as a case of Bybee's (1985) principle of morphological closeness.

5.4.3.4. Correspondence in composition

The accumulation of identical units in the significans may reflect their accumulation in the designatum. Reduplication that indicates plurality of objects or iteration of events is a common example of this kind of iconism. At the level of categories, the same principle obtains in coordinative constructions (studied in Haiman 1985[S]). Trivially, the fact that the coordinated constituents in E5 – E7 belong to the same syntactic category and take part in a sociative (rather than dependency) relation reflects their appurtenance to the same ontological category and their analogous engagement in the respective situations. The structural **symmetry** observed in chiastic constructions such as E3f reflects the converse conceptual relations coded by such sentences.

5.4.4. The role of iconicity

Iconic interpretations are default interpretations, i.e. such interpretations which prevail or are, at any rate, possible as long as there are no – symbolic – indications to the contrary. For instance, the temporal iconicity between the order of clauses and the order of events becomes effective in paratactic structures (Simone 1994[I], §4). If the construction contains grammatical means (called 'diacritics' in Haiman 1985[S][19]), as it does in subordination, these invalidate the default interpretation. On the basis of the default mechanism, the temporal order of the events reported in E12.a is assumed to be the same as the order of the clauses. The default interpretation is overridden in E12.b on the basis of the subordinative construction involving the symbolic sign *before*.

E12. a. Linda entered the room and greeted everybody.

b. Before Linda entered the room, she greeted everybody.

This shows that even in such an elaborate, complex and fully developed system as a modern natural language, the iconic interpretation of a sign is an elementary basis that is resorted to whenever there is no other information available. The same is, a fortiori, true of communication systems that somehow fall short of this characterization. Iconic communication is resorted to, inter alia, in pidgin languages, in communication with foreigners and at the origin of human language (cf. Givón 1985, §4). Iconic semiosis is therefore much more basic than Saussure's principle of the arbitrariness of the linguistic sign seems to imply. This has first been argued extensively in Jakobson 1966. Givón (1985:214) summarizes: "we ought to consider iconicity the truly general case in the coding, representation and communication of experience, and symbols a mere extreme case on the iconic scale." Simone (1994:x) rephrases this in proposing "that arbitrariness should perhaps be interpreted more properly as a kind of 'degenerate iconicity'." In all of this, we must bear in mind that symptomatic motivation is yet more basic than iconic motivation.

The theoretical insight is by now fairly firmly established. The problem is how **linguistic methodology** should react to it. Inside a given language, everything may appear to be motivated. Both *click* and *clack* designate abrupt small noises, but *click* designates a rather

[19] "a structure without diacritics can only acquire those meanings of which it is itself an icon." (Haiman 1985[N]:20)

