

SYNTACTIC ICONICITY, WITHIN AND BEYOND ITS ACCEPTED PRINCIPLES

SOLOMON MARCUS, ANDREEA CALUDE

Abstract. Our aim is to question the basic principles of iconicity, in respect to both the common and the scientific use of natural languages. We argue for the need to propose some extensions of them. We test the validity and the relevance of these principles on some Romance languages (especially Romanian) and we examine their relevance, but also their limits. The mathematical language and the cosmic language (Freudenthal) as well as the generative approach to the syntax of both natural and formal languages are especially in our attention.

Key words: iconicity, grammar, iconic principles, Romanian, French, Italian, symbolism.

There is a story about an Englishman, a Frenchman and a German who are debating the merits of their respective languages. The German starts by claiming: 'German is off course ze best language. It is ze language off logik and philosophy, and can communicate viz great clarity and precision even ze most complex ideas.' 'Boeff,' shrugs the Frenchman, 'but French, French, it ees ze language of lurve! In French, we can convey all ze subtiletes of romance weez elegance and flair.' The Englishman ponders the matter for a while, and then says: 'Yes, chaps, that's all very well. But just think about it this way. Take the word "spoon", for instance. Now you French call it "cuillère". And what do you Germans call it? – a "Löffel". But in English, it's simply called a "spoon". And when you stop to think about it...isn't that exactly what it is?' (from Deutscher 2005: 45)

1. INTRODUCTION

The notion of iconicity creates a daring and controversial chapter in linguistic theory and aims to challenge the status that arbitrariness has enjoyed for so long. It has been said that the "struggle against arbitrariness seems to have stimulated reflection not only on specific features of languages, but also on the possible future development of linguistics" (Simone 1995: IX). This paper aims to question the basic principles of iconicity and to test them for both the common and the scientific language. We reach in this way the need to transgress these principles and to propose some alternative variants. In another direction, we test the respective principles on some natural languages belonging to the family of Romance languages, particularly Romanian; but also French and Italian.

RRL, LV, 1, p. 19–44, București, 2010

The paper is organized as follows. The next section introduces the notion of iconicity and some background information regarding previous research in this area, including several points of critique brought to the theory of iconicity. Section 3 describes several of its key principles. Sections 4, 5, 6, 7 and 8 discuss the particular elements analyzed, namely reciprocal constructions, causatives, possessives, objects, social distance and politeness markers respectively. Finally, findings are summarized in section 9.

2. BACK TO THE CLASSICS

Ferdinand de Saussure describes the nature of the linguistic sign in his book entitled “Course in General Linguistics”:

[...] the linguistic sign is arbitrary.[...] In fact, every means of expression used in society is based, in principle, on collective behaviour or – what amounts to the same thing – on convention.

(de Saussure 1959, in Innis 1985)

Raffaele Simone (1995) talks about an “Aristotelian-Saussurean” paradigm which states that “language and reality are quite independent of, and do not resemble, each other; this is claimed to be so for reasons of economy and ‘handiness’, since no language could be used if not arbitrarily structured” (Simone 1995: vii). She explains that the opposing paradigm, that is, the Platonic view that language is not arbitrary, was “isolated” and often even “ridiculed” (Simone 1995: vii).

2.1. A case of extreme iconicity

However, at its most extreme, a language may be entirely built by means of iconic procedures. This is the language invented by Hans Freudenthal (1960), LINCOS, aimed to be used for communication with hypothetical intelligent living beings from other celestial bodies. Usually, we teach a foreign language by using a metalanguage, known to both the teacher and the student. However, for cosmic communication no such metalanguage exists. In order to transgress this difficulty, Freudenthal realizes that the only way to accomplish the task of a cosmic language is to build LINCOS such that it is its own metalanguage, i.e., the whole semantics of LINCOS is obtained by syntactic contextual procedures. For instance, dots denote natural numbers: . for 1, .. for 2, ... for 3 and so on. The meaning of = is explained by placing at its left and at its right the same number of dots. The meaning of < is shown by placing at its left fewer dots than at its right. The meaning of + is explained by means of messages of the form ... + .. =

2.2. Roman Jakobson, a pioneer

It is in the midst of the aforementioned conventional Aristotelian-Saussurean scene that in 1965, Roman Jakobson introduced the notion of iconicity and thus became the pioneer of this theory. Jakobson dared to challenge existing theories regarding the linguistic sign in spite of the fact that “Bally and Sechehaye, A. Meillet and J. Vendryes also emphasized the “absence of connection between meaning and sound”, and of the fact that Bloomfield echoed the same tenet: “The forms of language are arbitrary”.” (Jakobson 1965: 348).

2.3. Iconicity in scientific terminology

The iconic source of many words is very visible in the scientific terminology of any natural language. This terminology includes three kinds of words. A first type refers to words occurring in science with the same meaning as in the common language (‘this’, ‘introduction’ etc.). A second type includes words existing in both the common language and the scientific language, but their scientific meaning may be different from their usual meaning; for instance, words like ‘open’, ‘closed’, ‘filter’ have a specific mathematical meaning, but their iconic source is clearly shown by their intuitive common base with the respective words in the everyday language. As a matter of fact, the reason we adopt them as scientific terms is just in order to point out their intuitive roots. Science needs not only reason and logic, but also intuition, that is, a link with the real world. A third type includes terms existing only in the scientific language: ‘polynom’, ‘sinus’, ‘logarithm’. Here some iconic aspects can be detected too, but we will not insist here in this direction.

2.4. Iconicity in scientific symbolism

It is well known that scientific language includes two components; one belonging to the natural language and the other belonging to an artificial language. This mixed structure is very visible in logic, mathematics, chemistry, linguistics and so on. Previously we have pointed out the iconic source of a large part of scientific terminology. Now we will show that the artificial signs used in the scientific language have also, in most cases, an iconic source. For instance, the letter *E* reversed is used for the existential quantifier (‘there exists’), the letter *A* reversed is used to denote the universal quantifier (‘for any’), because *A* is the initial letter of ‘any’ and *E* is the initial letter of ‘exists’. The set-theoretic sign for the operation of union of several sets is similar to the letter ‘u’, the initial letter of ‘union’. The sign of integral in mathematics is a deformation of the letter *S*, the initial letter of ‘sum’, because an integral is obtained from a sum, by a specific limiting process. The typical symbol for a sum is the Greek letter sigma, which

corresponds to the letter 's', the initial letter of 'sum'. The difference between two sets is denoted by the same sign used for the difference between two numbers, just to point out their similarity. The signs for logical disjunction and logical conjunction are similar respectively with the signs for union and intersection in set theory, just to point out their isomorphism.

Once introduced, iconicity theory spilled into all linguistic areas, from phonology (see for example, Fónagy 1999 for a fascinating account of iconic principles of individual sounds and some phonetic paradoxes) and morphology to syntax and semantics (see the *Iconicity in Language and Literature* series, edited by Fischer, Nänny, and others, 1999, 2001, 2003, 2005, 2007). A very exciting avenue of research in this regard is the presence of iconicity in sign language (Taub 2001).

