

ISSA Proceedings 2002 - A Semio-Argumentative Perspective On Enthymeme Reconstruction



Natural language communicants always construct implicit messages. Implicitness can be regarded as a universal phenomenon, irrespective of what language we use. Implicitness can also be viewed as a matter of degree: some messages are “more elliptic” than others. Therefore, there must be criteria for defining implicitness. With that

in mind, messages are implicit linguistically, cognitively, and pragmatically. These three aspects closely interrelate, still, for technical purposes they can be differentiated.

Linguistic implicitness regularly occurs in dialogues where there is enough context information not to use one and the same word or phrase. It also occurs in titles where the text information is presented as a “chunk” or “topic”. More often than not we encounter cases when condensed information is used in the body of a text, p.ex. *Have you ever been to a topless bar?*

Cognitive implicitness occurs in any type of texts, since it is impossible to clarify everything the communicant grounds her message on, for fear of vicious circle (that usually concerns the parts of an argument). Cognitive implicitness is necessary when we have several embeddings like in the so-called consecutive subordination, p.ex. preceding structures for *the house that Jack built...* The number of such embeddings is usually not more than 3 structures; presumably it will hardly exceed the Miller’s number 7(2, with the previous example being left for very specific cases like nursery rhymes.

Pragmatic implicitness has to do with intentions because in sincere argumentation a sender would want his message to be purpose-sufficient (thus leaving some pertaining information aside), precise (leaving elaboration aside) and laconic (leaving details aside). Clarification of implicit information can be the matter of degree depending on communicative purposes: we can clarify a standpoint (a claim) and suppress premises hoping for skills of our vis-à-vis to restore the latter; we can clarify one of the premises that could be more difficult to get independently; we can, on the last account, clarify all the premises

immediately supporting the standpoint in order to “give the complete picture” of our argument (leaving alone the masochistic reasons of attracting possible criticism to all the components of our argument). These factors must be taken into account for analysing comprehension activities of argumentation recipients: to what extent do the latter need to reconstruct the unexpressed information?

A recipient never analyses all the components of the message with one and the same degree of precision. This is because we, recipients, apply different kinds of understanding to different parts of the message that we comprehend. In understanding, I differentiate between *referent recognition and designation comprehension* (with meaning *comprehension*, *sense decoding*, and *sense comparison* as the subtypes of the latter). The ground for this taxonomy is the semiotic structure of messages.

According to systemic-semiotic approach (R.Piotrovsky’s St.Petersburg school), studying how the text functions presupposes detecting meaning and sense of the text and is implemented on two levels of semiosis. Text is treated as a complex sign thus being the result of primary semiosis; it functions as a ready-made model in various situations of communication (secondary semiosis). In the primary semiosis the potential information of the text is reflected. In the semiotic structure of the text, the content is placed into the Designation which is a set of characteristics of the referential situation. The mental picture of the referent is a Denotation seen as a single whole. The morphologo-syntactic image of the material text is regarded as an Index. Emotional and evaluative features of the referent are regarded as a Connotation. In the secondary semiosis (a concrete situation) the text acquires a Concept as a set of communicatively important Designation features on which comprehension of the referential situation is based. The number of text Concepts is thus equal to the number of text recipients. This view of semiosis applies to highly rigid (easily modelled) texts where the Index is readily identified and reconstructed.

We propose a somewhat different model for text comprehension. In our view, secondary semiosis has little to do with non-literal sign comprehension; rather, it is understanding differentiated for different communicants depending on individual spheres of their Significations.

Sign comprehension order is practically the reverse of that of sign production. The ideal sphere of semiosis comprises the Content part, the Translation part and the Exponent part. In the material sphere we find the body of an exponent, a

sender, a receiver, and a situation / an object; the material part is not of primary importance for semiosis. The Content part contains the Denotation, the Perception, and the Signification; the latter consists of designative area and the referential area. All the referential area and a part of the designative make up the conventional field of the Signification; the rest of the designative sphere is the individual field of the Signification. The Translation part contains (linguistic) meaning. The Exponent part contains the image of a sign body. This representation is oriented at the semantic aspect of comprehension where explicit signs are present.