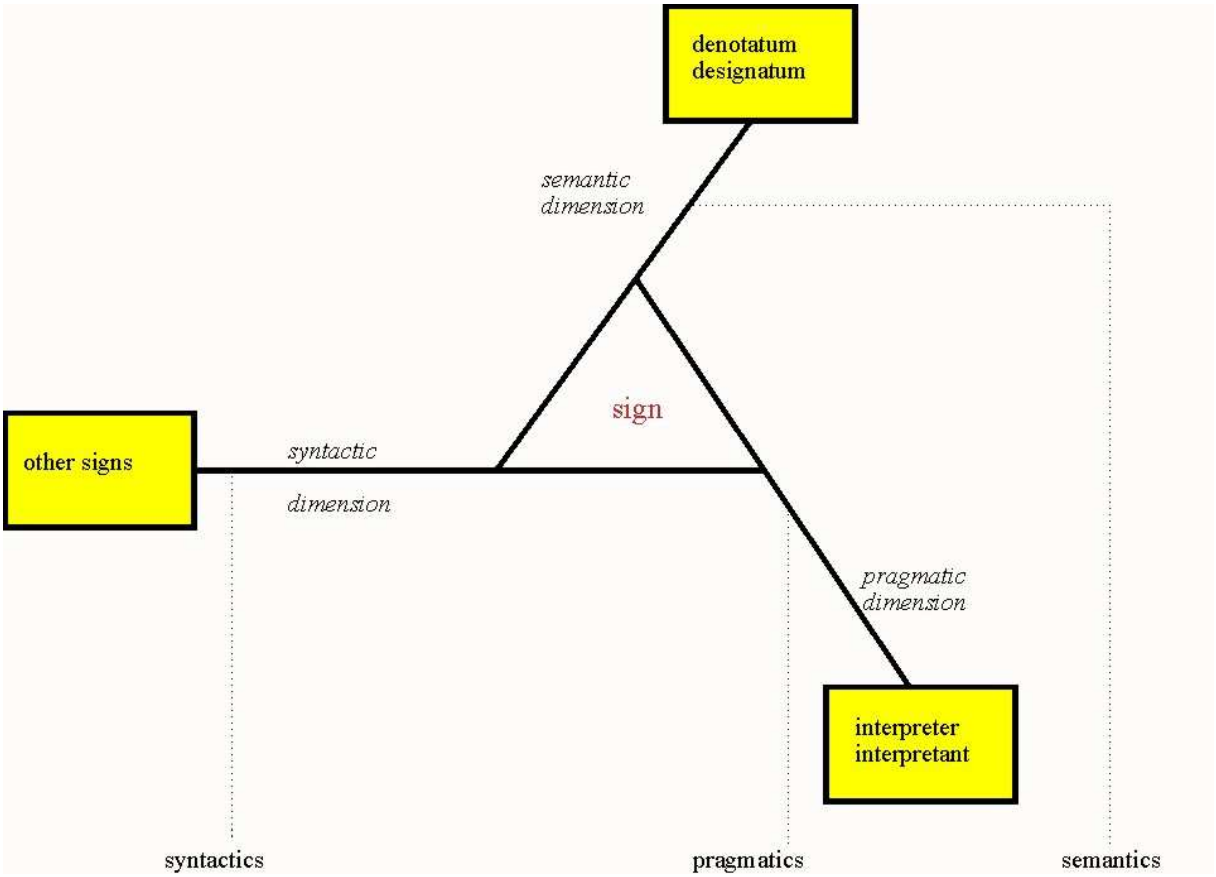
sharp noise, while *clack* designates a comparatively low noise. The problem is that you can know this without ever investigating how these words are used. Why? Because you can hear it from their significantia. This is the **onomatopoetic circle** (cf. Lehmann 2006). It consists in the following procedure: One starts from the significans, construes its significatum by methods of structural linguistics, i.e. inside the particular linguistic system, posits the designatum on the basis of the significatum without verifying the former on an independent basis and then postulates iconicity for the relation between the significans and the designatum. The danger of getting into the onomatopoetic circle in this kind of research has not always been appreciated. It threatens not only in onomatopoetics, but in any kind of iconicity, e.g. in the interpretation of distance iconism as with E11.

Structuralism has taught us that linguistic analysis starts from expressions and their structures, because this is the only way the linguist can access the meaning or function of the form. However, we have to complement this semasiological method by an onomasiological approach. The nature and structure of the content conveyed by linguistic expressions must be established by independent methods, e.g. by psycholinguistics or cognitive anthropology. We can then posit a designatum as a tertium comparationis for linguistic structures. In spelling such a designatum out, the possibilities of rendering it iconically in linguistic structure are made explicit. The structures of diverse languages in which a given designatum is represented may then be compared. In this way, the concept of iconicity is operationalized so that it can be checked by objective analytical methods. We will come back to this in section 7.

5.5. Motivation by other signs

Bühler's model of semiosis is complete as such. However, a sign cannot only be motivated by its particular relation to one of the components of semiosis. It can also be motivated by its relation to another sign (cf. Radden & Panther 2004, section 5). The idea of integrating into the semiotic model the relation of the sign under consideration to another sign was first brought up by Ch. Morris (1938:19-22). His sign triangle takes the form of S3:

S3. Sign relations according to Morris 1938



S3 may be related to Bühler's model (S1) in the following way: Bühler's 'objects and states of affairs' correspond to Morris's 'denotatum/designatum', while Bühler's 'sender' and 'receiver' jointly correspond to Morris's 'interpreter'. Then it becomes clear that the 'other signs' in S3 are an additional component. Naturally, the relation of a sign to the components of semiosis is of a different nature than its relation to other signs. However, the latter relation can motivate the sign, too. What we are here dealing with is what Saussure (1916:180-184) called 'arbitraire relatif'. Every sign is motivated by its paradigmatic and syntagmatic relations to other signs.