2.5. Iconicity in bilingualism

Outside the core theoretical branches of linguistics, iconicity also makes its mark in interesting and at times, unexpected ways. For example, working in the area of second language acquisition, a recent paper by Karrebæk (2003) argues that codeswitching – a controversial practice, bearing much linguistic and cultural ideology – has iconic tendencies. Karrebæk observes that bilingual children switch between Danish and Turkish, for various discourse purposes, such as, using one language for quoting direct speech, and another for the surrounding material, or correlating a switch in language with a switch in discourse topic. Here, the linguistic abilities of the bilingual brain, namely the knowledge of two languages, are exploited simultaneously in such iconic manner for increased communicative purpose.

2.6. Syntactic semantics as a source of iconicity

Freudenthal (1960, see also Chapter 6 of Marcus *et al.* 1971, devoted to cosmic language) proposes a purely syntactic-contextual approach to duration, space, distance, human behaviour. His procedure could be placed under the umbrella of 'syntactic semantics', i.e., to build meaning by means of syntax. So, form and meaning are superposed. As a matter of fact, this happens frequently in mathematics and in linguistics, in science and art in general. The number zero and the empty set are defined by their contextual behaviour, as elements of no effect in some operations: zero with respect to addition ($x + 0 = 0 + x = X$) and the empty set with respect to set union (the union between a set A and the empty set is just the set A). The iconicity is stressed here also by the emptiness of the symbol used to denote zero (0) or the empty set (O). The components of a generative Chomskyan grammar are defined by their contextual-syntactic behaviour in the rules defining

the respective grammar. The difference between auxiliary and terminal symbols is of a purely syntactic nature, while different grammatical categories such as noun phrase or verb phrase and different types of grammars (context free, context sensitive, etc.) are also distinguished by purely syntactic means. In poetry, the meaning is built contextually: a piece of poetry is like a foreign language we have to learn to a large extent in absence of a dictionary, i.e., using the contexts created by the respective text. This is the reason why, according to Mallarme, poetry is not made with ideas, it is made with words.

It is a long time now, over 40 years, since the introduction of iconicity to the linguistics arena in 1965. Yet this controversial notion is just as hotly debated today as it was in its humble beginnings – testimony to this is the fact that (almost) an entire issue of *Cognitive Linguistics* (volume 19, issue 1) is dedicated to a fierce debate between some prominent linguists of the day (Haspelmath, Croft, Haiman) over the applicability and power of iconicity in syntax.

Returning to iconicity in syntax, despite Chomsky's famous criticisms to the non-arbitrariness of human language (1968: 69–70), iconicity theory developed in syntax thanks to linguists such as Givón and Haiman who are arguably among the most prominent contributors to advances made in this field. The current paper uses some of the iconicity principles outlined by Givón (1984) and follows parts of Haiman's framework (1983).

3. THEORY OF ICONICITY

Peirce defines the term “icon” as a type of “sign which refers to the Object that it denotes merely by virtue of characters of its own, and which it possesses, just the same, whether any such Object actually exists or not” (Peirce 1932: 143). He differentiates between three types of icons: images, metaphors and diagrams (Peirce 1932: 157). This study concerns itself only with the latter type. Diagrams “represent the relations, mainly dyadic, or so regarded, of the parts of one thing by analogous relations in their own parts” (ibid). Iconicity can be viewed in light of either isomorphism (the tendency to have each meaning represented by exactly one form) or that of motivation (the form of the sign is motivated by its meaning). In this essay, we concentrate on diagrammatic icons which are motivated, as also discussed by Jakobson (1965).

3.1. Three Iconicity Principles

The most daring iconicity principle is the meta-iconic markedness principle which states that “categories that are structurally marked are also substantively marked” (Givón 1984: 965). This is an extreme view which asserts that there is an exact one-to-one map between form and meaning. However, in reality, iconicity

manifests itself in the form of a number of principles, such as the quantity principle, the proximity principle, and the linear order principle, which make weaker predictions than the meta-iconic markedness principle:

The quantity principle – A larger chunk of information will be given a larger chunk of code. Less predictable information will be given more coding material. More important information will be given more coding material.
(Givón 1984: 970)

The proximity principle – Entities that are closer together functionally, conceptually, or cognitively will be placed closer together at the code level, i.e., temporally or spatially. Functional operators will be placed closest, temporally or spatially at the code level, to the conceptual unit to which they are most relevant.
(Givón 1984: 970)

The principle of sequential order – The temporal order of events in the conceived world is mirrored in the order of clauses describing them.
(Radden and Dirven 2007: 53)

The quantity principle can be exemplified from Māori (the indigenous language spoken in New Zealand), where the plural form of nouns is obtained by reduplicating the stem:

- | | | | | |
|-----|-----------------|---------|-----------------|---------|
| 3.1 | <i>puka</i> | ‘book’ | <i>kani</i> | ‘ball’ |
| | <i>pukapuka</i> | ‘books’ | <i>kanikani</i> | ‘balls’ |

Similarly, the proximity principle can be illustrated with data from English:

- 3.2 Simon went home, then Paul, but she caught sight of him.
[*him* = Paul, not Simon]

Finally, a classical example of the principle of sequential order comes from Latin, namely the famous sentence spoken by Julius Caesar in 47 BC:

- 3.3 *Vēnī, vīdī, vīcī*
‘I came, I saw, I conquered.’

3.2. A proposal: the distant principle

In connection with the proximity principle, we should propose an opposite principle, we could call it the distant principle, according to which we bring together at the code level, two entities that are opposed in respect to their meaning,

i.e., very far each other semantically. A typical example in this respect is the invention of the word *democrature* in French and *democratura* in Romanian (the corresponding term in English could be *democratship*), in order to denote ironically a mixture of democracy and dictatorship, as seen in some former communist countries. This is also an example of what is called in French ‘mot-valise’ and in English, again by a French expression, portemanteau word; see Marcus (2000). There is a famous French book “*Parlez-vous franglais?*”, where the term *franglais* ironically denotes what French becomes by a lack of control of its metabolism with English (in English, such a mixture could be denoted by *Frenglish*). The first use of such linguistic formations belongs to Lewis Carroll in “*Alice in Wonderland*”, where he invents *to galumph*, a compression of the words *to gallop* and *to triumph*. Many other examples could be given; to give only one of them, we quote the English *brunch*, obtained by compressing *breakfast* and *lunch*). As a matter of fact, portemanteau words are one more way to apply the so-called principle of least effort, guiding our linguistic behaviour: to say more and more by less and less. According to the same law, the most frequent words are the shortest ones. In any frequency dictionary we observe that the most frequent words are generally conjunctions and prepositions like *and*, *on*, *at*, *or*, etc. Such words are better understood by their contextual syntactic behaviour than by their definition, in the way we explain nouns, verbs or qualificative adjectives.