We can figuratively say that in semiosis there are two processes – those of semiotic crescendo and of *diminuendo*. The semiotic diminuendo arises when Perception is formed because only some qualities of an encountered object or a situation are perceived. The diminuendo continues to take place when a Denotation is formed because it presupposes the choice of features relevant for the nomination. When we move from the Denotation to the Signification we are witnessing the process of semiotic crescendo because the Denotation is identified as a Class in the referential area of the Signification while the designative area, particularly its individual field, expand the size of the mental concept especially because the borders of the individual field are fuzzy. The fuzziness is conditioned by unlimited richness of the personal experience of individuals.

The Denotation is treated of here as an ideal object, its ideal representation which is still non-symbolised. The Denotation correlates to the Perception but does not inherit all its features; this is correlation of the virtual VS. actual type. If actual reflection of the situation takes place, the notions of Denotation and Perception are mandatory for semiosis. If an object is extracted from memory, the denoting process is carried out without the Perception.

The Signification has a complex structure. On the one hand, there are referential and designative areas, on the other – individual and conventional fields. The term *conventional* seems preferable to others (p.ex. *mutual*, *common*, etc.) because it can be easily applied for various texts, including scientific and argumentative ones. The text is aimed to transmit information about a state of affairs. When encoded, the latter first of all generates the denotative-referential structure of the text. This encoding is carried out by means of non-reflexive imprinting and is not linguistic in the strict sense of the word. Referent formation is class identification of a Denotation. The mentioned denotative-referential complex is then correlated with a model already present in the person's memory. This type of reflection is no

more passive but is purposeful. This is a designation stage of message generation.

Based on the treatment of semiosis we can single out different types of message comprehension. The general type will be Understanding. Within it, we single out three types.

Referent recognition applies to all fully-significant message elements to form a general meaningful idea of the message. Referentially-deficient recognition is understanding of syntactically functional elements because they do not denote objects or ideas but only unite them into a single whole (a sentence). For example, in *This behaviour of yours is absolute disgrace* all the words are referentially recognised except of where referentially-deficient recognition takes place. Referent recognition is basic type of understanding, i.e. no higher type is possible without such recognition.

There are communicatively focal/important elements that need concentration by recipients. Only to such elements do we apply the rest of the types of understanding. *Designation comprehension* implies understanding notional characteristics of the focal elements. If the former are shared (collectively or with the recipient only), we deal with meaning; if they are individual (i.e. different from the recipient's), we deal with sense. The notional characteristics of the foci can be expressed in their premises (p.ex., when the focal element is a phrase or a sentence). If the premises are explicit, the recipient can compare them with the ones she herself would have for the focal element in question. If they are implicit, they need be reconstructed for adequate estimation of the focus. Such reconstruction is argumentative by nature because the recipient looks for grounds of the analysed notions.

Sense decoding is based on prognostic reconstruction of the premises; they presumably reflect the sender's individual background. Efficient here is local coherence analysis based on an informal syllogistic technique. The technique is based on transforming the focal message into a rigid subject-predicate structure to which an algorithm is applied for getting unambiguously formulated premises. That is a method of syllogistic argument reconstruction where the recipient finds valid premises.

Sense comparison is applied to the reconstructed premises: the recipient evaluates their degree of plausibility to her own. If they are "good", the argument is correct. The notion of correctness is applicable only to arguments, and not to the focal messages proper: the latter can be consistent with the recipient's background (and therefore be correct) but may not follow from the sender's

message if the reconstructed premises are inconsistent with the previous or succeeding explicit information in her text.

The simplest case where we find meaning is, for example, in the standpoint sentence *Socrates is mortal*, where the recipient easily reconstructs the premises *All men are mortal* and *Socrates is a man*. We can see that this example is already standard and that means that syllogistic arguments seem to be regarded as dealing with shared meaning. This is probably true for syllogisms of the mode Barbara.