5.5.1. Motivation in paradigmatic relations

Let us first look at motivation in paradigmatic relations. A complex sign at any level has an internal structure that reflects to some degree the structure of its meaning. For instance, the meaning of a compound noun may in part be construed by combining the meanings of its determinans and determinatum. Similarly, the meaning of a sentence may be derived in part by applying rules of grammar and of semantic interpretation to its constituents and their structural relations. This kind of paradigmatic motivation is called **compositionality**. It is limited by lexicalization and idiomaticization, which lead to an alternative, viz. a holistic access to complex signs. However, language could not work if complex signs did not exhibit, to a high extent, this kind of motivation.

Here we briefly come back to metaphor, which was involved in the above examples of synaesthesia (p. 12) and order iconism (p. 13). This is a paradigmatic relation that plays an important role in lexical motivation. If a human being is called a *star*, the expression is

understood as motivated by the similarity between the person and the celestial body as regards its elevated position and the brilliant impression that it makes on the senses. From the examples given, we may infer that this kind of paradigmatic motivation reaches out of the linguistic system into the world of perception, knowledge and belief. This is, consequently, another area where an iconicity argument would need an independent extralinguistic basis.

Paradigmatic relations are also relevant in the phonological composition of the morpheme. Jakobson gives the following example of the workings of sound symbolism:

> The presence of a grave or acute phoneme in the root of a Dakota or Chinookan word does not signal by itself a higher or lower degree of intensity, whereas the coexistence of two alternant sound forms of one and the same root creates a diagrammatic parallelism between the opposition of two tonal levels in the signantia and of two grading values in the respective signata. (Jakobson 1966:356)

Such paradigmatic relations are, thus, an important basis of sound symbolism and, at the same time, a methodological principle guiding and limiting relevant research.

Another example of such partial morphosemantic correspondences obtaining at the submorphemic level is provided by German stems having the group /kn/ in the onset and designating something small and chubby, like:

> *Knäuel* 'clew', *Knauf* 'knob', *knautschen* 'crease', *Knebel* 'gag', *Knie* 'knee', *Knirps* 'dwarf', *Knöchel* 'ankle', *Knödel* 'dumpling', *Knolle* 'lump', *Knopf* 'button', *Knorpel* 'cartilage', *Knorren* 'knot, gnarl', *Knospe* 'bud', *Knoten* 'knot, node', *knüllen* 'crumple'.[20]

An example involving grammatical meanings is the series *mich, dich, sich* 'me, you, himself', which invites a segmentation *m-* '1.sg.', *d-* '2.sg., *s-* '3.sg.', *-ich* 'acc.'[21] Such examples are at the submorphemic level, thus at the borderline between morphology and sound symbolism.

All of these cases may also be seen from the point of view of **analogy**. A metaphor is a particular kind of analogy; if a complex sign is interpretable as compositional, it is so on the basis of an analogy to signs with a similar sound-meaning relation; and the diagrammatic parallelism between sounds and meanings in one Dakota and Chinook sound-symbolic word is strengthened to the extent that it is analogous to other such words. Analogy is thus one of the fundamental motivating forces in linguistic structure. Explanations based on analogy are, of course, low-level intra-system explanations, which do not exclude, but rather call for higher-level and even external functional connections.

5.5.2. Motivation in syntagmatic relations

Next a brief look at motivation in syntagmatic relations. The appearance or particular shape of an element in a text may be motivated by properties of its syntagmatic context. The most obvious example that comes to mind are anaphoric relations: The appearance of an anaphoric pronoun or cross-reference morpheme is motivated by the resumption of something appearing earlier in the same text; and its particular shape is motivated by agreement.

---

[20] Note that, for some of the above items, their inclusion in this set may be due to the onomatopoetic circle.

[21] Cf. Leiss 1997 and other recent publications of this author for an approach that tries to minimize homonymy in the lexicon by motivating semantically as many phonological correspondences as possible.

In a more abstract and mediate sense, metonymy has sometimes been seen as motivation by syntagmatic relations. In a sentence such as *the White House has accepted the offer*, the expression *White House* is not interpreted as referring to a building, but to persons who form an institution that works in this building and who act qua members of this institution. While it is received knowledge that metonymy is based on and motivated by some such relation of contiguity, it does not seem clear that the syntagmatic context plays an important role here. Here as in the case of metaphor, the motivation may be at least partly extralinguistic.