Interestingly, the proximity principle is not always respected. Let us recall the notion of a distance between two terms a and b in a linguistic text introduced by the mathematician W. Fucks (1953): it is the average number of (distinct or not) terms (or occurrences) between an occurrence of a and an occurrence of b in the respective text. When Roman Jakobson (1960) claimed that the poetic function projects the equivalence principle from the selection axis into the combinatorial axis, and Roland Barthes repeated the same idea under a different form (1964: 16), they claimed that in poetry, terms which are semantically or paradigmatically opposed are usually brought very near each other according to Fucks distance. For example, when Paul Eluard writes *La terre est bleue comme une orange* (‘The earth is blue like an orange’), terms such as *terre* (‘earth’), *bleue* (‘blue’) and *orange* (‘orange’) are syntagmatically near, but semantically far; although *bleue* and *orange* are equivalent in the sense that they belong to the same paradigm of colors. If in the usual texts terms belonging to the same paradigm are in most cases far enough from each other with respect to Fucks distance, in a poetic text this rule is no longer respected. However, even if it is not respected, the proximity principle is replaced in poetry by an anti-proximity principle (paradigmatically distant elements are brought syntagmatically near) and this statistical rule is itself a form of iconicity.

Another form of syntactic iconicity which does not respect the proximity principle can be observed in mathematical texts and, more generally, in any text which is organized in an explicit step by step procedure (for instance, in a legal

text). Here, the anaphoric and the cataphoric systematic procedure brings in direct contiguity relation (cause-effect, hypothesis-conclusion, various other types of inferences, recurrent use of the same definition or statement) terms which are syntagmatically increasingly further apart.

3.3. Transgressing the proximity principle

In general, one can propose an extension of the basic iconicity principles, which is suggested, as a matter of fact, by the previous considerations. According to the quantity principle, formal complexity corresponds to conceptual complexity. By extension, one could consider any regular, systematic link between the formal and the conceptual complexity as a kind of extension of iconicity, a kind of weak iconicity. For instance, it is known from the theory of formal grammars that in order to generate a finite set of n statements in English we need n generative rules, while many infinite parts of the set of all well-formed statements in English can be generated by means of only a few (sometimes, only two) rules. Obviously, an infinite set of statements has a conceptual complexity higher than any finite part of it, despite the fact that the former has a formal complexity smaller than the latter (if we accept that the formal complexity is measured by the number of generative rules we need to obtain the respective sets of statements). In the same order of ideas, in the mathematical language, the conceptual complexity of the integral of a function on a compact interval is obviously higher than the conceptual complexity of the sums leading, by a limiting process, to the respective integral. However, the formal complexity of these sums, as soon as the number of terms is increasing, going towards infinity, is higher and higher, transgressing the formal complexity of the integral.

3.4. Transgressing the sequential order principle

Take now the sequential order principle, according to which the sequential order of events described is mirrored in the speech chain. Sometimes, we adopt the opposite way, describing some events, from left to right, in the order opposite to the chronological one, i.e., from the near to the far past. Similarly, we can proceed from effect to cause instead of moving from cause to effect. For didactic purposes, at least, we may start from what is witnessed now and ask why it happened previously and so, step by step, we reach an endless sequence of events going from present to past. So, the sequential order of events (according to their chronology) is just the opposite, i.e., the mirror image of the order in which they are described (because the mirror always changes the left-to-right order with the right-to-left

order) and their concatenation leads to a palindromic structure. Finally, a similar discussion concerning the proximity principle was already done.

3.5. Conceptual Distance and Linguistic Distance

In linguistics, Haiman popularised the terms of *conceptual distance* and *linguistic distance*. He claims that “linguistic distance between expressions corresponds to the conceptual distance between them” (Haiman 1983: 782). Conceptual distance is defined as follows.

Two ideas are conceptually close to the extent that they:

- a. share semantic features, properties, or parts;
- b. affect each other;
- c. are factually inseparable;
- d. are perceived as a unit whether factually inseparable or not.

(Haiman 1985: 104–105)

Similarly, the concept of linguistic distance is explained below.

Where X, A, and Y are morphemes, the linguistic distance between X and Y diminishes along the following scale (# is word boundary, + is morpheme boundary):

- a. X # A # Y
- b. X # Y
- c. X + Y
- d. Z

(Haiman 1983: 782)

Iconicity theory does not aim to dispute the arbitrariness of human language, but rather, it claims the existence of cases in which there is a clear correlation between form and meaning. For example, it is not our goal to show that reciprocal or possessive constructions are completely non-arbitrary in Romanian, but instead, we are interested in finding examples of cases where meaning is reflected by structure. It is perhaps worth noting that while focusing on the arbitrariness of language highlights (among other issues) “language as a social construct”, focusing on the iconic properties of language can help us zoom in on the creative aspect of language (see Fischer and Nänny 1999), and on the perspective of “language as a cognitive exercise”.

In some cases the iconicity observed turns out to be weak. In other words, the iconic principles found may not apply to the entire class or to the overall structure, but they have a restricted scope over the members of the class. However, the vital constraint confirmed throughout is that iconicity is never broken, i.e., more semantic content matched with less linguistic content, while less semantic content being represented by more linguistic code.

4. RECIPROCAL CONSTRUCTIONS

A reciprocal construction is used to describe a situation in which two participants are presented as being in the same relation to one another (Lichtenberk 1985: 19 and Kemmer 1993: 121–123). Figure 1 shows this situation diagrammatically. Two participants A and B are represented to be in the same relation R to each other, such that A stands in relation R to B and in turn, B stands in relation R to A.

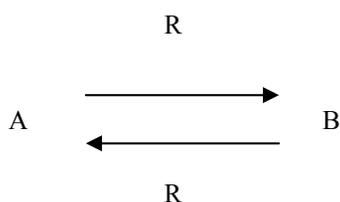


Fig. 1 – The Reciprocal Situation (Lichtenberk 1985: 19).

Structurally, Romanian has three different ways to encode the global meaning expressed by a prototypical reciprocal construction. These are exemplified in 4.1 (a to c). All sentences given below have the function of describing a reciprocal relation, namely that of love, between the two participants, Maria and Ion.

- 4.1a *Maria și Ion se iubesc.*
 Maria and Ion X¹ love
 ‘Maria and Ion love each other.’
- 4.1b *Maria și Ion se iubesc unul pe altul.*
 Maria and Ion X love X
 ‘Maria and Ion love each other.’
- 4.1c *Maria îl iubește pe Ion și Ion o iubește pe Maria.*
 Maria III.SG.MASC.ACC love on Ion and Ion III.SG.FEM.ACC love on Maria
 ‘Maria loves Ion and Ion loves Maria.’