Still, there are cases where premise reconstruction depends on individual factors. For example, the sentence semantics standpoint *Localistic case theories deal with the underlying structure of the sentence* cannot be adequately estimated from the point of view of its plausibility unless the receiver takes into account the ambiguous nature of the indefinite article of the subject of the sentence (represented by zero in our case). The ambiguity is if the sentence is universal or particular (in natural language texts the respective quantifier is usually omitted which creates a good chance of intentional deceiving of receivers).

Premise reconstruction in syllogisms depends on the choice of the middle term. For a linguistics theorist working in the field of syntactic semantics, the probable middle term may be *case role theories* (a class for *localistic case theory*). In that case the result of reconstruction is:

1. *Any localistic case theory deals with the underlying structure of the sentence because Any case role theory deals with the underlying structure of the sentence and Any localistic case theory is a case role theory.*

For a particular judgement and the same middle term the premises must be reconstructed differently. For example,

2. *Some localistic case theories deal with the underlying structure of the sentence because Any case role theory deals with the underlying structure of the sentence and Some case role theories are localistic case theories.*

The reasoning in (1) is done through the mode Barbara and is valid. The reasoning in (2) is according to the mode Datisi and is valid, too. Though both arguments are valid, we still cannot say which of them is more plausible. A possible solution of this problem is this.

Since the truth of a universal judgement entails the truth of the respective particular judgement and particular judgement leaves the truth of the respective

universal judgement indefinite, it is intuitively tempting to say that since (1) is true, (2) is also true. Still, for a syllogistic conclusion to be true, its formal validity must be supplemented by true premises. This is the case when we move from the premises to the conclusion and estimate the premises. In our examples we moved in the opposite direction supposing that the conclusions were true. Moreover, we reasoned from the universal to the particular. But the fact is that the universal treatment of the hidden/enthymematic article does not make the initial sentence completely correct – there are localistic case role theories that deal with both the deep *and* the surface structure of sentences. Here we encounter the *fallacy of focus shift* specific, maybe, only for syllogistic – instead of taking into account options for the complement of the standpoint judgement, the analyser is tempted to estimate its subject and grammatical predicate.

If we take a closer look at the standpoint sentence, we can see that it is a property-sentence transform of the definitive sentence *Localistic case theories are theories of <cf.: dealing with> the underlying structure of the sentence*. If the sentence had that initial form, it could be easier to estimate its truth-value, cf.:

3. *Any localistic case theory is a theory of the underlying structure of the sentence because Any case role theory is a theory of the underlying structure of the sentence and Any localistic case theory is a case role theory* (The mode Barbara)

4. *Some localistic case theories are theories of the underlying structure of the sentence because Any case role theory is a theory of the underlying structure of the sentence and Some case role theories are localistic case theories* (The mode Datisi).

Semantico-syntacticians would probably detect the falsity in the first (universal) premise of both syllogisms (though both of them are structurally correct).

The definitive judgement in both (3) and (4) are semantically deficient – they lack a quantifier before the grammatical attribute, and that quantifier is an essential condition for the judgement meaning. The quantifier in question can have different force, cf.: *only/exclusively, principally, primarily, generally*. In principle, the transformation of the definition sentence into a property sentence must be supplemented by the quantifier. Interestingly enough, the force of the essential condition quantifier is in a specific relation with the judgement subject quantifier: If a strong quantifier is used, only the particular judgement is good; with a weak quantifier the universal judgement is semantically plausible, cf.:

5. Some localistic case theories are theories of <deal with> only the underlying structure of the sentence

6. Any localistic case theory is a theory of <deal with> primarily the underlying structure of the sentence

A sort of compensatory mechanism having to do both with sentence grammar and logic works here: the rigidity of the quantifier in the secondary part of the sentence (i.e. in the attribute <complement>) combines with the non-rigidity of the quantifier in the main part (the subject) and vice versa, the non-rigidity of the quantifier in the secondary part combines with the rigidity of the main part.

Semiotically, it means that linguistic meaning, and not just signification must be taken into consideration when we reconstruct enthymemes.