5.5.3. Language-internal and language-external motivation

Motivation of a sign by its paradigmatic and syntagmatic relations obtains inside a given language system. It thus differs from the kinds of motivation that refer to the components of semiosis in that its basis is not universal, but language-specific. In this connection, naturalness theoreticians (cf. Dressler et al. 1987) have spoken of 'system-internal adequacy' or '(language specific) system adequacy'. Methodologically, this is another field where the danger of 'everything is motivated' is omnipresent. One must bear in mind that not even the driest structuralist, including Saussure himself, has ever doubted that linguistic elements are principally motivated in this sense. The primary purpose of the current section therefore has been to delimit that kind of motivation which reaches out of language itself from that kind of motivation that stays within its confines. The latter kind is basic to all of linguistics and therefore not apt to define a specific linguistic research program. Still, specific kinds of motivation like metaphor and metonymy show that the boundary between language-internal and language-external motivation (where 'language' = 'langue') may be hard to draw.

T3. Kinds of motivation of signs

locus of motivation	**motivating relation**	**type of sign**
system-internal	by paradigmatic and syntagmatic relations	sign
language-internal	by convention	symbol
language-external	by similarity	icon
	by cause	symptom

T3 summarizes the principal kinds of motivation of linguistic signs discussed in sections 5.2 – 5.5. 'System-internal motivation' refers to the system of the *langue*, which essentially consists of paradigmatic relations among its elements, and to the structure of texts of such a *langue*, which essentially consists of syntagmatic relationships among its elements. 'Language-internal motivation' refers to the individual language as a traditional activity of its speech community. 'Language-external motivation' refers to the speech situation and the designated world in which the speech act takes place. From the preceding discussion, it becomes clear that system-internal and even language-internal motivation as such is essentially taken for granted in linguistics and does not usually constitute the object of debate when linguists ask whether, where and how linguistic expressions are motivated. It is language-external motivation that is crucial to the on-going discussion and that is both insufficiently clear at the theoretical level and insufficiently investigated at the empirical level.

5.6. Multiple motivation

Peirce already said that 'icon – index – symbol' is not so much a classification of signs as it is a set of functions in which every sign may partake to some extent. Consequently, a given sign may be motivated in more than one way. Here are two examples from Keller 1995, ch. 13:

Yawning as a sign of boredom is an iconified symptom. On a first plane, the signaled yawning is an icon of genuine yawning. On a second plane, genuine yawning is a symptom of tiredness.

An Egyptian hieroglyph showing bent reeds means "wind". It, too, functions as an indirect symptom: On a first plane, it is an icon of real bent reeds. On a second plane, real bent reeds are a symptom of wind.

Thus, different kinds of motivation may apply to a given sign. In syntax, as we have seen in section 5.4.3.3, complexity and distance iconism are inextricably interwoven in a given construction. Moreover, such a construction is, of course, motivated inside the linguistic system by its paradigmatic and syntagmatic relations. Multiple motivation is probably the norm in linguistics.

6. Motivation and grammaticalization

When a new sign is used in a community, it must somehow be motivated. It may be compositional to some extent or even entirely. To this extent it is motivated by its relations to other signs, as we have seen in section 5.5. To the extent that the sign is not compositional, one of the other motivating mechanisms must be operative.

The sign may be due to a convention from the moment of its origin, i.e. it may start out as a (Peircean) symbol. This applies to neologisms that are explicitly agreed upon by some relevant speech community or are stipulated and defined by some competent body. Such processes do occur, but they are not responsible for the bulk of new signs in the system. The other two mechanisms account for the spontaneous, undirected introduction of new signs into a communicative system.

The new sign may be initially motivated as a **symptom**. The clearest cases of this kind are interjections. As long as they stay interjections, they require no special integration into the grammatical system. For such signs, however, which get involved in the syntax, the genesis is already tinted by the conventions of grammar. In section 5.3, we saw that sequential order of signs may reflect the order in which referents come to the mind of the speaker, and the speaker may thus start a sentence by what is on top of his mind, producing a sequential order that is symptomatic. If he does not adapt the syntax of the rest of the sentence to the new word order, the result may be ungrammatical by the rules of grammar. For instance, the speaker wants to lend contrastive emphasis to 'not me' in E13.a. He might wish to just front this constituent and give it contrastive stress, as in E13.c. But this is not possible in Brazilian Portuguese. Instead, he has to adjust the sentence construction to this communicative function by constructing a cleft-sentence, as in E13.b.