4.1. Semantics of reciprocals in Romanian

The three constructions presented above are not synonymous; they have subtle meaning differences. In 4.1.a, Maria and Ion’s love is perceived as one single event (rather than two events, namely Maria loving Ion, and Ion loving Maria). This construction is referred to as middle voice (see Calude 2005, 2007). Similarly, in examples 4.2 and 4.3 below, the kissing and the fighting are both construed as single events.

¹ I follow the convention used by Lichtenberk (1985:22) and hence denote all devices used in the construction of reciprocals or reflexives by the symbol X.

- 4.2 *Maria și Ion se sărută.*
 Maria and Ion X kiss
 ‘Maria and Ion are kissing (each other).’
- 4.3 *Copiii se bat.*
 child.DEF.PL X fight
 ‘The children are fighting (each other).’

Clearly, as the acts of fighting or kissing are perceived as one single event, this event happens at the same time for both participants. In contrast, in example 4.1b, the love shared by Maria and Ion is construed as comprising two symmetric events, Maria’s love for Ion and Ion’s love for Maria. Note that in both 4.2 and 4.1b, the events are understood to take place simultaneously.

In the final example of 4.1, namely 4.1c, the love is also fragmented into “separate” parts as in 4.1b (e.g., Maria’s love for Ion, and Ion’s love for Maria). However, in contrast to 4.1b, the two events may not happen at the same time. Furthermore, their separation in time is presented sequentially, first Maria loves Ion, and then Ion loves Maria.

4.2. Structure of reciprocals in Romanian

The reciprocal constructions in examples 4.1a, 4.2 and 4.3 are formed with the help of a single marker, *se* (termed middle marker, see Kemmer 1993). The same sentence is presented without the reflexive marker in example 4.4. The verb “love” is transitive and hence requires a direct object, which is missing in this case. Therefore, the sentence becomes ungrammatical.

- 4.4 **Maria și Ion sărută.*
 Maria and Ion kiss
 ‘Maria and Ion are kissing.’

Example 4.1b contains both the middle marker *se*, but also an additional marker, usually used in chaining situations. These latter are “relations by which the participants related can be compared to the links of a chain” (Lichtenberk 1985: 24). The additional markers, *unul pe altul* (lit. one on.PREP another) in the case of example 4.1, are inflected for gender and number. If both participants have feminine gender, then the feminine form is used, otherwise the masculine form is employed. The table below summarizes all the possible forms.

Table 1

Markers used to express chaining situations in Romanian

Singular		Plural	
Masculine	Feminine	Masculine	Feminine
unul pe altul	una pe alta	unii cu alții	unele cu altele
unul cu altul	una cu alta	unii pe alții	unele pe altele

The table gives two variants for each category, for example *unul pe altul* and *unul cu altul* for masculine singular. Different forms of the preposition (*pe* ‘on’, *cu* ‘with’ and so on) are required depending on the verb involved. The two forms presented in the table are the most common, but not the only ones.

In example 4.5, we have a case where the plural masculine is used because there is at least one participant of masculine gender, namely the word ‘boy’.

- 4.5 *Fetele și băieții se încurajează unii pe alții.*
 girl.DEF.PL and boy.DEF.PL X argue X
 ‘The girls and the boys are encouraging each other.’

An alternative form of the marker is required in the next example. Verbs such as *se certa* ‘argue’ or *a vorbi* ‘talk’ use forms of the type *unele cu altele*, whereas *încuraja* ‘encourage’, *săruta* ‘kiss’, *iubi* ‘love’ need the form *unele pe altele*.

- 4.6 *Mamele și fetele se ceartă unele cu altele.*
 mother.DEF.PL and girl.DEF.PL X argue X
 ‘The mothers and the girls are arguing (with each other).’

The last type of construction, given in 4.1c, consists in two conjoined clauses. They are independent and can be used separately to indicate one direction of the reciprocity, i.e., that Maria loves Ion, as shown in 4.7.

- 4.7 *Maria îl iubește pe Ion.*
 Maria III.SG.MASC.ACC love on Ion
 ‘Maria loves Ion.’

4.3. Iconicity involving Romanian reciprocal constructions

The diagram in Figure 2 explains the semantic and structural differences between the three kinds of constructions introduced in section 4.

Semantics		Structure	
No. of events construed	Time	Example	Markers used
1 event	simultaneous	4.1a	1 reflexive marker
2 events	simultaneous	4.1b	1 reflexive marker and 1 reciprocal marker
2 events	not always simultaneous	4.1c	2 distinct clauses

Fig.2 – antic and structural differences between different methods of representing reciprocal constructions.

Note that there is no way to represent a situation where the reciprocity is perceived as one single event which is somehow not simultaneous, since this is a pragmatic impossibility.

According to Figure 2, as the amount of information increases, the length and number of linguistic marking also increases. This is in line with the quantity principle outlined by Givón (1984:970). This indicates that reciprocal constructions are iconic in Romanian syntax. Furthermore, there is no reciprocal construction which has more information and less linguistic coding (i.e., where iconicity is broken).

5. CAUSATIVE CONSTRUCTIONS

Causative constructions are used to depict events where an agent or external force is depicted as forcing a patient to perform a particular action or inducing them to undergo some change. Languages have various ways of encoding this type of relations, and it is not uncommon for a language to have more than one; see below some typical examples from English.

- 5.1 a. *Maria forced her sister to watch TV.* (Analytic causative)
 b. *John had his mother do his washing this weekend.* (Analytic causative)
 c. *She fed him a bunch of lies.* (Lexical causative)
 d. *She gently laid the flowers by the cenotaph.* (Lexical causative)

5.1. Structure of analytic causatives in French

While there are several types of causative constructions in French, for simplicity, we limit the discussion here to two particular cases, namely the VV (verb verb) and the VOV (verb object verb) analytic causatives, following Archard (2002). These are exemplified in 5.2 and 5.3, from Archard (2002: 131, ex. 5 and 6, respectively).

- 5.2 *J'ai laissé brûler le gratin.*
 1.SG.NOM'AUX let.PAST burn ART casserole
 'I let the casserole burn.'
- 5.3 *J'ai laissé le feu brûler jusqu'à l'aube.*
 1.SG.NOM'AUX let.PAST ART fire burn until'at dawn
 'I let the fire burn until dawn.'

One of the verbs which is involved in analytic causatives in French is the verb *laisser* ('let'); there are, of course, others *faire* ('make'), *forcer* ('force'), *obliger* ('force'), and so on. What is significant about examples 5.2 and 5.3 is that structurally, they differ with respect to the number of clauses involved: example 5.2 is monoclausal (*laissé brûler* 'let burn' forms a complex verb phrase in 5.2), while 5.3 is biclausal (*laissé* 'let' is the main clause verb and *brûler* 'to burn' is the non-finite subordinate verb).