E13.	a.	Não	vai	me	beijar,	vai	beijar	a	mãe.
PORT		not	go:3.SG	me	kiss:INF	go:3.SG	kiss:INF	DEF.F	mother

'You are not going to kiss me. Go kiss your mother. (Thomas 1969:7)

b. Não sou eu que você vai beijar, vai beijar a mãe.
not am I that you go:3.SG kiss:INF go:3.SG kiss:INF DEF.F mother
'It's not me you are going to kiss. Go kiss your mother.'

c. *Não mim (você) vai beijar, …
not me you go:3.SG kiss:INF
'Not me you are going to kiss, …'

This shows that symptomatic signs do not start out as pure symptoms, but instead are integrated into the language system from start. Nevertheless, the construction is maximally motivated at its origin, partly as a symptom of the speaker's communicative disposition, partly by the compositional rules of the system. The Portuguese cleft-sentence may then be further grammaticalized, one of the factors in this process being omission of the subordinator *que*. When this happens, compositionality decreases, the construction becomes more arbitrary, i.e. it becomes a construction of its own, not derivable from universal communicative principles and existent constructions.

Lastly, the new sign may be initially motivated as an **icon**. Total reduplication to convey plurality, as in E14 from Sundanese, is a paradigm example.

E14. a. anak-anak 'children'

SUND b. buku-buku 'books'

E15. a. sa-sato-an
SUND RDP-animal-PL 'animals'

b. pa-parabot-an
RDP-utensil-PL 'utensils'

In the same language, some nouns form their plural by total reduplication, while others, including those of E15, form it by a combination of partial reduplication with a suffix. The latter process is palpably more symbolic, both because partial reduplication is less iconic than total reduplication and because suffixation, a fortiori in discontinuous combination with partial reduplication, is yet less iconic.

Signs that owe their origin to one of the two motivations s.s. may be conventionalized by being integrated into the language system. This process commonly detracts from the initial motivation of a sign as a symptom or an icon and converts it into a mere symbol. Processes of **conventionalization** are unidirectional in the following sense (cf. Keller 1995, ch. 13, esp. p. 171f): A symptom may become an icon; and an icon (whether or not stemming from a symptom) may become a symbol. Yawning as a sign of boredom exemplifies the former process, *cuckoo* and Old High German *gauch* as signs for *Cuculus canorus* exemplify the latter. Other transitions do not occur; in other words, these processes are irreversible.

Conventionalization is, thus, demotivation. The dynamic perspective allows us to see more clearly in which respect (Peircean) symbols may be called motivated. They may have started out as symptoms or icons, thus as motivated in the strict sense. They lose this initial motivation when they become conventional. Diachronically, the convention itself is based on the earlier motivation. Synchronically, the only motivation that remains is their being sanctioned by a convention and their motivation by the other signs in whose system they are integrated.

As the examples illustrate and as has long been observed (cf. Lehmann 2002, ch. 4.2.1 and the references cited there), such processes are intimately connected with **grammaticalization**. Grammaticalization is a process which subjects something to rules of grammar. It thus involves the integration of the grammaticalized item or construction into the linguistic system. This is, at the same time, a transition from motivation to arbitrariness, from a mode of expression that is universally available at the level of *langage* to a mode of expression that is an integral part of the particular language system. Grammaticalization therefore means transition from universal motivation to system-dependent appropriateness (cf. section 5.5.1 and 7).

Operators such as determiners have semantic scope over their operand. At the start of their grammaticalization career, they are combined with the entire phrase of the nominal that they determine. This syntactic order iconically mirrors semantic scope and is therefore called 'scope order'. It is observable, e.g., with the English and German articles. With grammaticalization advancing, operators tend to get attached to some host. That happened, for instance, with the definite article in Rumanian (a noun suffix) and in Lithuanian (an adjective suffix). Such a bound determiner may get entrapped between its host and other, higher-level nominal constituents, e.g. a following relative clause in Rumanian or the head noun in Lithuanian. The order of the determiner and the rest of the NP then no longer reflects the semantic scope of the former; it becomes some kind of 'template order'. Template order may be anti-iconic.

The point here is twofold: First, such **anti-iconicity** is a consequence of advanced grammaticalization; it is not found in productive high-level syntactic patterns. Second, the term anti-iconicity is misleading because it suggests that the semantic interpretation of the structure must take the opposite direction of iconicity or else will go astray. As a matter of fact, the more strongly grammaticalized a configuration is, the less it is supposed to be interpreted at all. In terms of the examples: the position of the English article in front of its noun phrase is to be taken as a sign of its semantic scope. The position of the Rumanian definite article is not to be interpreted.