5.2. Semantics of analytic causatives in French

Semantically, Archand (2002: 131–132) explains that the two examples differ in their construal. In both examples, the subject first person singular form is depicted as the Agent, while the casserole functions as the Patient (burning). Adopting a cognitive approach, he notes that the crucial distinction between the two examples consists in that, in 5.2, the Agent acts directly onto the Patient, and the latter cannot be understood as being the source of the burning action. In 5.3, however, the fire is presented as though it is itself involved and (at the very least) partially actively responsible for bringing about the event. In other words, the fire is construed as a source in 5.3, but not in 5.2.

5.3. Iconicity in French causative constructions

The analytic causative constructions discussed above are iconic in two subtly distinct ways. First, a greater degree of linguistic separation exists between Agent and Patient when the former is construed as not directly acting on the latter (i.e., they occur in separate clauses), whereas the two are linguistically “closer” (i.e., occurring in the same clause) in the case where the Agent is depicted as actively affecting the Patient. This conforms to the proximity principle.

At the same time, the iconicity principle of quantity is also relevant since increased linguistic coding is used for a situation which is cognitively more complex. That is, when the Agent is the direct source of the burning, less linguistic material is used (fewer words and a simpler structure). In contrast, when the Agent is only partially responsible for the event and the fire is itself expressed as a possible source involved in bringing about the action (a more complex situation to construe), more linguistic material is employed (more words and a more complex structure).

6. POSSESSIVE CONSTRUCTIONS

This section investigates whether possessive constructions are iconic in the Romanian syntax. We follow the framework outlined by Haiman (1983: 793–795) and Haiman (1985: 130–136).

Conceptually, there are two kinds of possessive constructions: inalienable and alienable. An inalienable possession represents the semantic notion that the possessum is either inseparable from or cannot exist (or be conceptualized) without the possessor. In contrast, alienable possessive constructions make no such implications, and the possessums involved are understood to be conceptually separated from their possessor. Example 6.1a shows two inalienable possessives in English, and 6.1b gives two alienable possessive constructions.

- 6.1a. my mother
his leg
- 6.1b. my car
your house

The above examples show that, linguistically, in English the distinction between the two kinds of possessives is not realized. While in contrast to English, many languages have explicit coding of differences between alienable and inalienable possession, not all languages agree on where exactly to draw the distinction between the two categories (Haiman 1985, Nichols 1988). In light of the various cross-linguistics data found, researchers converge on the idea of a typological hierarchy of inalienability, given below, from Nichols (1988: 572, 1992: 160).

The inalienability hierarchy:

- body parts and/or kinship relations
 - > part-whole
 - > spatial relations
 - > culturally basic possessed items
 - > other

What is somewhat unusual about this hierarchy is the fact that it contains a joint head. In other words, there are languages in which only the class of body parts is coded as inalienable, e.g., Dizi, Paumari, Tauya, Worora, conversely, there are languages, where only the class of kinship relations is coded as inalienable, e.g., Dongolese, Nubian, Mumuye, Wappo, and finally, there are languages in which both classes are coded as inalienable, e.g., Haida, Maung, Washo, Yuchi (cf. Hollman and Siewierska 2007: 412).

Romanian syntax does make inalienable/alienable distinctions, in agreement with the predictions made by the inalienability hierarchy. Its possessive marking patterns fall in the second group described above, where only relations of kin are coded as inalienable (body parts and any other lower categories on the hierarchy are coded as alienable). However, as we will see in the following section, what is unusual about the Romanian case is that there is a choice in the coding of relations of kin: one which marks the inalienable quality of the possession, and one which does not mark this quality. The usage is governed by register, such that, the former marking is used in informal speech, and the latter in more formal contexts (and writing).

Possessive marking in Romanian involves a single word, which follows the possessor. Example 6.2 shows this:

- 6.2 *pomul* *meu*
 tree.DEF I.SG.POSS
 ‘my tree’

A direct translation of the English examples 6.1a and 6.1b into Romanian is given below.

6.3a	<i>mama</i> mother.DEF 'my mother'	<i>mea</i> I.SG.POSS	<i>piciorul</i> leg.DEF	<i>lui</i> III.SG.POSS 'his leg'
6.3b	<i>mașina</i> car.DEF 'my car'	<i>mea</i> I.SG.POSS	<i>casa</i> house.DEF	<i>ta</i> II.SG.POSS 'your house'

The examples above show the general pattern described earlier: *possessum # possessor marker*² (i.e., a single word follows the possessor). We now consider the coding of relations of kin, and following this, that of body parts, in order to show the contrast in marking patterns.

6.1. Relations of kin in Romanian

As mentioned above, Romanian *can* distinguish between the two kinds of possessives structurally. The patterns from examples 6.3a and 6.3b not show this, but the following example does:

6.4	<i>maică-mea</i> mother.DEF-I.SG.POSS 'my mother'
-----	---------------------------------------------------------

Example 6.4 shows the possessive marker not following the possessor as in 6.3a, but instead attached to it as a clitic. The intonation is also changed, the new word is pronounced as a unit, not as two separate words (in contrast to those in 6.3a). Semantically, there is no difference between the two ways of forming the possessive construction. However, there is a stylistic difference and the latter form (shown in 6.4) would not occur in formal speech or in most types of writing. This marking pattern is productive across the entire class of relations of kin; see further examples below.

6.5a	<i>taică-miu</i> father-I.SG.POSS 'my father'	6.5b	<i>unchi-su</i> uncle-III.SG.POSS 'his uncle'
6.5c	<i>bunică-ta</i> grandmother-II.SG.POSS 'your grandmother'	6.5d	<i>socru-miu</i> father-in-law-I.SG.POSS 'my father-in-law'

² The symbol # denotes a word boundary, and + denotes a morpheme boundary.

The possessor marker is inflected for person, number and gender. The gender marker represents the gender of the possessum rather than that of the possessor, in spite of being attached to the latter. As the above examples show, the *possessum* + *possessor* scheme can be applied for all of three persons (first person, second person and third person). However, it can only be used in constructions involving a single possessor. It is ungrammatical to form constructions such as those in 6.5a-d when the number of possessors exceeds one, as in 6.6.

6.6 **maică-noastră*
 mother.DEF-1.PL.POSS
 ‘our mother’

The grammatical expression corresponding to example 6.6 is:

6.7 *mama* *noastră*
 mother.DEF I.PL.POSS
 ‘our mother’

6.2. Body parts in Romanian

Possessive expressions involving body parts do not benefit from the kind of flexibility that the class of kin relations does. Example 6.3 shows that possessive constructions involving body parts are formed in according to the usual pattern of *possessum* # *possessor marker*. Body parts are never expressed through the construction *possessum* + *possessor marker* as exemplified below.

6.8 **cap-meu*
 head-1.SG.POSS
 ‘my head’

The grammatical version is given in 6.9.

6.9 *capul* *meu*
 head.DEF I.SG.POSS
 ‘my head’

There are no other possessive constructions in Romanian syntax that are allowed to follow the *possessum* + *possessor marker* schema, apart from those involving relations of kin, outlined in section 6.2.