7. Motivation and typology

Let us consider two strategies of marking the relation between two nominal expressions such that one is semantically relational and the other bears a possessive relation to the former. From among the strategies employed cross-linguistically to code such a situation, we select two: One consists in coding the possessor as a verbal dependent and leaving its direct relation to the other nominal expression uncoded, as in *she hit me on the head*. This is called the **external possessor** strategy. The other strategy consists in coding the possessor as an attribute of the other nominal expression, leaving its affectedness by the verbal action uncoded, as in *she stepped on my foot*. This is called the **possessive attribute** strategy.

Old Latin may serve to illustrate the external possessor strategy. If a noun is semantically relational and its possessor is a participant in the same situation, it is not represented in the form of a possessive pronoun (except under contrastive emphasis, as in E16), but either not at all or in the form of a dative adjunct, a 'dativus possessivus' (E17). The examples illustrate this with a body part noun. The same could be shown for kinship terms (cf. Lehmann 2005).

E16. em, méum caput contemples,
LAT hey my:ACC.SG head(ACC.SG) look.at:SUBJ.PRS:2.SG
si quidem ex re consultas tua
if at.all out.of thing:ABL.SG get.advice(PRS):2.SG your:ABL.SG
"hey, look at my head if you want to be advised in your own interest" (Pl. As. 538)

E17. ego tibi comminuam caput
LAT I thou(DAT) smash:SUBJ.PRS:1.SG head(ACC.SG)
'I will smash your head' (Pl. Rud. 1118)

E18. capiam coronam mi in caput
LAT get:PRS.SUBJ:1.SG wreath:ACC.SG me(DAT) in head(ACC.SG)
'I will put a wreath on my head' (Pl. Am. 999)

E19. adimit animam mi aegritudo
LAT take.away(PRS):3.SG soul:ACC.SG me(DAT) illness:NOM.SG
'the illness takes my soul away' (Pl. Tin. 1091)

The external possessor strategy is structurally analogous to the indirect object construction, as in E19. It is based on the affectedness of the participant in question by the verbal action, as coded in the actant status of the 'me' in E19. From there, it is applied to such possessors which are affected by the verbal action, as, e.g., in E17. In this constellation, the strategy is widespread cross-linguistically. What characterizes Latin is the expansion of the external possessor strategy to semantic constellations in which it is not motivated in this way, as in E18.

In Yucatec Maya, things are completely different (cf. Lehmann et al. 2000). Semantically relational nouns including body part terms such as 'head' are inalienable, which means that they must be accompanied by a possessive pronoun, as in E20. Since these possessive pronouns are clitic, they cannot be stressed. Consequently, an independent pronoun in the function of a nominal possessive attribute must be added to achieve this effect, as in E21, which translates E16.

E20. T-in k'op-ah u ho'l le máak-o'.
YM PST-SBJ.1.SG hit-CMPL POSS.3 head DEF person-D2
'I hit that man on the head.'

E21. leh, pakt in ho'l tèen!
YM hey look.at(IMP) POSS.1.SG head me
'hey, look at my head' (CL)

E22. K-u lu's-ik u sahkil-il máak-o'b.
YM IMPF-SBJ.3 leave:CAUS-INCMPL POSS.3 afraid:ABSTR-REL person-PL
'He took the fear from the people.' (CM 99)

The possessive attribute strategy has its proper locus in a constellation where the possessed noun is relational and the possessor does not have a participant role of its own in the situation, as in E21. In this constellation, it is found in most languages. But Yucatec Maya extends the range of application of this strategy further. When the possessor is coreferential with an argument of the verb, as in E22 (a corpus counterpart to E19), languages have a choice

between coding either the argument or the possessor role. Yucatec Maya in such cases practically always codes the possessor role, leaving the argument role uncoded.

What we call the **locus** of a strategy is a semantic constellation in which it is maximally motivated. In the external possessor construction, the possessor expression is structurally closer to the verb than to the possessed nominal. This mirrors its affectedness by the situation. In the possessive attribute construction, the possessor is structurally closest to the possessed nominal. This mirrors the close semantic relation between the two. In both cases, we have proximity iconism. However, for a construction to have a locus does not necessarily mean that it is exclusively motivated as an icon or a symptom. Motivation in syntax mostly results from an interaction of universal symptomatic or iconic principles with norm-dependent conventions (Givón 1994, section 3).

Latin and Yucatec Maya thus represent two extreme types as regards the coding of the possessor of a relational noun. The two strategies themselves recur in diverse languages, including English. Each of the strategies is motivated in a particular constellation. Old Latin extends the external possessor strategy to constellations such as E18, where the possessor is hardly affected so that the strategy is no longer iconically motivated. This may be seen as the enforcement of a strategy which is entrenched in the language system, its use beyond its functional locus. This use of the external possessor strategy is characteristic of Latin.