6.3. Iconicity in Romanian possessives

As demonstrated by Haiman (1983: 795) relations of kin and body parts are a subset of inalienable possessive constructions which carry the conceptual significance of a tighter bond between possessor and possessum. Like Haiman,

Croft (2003) also attributes the different marking patterns observed cross-linguistically in possessive constructions to iconicity.

Romanian syntax allows two methods of representing these constructions structurally: (1) X#Y as in examples 6.2, 6.3 and 6.7, and (2) X+Y as in 6.4, 6.5 and 6.6, where X is the possessum noun and Y the possessor marker. Hence, in forming the Romanian possessive we can distinguish the following schemes:

Alienable possessions:	}	<i>possessum # possessor marker</i>
Inalienable possessions:		<i>possessum # possessor marker or</i>
		<i>possessum + possessor marker</i>

The latter schema is iconic as it obeys the proximity principle proposed by Givón (1984: 970). In other words, the conceptual closeness of inalienable possessives is expressed structurally through a smaller linguistic distance. It can be said that Romanian possessive constructions are weakly iconic for two reasons. First, the ‘X+Y’ method of forming them does not apply to the entire class of inalienables, but is restricted to that of relations of kin. Furthermore, even within this latter class, there are two other restrictions (it can only be used in informal speech, and there can only be one possessor involved, as seen in example 6.6). Secondly, the ‘X+Y’ schema is not the only way of forming inalienable possessive constructions, since both ‘X#Y’ and ‘X+Y’ are accepted.

Finally, as with reciprocal constructions, iconicity is never broken, i.e., conceptual separateness is never coded by a structurally ‘closer’ construction. That is, given the grammatical construction *possessum # possessor marker* for inalienable possessives, there is no construction representing alienable possession which has the structure *possessum + possessor marker*.

7. ORDERING OF OBJECTS IN ITALIAN

In his seminal 1983 paper, Haiman states that “in both nominative/accusative and ergative languages, the conceptual distance between verb and direct object is greater when the object is in oblique case, like dative or instrumental, than when it is in a direct case, like accusative or absolutive” (p. 791). The close conceptual relationship between verb and its oblique object is iconically reflected in the grammar of Italian by the ordering of the objects, as given in 7.1. Thus, the direct object *un libro* ‘a book’ precedes the oblique *a un amico* ‘to a friend’ and is closer (conceptually as well as linguistically) to the verb.

7.1 *Maria ha dato un libro a un amico.*
 Maria AUX give. PAST ART book to ART friend
 ‘Maria gave a book to a friend.’

Politeness markers are used by speakers for the purpose of showing respect to the addressee, i.e., parents, teachers, older persons and so on. Social markers, on the other hand, are either employed when the two parties do not know each other well or when they are in fact complete strangers (i.e., to indicate social distance). These markers are in fact that same in Romanian, that is, they are represented by the same structures.

In contrast to Indo-European languages such as French and German which have two registers, Romanian has three: informal, formal, highly formal. The latter two are used to show social distance or politeness, as explained above. As suggested by the terms themselves, the highly formal register signifies more respect or further social distance between the participants than the formal one, and in turn, the formal register carries more respect or further social distance than the informal one. Structurally, there was two ways in which the registers contrast. The first is related to the pronouns used, and the second has to do with the verb inflections employed.

8.1. Pronouns in Romanian

The second person pronouns used in the informal register are replaced by different forms, often given under the label of “politeness pronouns” in grammars (see for example Avram 1986, Bărbuță *et al.* 2000). Example 8.1 shows these forms.

8.1	II.SG.FEM/MASC	II.PL.FEM/MASC
INFORMAL REGISTER	<i>tu</i>	<i>voi</i>
FORMAL REGISTER	<i>dumneata</i>	<i>dumneavoastră</i>
HIGHLY FORMAL REGISTER	<i>dumneavoastră</i>	<i>dumneavoastră</i>

Similarly, the third person pronouns are replaced by politeness ones. However, this time, the two formal registers use the same forms. In addition, in further contrast to the second person pronouns, the third person singular forms are marked for gender, that is, different pronouns are used for feminine and masculine (but no gender distinction is observed with plural ones). The next example shows these.

8.2	III.SG.FEM	III.PL.FEM	III.SG.MASC	III.PL.MASC
INFORMAL	<i>ea</i>	<i>ele</i>	<i>el</i>	<i>ei</i>
FORMAL	<i>dumneaei</i>	<i>dumnealor</i>	<i>dumnealui</i>	<i>dumnealor</i>

For completion, it is worth mentioning that as expected, there is no politeness or social distance marking for the first person.

8.2. Verb inflections in Romanian

In addition to differential pronoun forms, the three registers also differ with respect to verb marking patterns used. In the highly formal register, the second person singular form of the main verb is replaced by the second person plural one. However, the formal register keeps the usual verb forms. Example 8.3 gives the appropriate verb forms for the verb ‘go’ across all three registers.

8.3		II.SG.FEM/MASC	II.PL.FEM/MASC
INFORMAL REGISTER		<i>mergi</i>	<i>mergeți</i>
FORMAL REGISTER		<i>mergi</i>	<i>mergeți</i>
HIGHLY FORMAL REGISTER	FORMAL	<i>mergeți</i>	<i>mergeți</i>

The verb inflections for the third person formal or highly formal remain unchanged in all situations, see 8.4.

8.4		III.SG.FEM/MASC	III.PL.FEM/MASC
INFORMAL		<i>merge</i>	<i>merg</i>
FORMAL		<i>merge</i>	<i>merg</i>

8.3. Iconicity across different registers in Romanian

The differences between the three registers are best observed in a (complete) sentence such as the one in example 8.5. In this example, we give a sentence in the informal register and its different forms in the formal and highly formal address, respectively.

8.5	II.SG.FEM/MASC	buy.II.PL.FEM/MASC	house.DEF.SG
INFORMAL	<i>Tu</i>	<i>cumperi</i>	<i>casa?</i>
FORMAL	<i>Dumneata</i>	<i>cumperi</i>	<i>casa?</i>
HIGHLY FORMAL	<i>Dumneavoastră</i>	<i>cumpărați</i>	<i>casa?</i>

‘Are you buying the house?’

Example 8.6 illustrates a sentence whose third person forms differ across the various registers. As discussed above, the third person only differs across two of the three different registers and the verb inflections remain the same throughout.

8.6	III.SG.FEM	go.III.SG.FEM/MASC	at.house.SG
INFORMAL	<i>Ea</i>	<i>pleacă</i>	<i>acasă.</i>
FORMAL	<i>Dumneaei</i>	<i>pleacă</i>	<i>acasă.</i>
HIGHLY FORMAL	<i>Dumneaei</i>	<i>pleacă</i>	<i>acasă.</i>

‘She is going home.’