Similarly, Yucatec Maya extends the possessive attribute strategy to situations such as E22, where the possessed noun is not relational and where the possessor is actually affected by the situation. This, too is an overuse of the possessive attribute strategy far beyond its proper locus, and is characteristic of Yucatec Maya.

What we find in such cases is the reliance on a certain structural device even outside the domain of its primary functional motivation. For any given structural device, this line will be pursued only by a minority of languages. The majority uses the structural device for such functions to which it bears an iconic relationship. In this, they obey a universal principle, and such obedience does not constitute any particular type. It is the stretching of a structural device beyond its iconic applicability which enhances arbitrariness in grammatical structure and, thus, peculiarity. Thus, typology may characterize a language by those strategies which it, so to speak, overuses. While this is not a particularly original idea — hints at it may already be found in Humboldt[22] —, it deserves to be further pursued.

8. Summary

The concept of motivation applies primarily to acts and actions and only derivatively to the means and strategies employed in them. Consequently, an account of motivation in language has to refer to a theory of semiosis and of language activity. Basing our theory of semiosis on Bühler (1934), we have reduced Peirce's three types of signs – icon, index and symbol – to Bühler's three functions of the sign – sign representing the designatum (symbol), sign expressing the sender (symptom) and sign appealing to the hearer (signal).

Kinds of motivation in language can primarily be distinguished by these three basic sign functions. Of these, the symptom is the most primitive sign and, at the same time, a stage that is superseded by icons and symbols in semiosis. Icons provide the most pervasive and

[22] Humboldt (1836:533), presenting the grammar of Nahuatl as an incorporating language, says: "Die Sprache verfolgt aber hierbei immer die einmal gewählte Bahn und ersinnt, wo sie auf Schwierigkeiten stößt, neue künstliche Abhelfungsmittel."

variegated kind of motivation in language. Symbols represent the limiting case of signs that are only motivated by a convention.

Apart from their relations to the constituents of semiosis, signs are also motivated by their paradigmatic and syntagmatic relations to other signs. This, however, is a low-level intra-system kind of motivation that is the default for linguistic signs and thus only serves to pin down such signs that have gotten isolated in their language system..

It was one of the purposes to show that although iconicity is an essential kind of motivation of linguistic signs, it is not expedient to replace the concept of motivation by the concept of iconicity. In order to be fertile, the concept of iconicity has to be delimited against symptomaticity, on the one hand, and against system-internal adequacy, on the other hand. Signs that are not iconic may be motivated in various other ways.

References

Bühler, Karl 1934, *Sprachtheorie. Die Darstellungsfunktion der Sprache.* Jena: G. Fischer.

Bybee, Joan L. 1985, *Morphology. A study of the relation between meaning and form*. Amsterdam: J. Benjamins.

Comrie, Bernard 1985, "Causative verb formation and other verb-deriving morphology." Shopen, Timothy (ed.), *Language typology and syntactic description.* Cambridge etc.: Cambridge University Press; III:309-348.

Dressler, Wolfgang U. & Mayerthaler, Willy & Panagl, Oswald & Wurzel, Wolfgang A. 1987, *Leitmotifs in natural morphology.* Amsterdam & Philadelphia: J. Benjamins (Studies in language companion series, 10).

Givón, Talmy 1985, "Iconicity, isomorphism and non-arbitrary coding in syntax." Haiman (ed.) 1985:187-219.

Givón, Talmy 1994, "Isomorphism in the grammatical code. Cognitive and biological considerations." Simone (ed.) 1994: 47-76.

Haiman, John 1985, *Natural syntax. Iconicity and erosion.* Cambridge: Cambridge University Press.

Haiman, John 1985, "Symmetry." Haiman (ed.) 1985: 73-95.

Haiman, John (ed.) 1985, *Iconicity in syntax. Proceedings of a symposium on iconicity in syntax, Stanford, June 24-6, 1983.* Amsterdam & Philadelphia: J. Benjamins (Typological Studies in Language, 6).

Jakobson, Roman 1966, "Quest for the essence of language." *Diogenes* 51:21-37. Reprint in: Jakobson, Roman 1971, *Word and language. Selected writings vol. II*. The Hague & Paris: Mouton; 345-359.

Kirsner, Robert S. 1985, "Iconicity and grammatical meaning." Haiman (ed.) 1985:249-270.