The conceptual difference across the three registers is obvious. The informal register contains less information than the formal one, as the latter encodes (beside the actual message) the fact that the speaker carries respect for the addressee or that

the two participants are not well known to each other. Similarly, the highly formal register contains additional information to the formal one, as it signifies more respect towards the addressee or exaggerated distance between the participants.

What is of interest is the fact that the structure mirrors these conceptual differences, as the linguistic code used increases with each register (i.e., with each level of increased distance). The correlation between the structural and conceptual differences among the registers is shown symbolically in Figure 3. If we take the informal register as a basic starting point (or as the unmarked case), we can see that each perceived increase in social distance (on the conceptual axis) is mirrored by an increase in the coding used (on the structural axis).

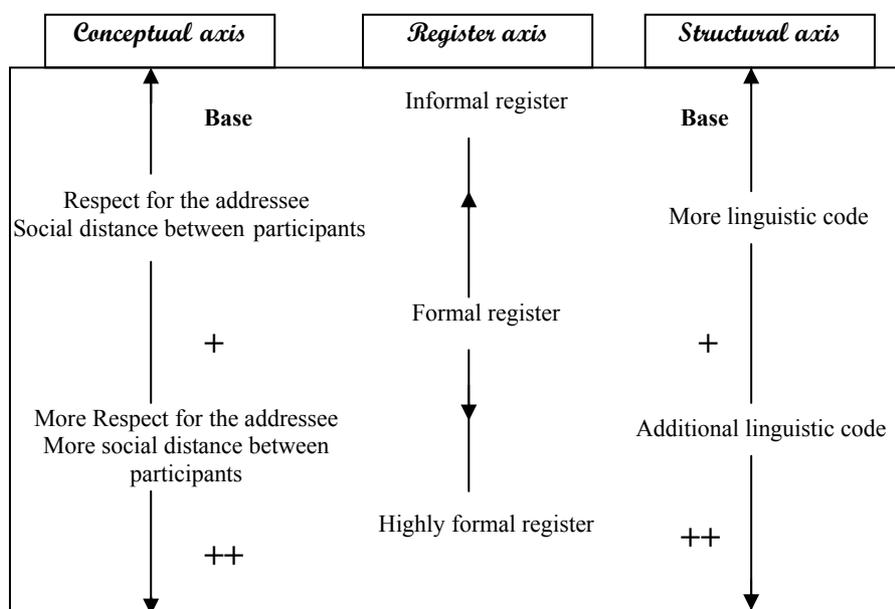


Fig.3 – Form and Meaning in social distance and politeness constructions.

Romanian politeness and social distance markers obey the quantity principle outlined by Givón (1984: 970) and are hence iconic. Furthermore, iconicity is never broken, in that, there is no grammatical construction in the formal register which contains less linguistic content than its equivalent in a less formal register.

9. CONCLUDING REMARKS ON ICONICITY IN ROMANCE LANGUAGES

This study investigates the presence of iconicity theory in Romanian syntax. The grammatical constructions analyzed are reciprocal relations, possessive expressions, and social distance and politeness constructions, respectively.

Our results show that reciprocal constructions are iconic, in accordance with Givón's quantity principle (1984: 970), such that, increased conceptual complexity correlates with increased linguistic content. Furthermore, there is no grammatical sentence which allows more conceptual "bulk" and less linguistic coding.

Analytic causative constructions prove to be iconic in two ways in French. They respect the proximity principle in that greater cognitive distance correlates with greater linguistic distance between Agent and Patient. At the same time, the quantity principle is also observed since greater linguistic material is used to code a more complex construal.

The situation is similar with possessive constructions. Like many other languages, Romanian allows overt distinctions to be made in the coding of alienable and inalienable possession. As such, alienable possession is expressed by a separate word (a possessive pronoun) which follows the possessum. On the other hand, certain inalienable possessives, namely relations of kin, may be expressed by the "tighter" construction containing the possessum with an affixed clitic possessive marker. This marking pattern happily co-exists as a means of expressing possession in terms of relations of kin, alongside the usual (and more productive) pattern of possessum # possessive pronoun. While there are semantic differences between the two patterns, these are stylistic ones (the former is only used in informal spoken registers, while the latter is used in formal ones and writing).

We show that in Romanian, possessives are weakly iconic, in accordance with Givón's proximity principle (1984: 970). Also, there is no grammatical construction which allows an alienable possessive to be expressed using the structure of possessum + possessor marker.

In Italian, the ordering of objects is also iconic, in that objects which are closer conceptually to the verb, also occur linguistically closer to it by virtue of being expressed in close proximity to the verb (or at least as close as, or closer than say indirect objects, or oblique objects).

Turning to social distance and politeness markers, we have seen that Romanian contains three different registers. Examples show that as the amount of social distance and politeness increase, so does the linguistic content. This is iconic, in line with Givón's quantity principle (1984: 970). Similarly as with the other constructions presented, iconicity is never broken, i.e., there is no formal register which contains less linguistic coding than a less formal one.

The syntactic constructions investigated follow principles of iconicity. It is likely that there may be other iconic constructions in Romanian syntax. One such construction may be that of definite and indefinite articles, which follow the pattern below (see examples). However, this is left for future research.

Definite article: noun + definite article particle
Indefinite article: definite article particle # noun

9.1	<i>casa</i>		<i>copacul</i>	
	house.DEF.SG.FEM.NOM		tree.DEF.SG.MASC.NOM	
	‘the house’		‘the tree’	
9.2	<i>o</i>	<i>casă</i>	<i>un</i>	<i>copac</i>
	INDEF.SG.FEM.NOM	house	DEF.SG.MASC.NOM	tree
	‘a house’		‘a tree’	

Finally, we may ask ourselves why the question of (linguistic) iconicity has fascinated linguists and researchers in general. What does iconicity have to offer to the inquiring mind? For centuries, linguists have tried to capture the ‘machine’ behind the “universal paradigm” that we call language, as well its essence and boundaries (Marcus 2007: 11-12). While attempting this herculean task, they (alongside many other researchers) have noticed that language is not only able to tell us about how we communicate, but also holds the key (at least in great part) to how we make sense of the world around us, and how we categorize and organise our experience. By diving down to linguistic structure, beneath the discourse and words used, researchers can tap into the principles which govern the systems we use for the purpose of this organisation and categorization.

With its features of discreteness and sequentiality imposed by its genuine link with the left-hemisphere of the brain, language is potentially universal (Marcus 1974). So, its universality is a direct consequence of the universality of the left-brain hemisphere, as a constitutive part of the human being. This direct link between biology and language is a clear phenomenon of universal iconicity.

This is where iconicity comes in, as one of the principles used to this end. Looking through the lens of the syntactic microscope allows us to see the mechanisms which shape language, iconicity being one of them. This exercise can bear fruitful findings not only from a theoretical standpoint in learning more about how humans think and how language works, but also in future communicative developments, such as developing efficient and useful symbolic languages for computer mediated communication (Masoud and Barker 2000).

Appendix A: glosses

I	– 1 st person
II	– 2 nd person
III	– 3 rd person
DEF	– definite article
FEM	– feminine
FEM/MASC	– feminine or masculine, the forms are identical
INDEF	– indefinite article
MASC	– masculine
PL	– plural
POSS	– possessive
SG	– singular
X	– device for forming reciprocal and reflexives constructions

REFERENCES

- Archard, M., 2002, "Causation, constructions, and language ecology: an example from French", in: M. Shibatani (ed.), *The Grammar of Causation and Interpersonal Manipulation*, Philadelphia, John Benjamins, 127–156.
- Avram, M., 1986, *Gramatica pentru toți*, București, Editura Academiei.
- Bărbuță, I., A. Cicala, E. Constantinovici, T. Cotelnic, A. Dirul (eds.), 2000, *Gramatica uzuală a limbii române*, Chișinău, Grupul Editorial Litera.
- Barthes, R., 1964, *Eléments de sémiologie*, Paris, Gonthier.
- Calude, A., 2007, "Light and heavy reflexive marking: the Middle Domain in Romanian", *Annual Review of Cognitive Linguistics*, 5, 239–269.
- Calude, A., 2005, "Reflexive-Middle and Reciprocal-Middle Continua in Romanian", *Proceedings of the 2004 Conference of the Australian Linguistics Society*, July 13–15, archived at the University of Sydney.
- Chomsky, N., 1968, *Language and Mind*, New York, Harcourt, Brace & World.
- Croft, W., 2008, "On iconicity of distance", *Cognitive Linguistics*, 19, 1, 49–57.
- Croft, W., 2003, *Typology and Universals*, Cambridge, Cambridge University Press (2 edition).
- Deutscher, G., 2005, *The Unfolding of Language*, London, Arrow Books.
- Fischer, O., W. G. Müller (eds.), 2003, *From Sign to Signing: Iconicity in language and literature 3*, Amsterdam, Benjamins.
- Fischer, Olga, M. Nänny (eds.), 2001, *The Motivated Sign. Iconicity in Language and Literature 2*, Amsterdam, Benjamins.
- Fischer, O., M. Nänny, 1999, "Iconicity as a Creative Force in Language Use", in: O. Fischer, M. Nänny (eds.), *Form, Miming, Meaning*, Philadelphia, John Benjamins, XV–XXXIV.
- Fónagy, I., 1999, "Why Iconicity?", in: O. Fischer, M. Nänny (eds.), *Form, Miming, Meaning*, Philadelphia, John Benjamins, 3–31.
- Freudenthal, H., 1960, *LINCOS. Towards a cosmic language*, Amsterdam, North Holland.
- Fucks, W., 1953, "Mathematische Analyse des Literarischen Stils", *Studium Generale*, 506–523
- Givón, T., 1984. *Syntax – a functional-typological introduction*, volume II, Amsterdam, Benjamins Publishing Company.
- Haiman, J., 2008, "In defense of iconicity", *Cognitive Linguistics*, 19, 1, 35–48.
- Haiman, J., 1985, *Natural Syntax: Iconicity and Erosion*, Cambridge, Cambridge University Press.
- Haiman, J., 1983, "Iconic and Economic Motivation", *Language*, 59, 781–819.
- Haiman, J., 1980, "The Iconicity of Grammar: Isomorphism and Motivation", *Language*, 56, 515–540.
- Haspelmath, M., 2008a, "Frequency vs. iconicity in explaining grammatical asymmetries", *Cognitive Linguistics*, 19, 1, 1–33.
- Haspelmath, M., 2008b, "Reply to Haiman and Croft", *Cognitive Linguistics*, 19, 1, 59–66.
- Hollman, W., A. Siewierska, 2007, "A construction grammar account of possessive constructions in Lancashire dialect: some advantages and challenges", *English Language and Linguistics*, 11, 2, 407–424.
- Innis, 1985, *Semiotics, an Introductory Anthology*, Bloomington, Indiana University Press.
- Karrebæk, M., 2003, "Iconicity and structure in codeswitching", *International Journal of Bilingualism*, 7, 4, 407–441.
- Kemmer, S., 1993, *The Middle Voice*, Amsterdam, John Benjamins Publishing Company.
- Kinder, John, V. Savin, 2004, *Using Italian – a guide to contemporary usage*, Cambridge, Cambridge University Press.
- Lichtenberk, F., 1985, "Multiple Uses of Reciprocal Constructions", *Australian Journal of Linguistics*, 5, 1, 19–41.
- Maeder, C., O. Fischer, W. Herlofsky (eds.), 2005, *Outside-In – Inside-Out. Iconicity in Language and Literature 4*, Amsterdam, Benjamins.

- Marcus, S., 2007, *Words and Language Everywhere*, Milano, Polimetrica.
- Marcus, S., 2000, "Portmanteau Words(mots-valise)", *Studii și cercetări lingvistice*, 51, 1, 133–161.
- Marcus, S., 1974, "Linguistics as pilot science", in: T. A. Sebeok, *Current Trends in Linguistics*, vol. 12, The Hague, Mouton, 2871–2887.
- Marcus, S., N. Edmond, S. Stati, 1971, *Introduzione alla Linguistica Matematica*, Bologna, Patron.
- Yazdani, M. P. Barker (eds.), 2000, *Iconic Communication*, Bristol, UK, Portland, USA, Intellect.
- Nichols, J., 1992, *Linguistic diversity in space and time*, Chicago and London, University of Chicago Press.
- Nichols, J., 1988, "On alienable and inalienable possession", in: W. Shipley (ed.), *In Honour of Mary Haas: from the Haas Festival Conference on Native American Linguistics*, Berlin, Mouton de Gruyter, 557–609.
- Peirce, C., 1932, "Collected papers of Charles Sanders Peirce", C. Hartshore, P. Weiss (eds.) Cambridge University Press.
- Radden, G., R. Dirven, 2007, *Cognitive English Grammar*, Amsterdam/Philadelphia, John Benjamins.
- Roman, J., 1965, "Quest for the Essence of Language", *Selected Writings, II*, The Hague, Mouton Press, 344–359.
- Roman, J., 1960, "Linguistics and Poetics", in: T. Sebeok (ed.), *Style in Language*, Cambridge, MA: MIT Press, 350–377.
- Saussure, F., 1959, *Course in General Linguistics*, C. Bally, A. Sechehaye (eds.), Translated by W. Baskin, New York Philosophical Library.
- Simone, R. (ed.), 1995, *Iconicity in Language*, Amsterdam, John Benjamins Publishing Company, VII–XI.
- Tabakowska, E., C. Ljungberg, O. Fischer (eds.), 2007, *Insistent Images. Iconicity in Language and Literature 5*, Amsterdam, Benjamins.
- Taub, S., 2001, *Language from the body: iconicity and metaphor in American Sign Language*, Cambridge, Cambridge University Press.