Keller, Rudi 1995, *Zeichentheorie. Zu einer Theorie semiotischen Wissens.* Tübingen: Francke (UTB, 1849).

Lehmann, Christian 1974, "Isomorphismus im sprachlichen Zeichen." Seiler, Hansjakob (ed.), *Linguistic workshop II. Arbeiten des Kölner Universalienprojekts 1973/4.* München: Fink (Structura, 8); 98-123.

Lehmann, Christian 1978, "On measuring semantic complexity. A contribution to a rapprochement of semantics and statistical linguistics." *Georgetown University Papers on Languages and Linguistics* 14:83-120.

Lehmann, Christian 2002, *Thoughts on grammaticalization.* Erfurt: Seminar für Sprachwissenschaft der Universität (ASSidUE, 9).

Lehmann, Christian 2005, "Sur l'évolution du pronom possessif." Kiss, Sándor & Mondin, Luca & Salvi, Giampaolo (eds.), *Latin et langues romanes. Études de linguistique offertes à József Herman à l'occasion de son 80ème anniversaire.* Tübingen: M. Niemeyer; 37-46.

Lehmann, Christian 2006, "Arbitraire du signe, iconicité et cercle onomatopéique." Saussure, Louis de (ed.), *Nouveaux regards sur Saussure. Mélanges offerts à René Amacker*. Genève: Droz (Publications du Cercle Ferdinand de Saussure, 5); 107-123.

Lehmann, Christian & Shin, Yong-Min & Verhoeven, Elisabeth 2000, *Person prominence and relation prominence. On the typology of syntactic relations with special reference to Yucatec Maya.* München: LINCOM Europa (LINCOM Studies in Theoretical Linguistics, 17).

Leiss, Elisabeth 1997, "Synkretismus und Natürlichkeit." *Folia Linguistica* 31:133-160.

Martinet, André 1957, "Arbitraire linguistique et double articulation." *Cahiers Ferdinand de Saussure* 15:105-116.

Morris, Charles W. 1938, “Foundations of the theory of signs.” *International encyclopedia of unified science*, vol. I, no. 2. Chicago: Chicago University Press.

Paul, Waltraud 1982, *Die Koverben im Chinesischen (with an English summary).* Köln: Institut für Sprachwissenschaft der Universität (Arbeitspapier Nr. 40).

Peirce, Charles S. 1932, "Speculative grammar." Peirce, Charles S. 1960, *Collected papers of Charles Sanders Peirce. Vols. I-VI ed. by Charles Hartshorne and Paul Weiss, VII-VIII ed. by Arthur W. Burks.* Cambridge, Mass.: The Belknap Press of Harvard University Press (2. ed.); II:129-272 [= Book II].

Pusch, Claus D. 2001, "Ikonizität." Haspelmath, Martin & König, Ekkehard & Oesterreicher, Wulf & Raible, Wolfgang (eds.), *Language typology and language universals. An international handbook. 2 volumes.* Berlin: W. de Gruyter (Handbücher zur Sprach- und Kommunikationswissenschaft, 20); 369-384.

Radden, Günther & Panther, Klaus-Uwe 2004, "Introduction: Reflections on motivation." Radden, Günther & Panther, Klaus-Uwe (eds.), *Studies in linguistic motivation.* Berlin & New York: Mouton de Gruyter (Cognitive Linguistics Research, 28); 1-46.

Saussure, Ferdinand de 1916, *Cours de linguistique générale, publié par Charles Bally et Albert Séchehaye avec la collaboration de Albert Riedlinger.* Paris: Payot.

Simone, Raffaele 1994, "Iconic aspects of syntax: a pragmatic approach." Simone (ed.) 1994: 153-169.

Simone, Raffaele (ed.) 1994, *Iconicity in language.* Amsterdam & Philadelphia: J. Benjamins (Current Issues in Linguistic Theory, 110).

Tai, James H.-Y. 1985, "Temporal sequence and Chinese word order." Haiman (ed.) 1985: 49-72.

Thomas, Earl W. 1969, *The syntax of spoken Brazilian Portuguese.* Nashville: Vanderbilt University Press.

Wilkins, David 1992, "Interjections as deictics." *Journal of Pragmatics* 16:119-158.

Sprachtheorie Kap. 6.6.2 wäre noch auszuschlachten

Robins, R. H. (1959). Nominal and verbal derivation in Sundanese. Lingua, 8:337-369.