

CONVENTION AND CREATIVITY IN NATURAL LANGUAGE

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In the process of human language interaction there are two factors that play the most important role in the negotiation of meanings which goes on in spoken or written discourse. The speaker (writer) wants to convey his intentions to the hearer (reader). In order to achieve this he must use some conventions concerning the knowledge shared between him and the addressee. These conventions may refer to the instrument of communication and describe the usage of the language code, some others may relate to the use of the code, i.e. language rhetoric, still others may fall outside the code and concern the shared knowledge of the world. This is the *conventional* factor in natural language understanding and production, the component that makes communication possible.

The other factor accounts for the advancement of the interaction and the *creative* aspect of language. *Creativity* in the Cartesian sense as understood by Chomsky (1972:12) is manifested by the following properties of human language: 1. potential infiniteness in scope; 2. freedom from stimulus control; 3. coherence and appropriateness to the situation; 4. possibility of introducing innovations.

The first two of these are characteristic not only of human language. Artificial codes such as computer programmes, algebra, etc., share such properties (Kurcz 1980). The latter two, however, pertain to the essence of the natural human code. They express cognitive *creativity* in language enabling its user to confront his utterances with the surrounding reality by attaching reference, discriminating between true and false statements, as well as to introduce innovations not only in the types of sequencing of patterns but also in modifying the patterns themselves. The latter factor can assure especially comfortable conditions for performing all sorts of change

on the instrument of communication. It guarantees the openness of the system and its mutability. In other words, this property allows to introduce new constructs, different from ordinary patterns, which are creative only in the limited sense of potential infiniteness in scope. This principle is of recursive character in that it permits the new pattern to serve further on as the basis for new creations. These two meanings of *creative* seem to correspond to the distinction proposed by Leech (1969). One refers to the original use of the established possibilities in the language, while the other consists in creating new possibilities, which are not already in it. These creative processes of production are paralleled by the processes of decoding new messages by the addressee. In both the cases there must be assumed a potential or factual existence of a connection between the new creations and sets of familiar notions or patterns, which can serve as points of reference.

A question may arise concerning the nature of these processes. The simplest answer may be that the newly perceived elements of the outside world are to be matched against conventional images internalized in our minds, that have been formed at the former exposure to similar stimuli. All those signals, seen and/or heard, new to our experience, are born into already existing order of the conventionalized cognitive constructs. The search process stimulated by the perceived objects results in the activating of the possessed knowledge of the world, comparing it to the new material and, finally, incorporation or rejection of it. Incorporation may be signalled by the "click of comprehension". It is in this sense that we can talk of creative activity involved in perception or interpretation of discourse (Widdowson 1979, Rivers 1980). And it is also in this sense that meanings conveyed in the use of language in the development of the discourse are discovered or negotiated rather than assigned precise specification in grammars (Widdowson op. cit.: 157). Also all sorts of semi-sentences, paradoxical statements, new poetic creations can be more adequately explained by non-idealizing grammars.

Creativity in language, and probably not only in language, production is also an interaction between the old and the new. The new, however, in either of the two senses described above cannot be produced or understood by a human being totally independently of the familiar material. It may be thought of either in terms of rearrangements and/or multiplication of the known stereotypic patterns, or in terms of introducing new elements to the existing patterns by establishing new connections between them, by their reconfigurations etc., so that the result may be a creation, more or less distant to the old constructs.

What I have called above a stereotypical image or a conventional pattern can be described in terms of frame-systems, similar to those proposed by Minsky (1975) and Schank (1975).

The frame-system (FS) expresses an individual vision of the world of its

owner, shaped by such properties as: social background, education, genetic predispositions, psychological state, experience, as well as his language community membership.

From the point of view of its organization a frame (F) is a data structure that consists of: a) a collection of nodes with a characteristic feature specification for each concept and markers pointing to other frames; b) characteristic relations for those concepts and nodes; c) assertions concerning concepts and relations.

Prior to the act of perception F is prototypical. A *prototype* can be represented as a structure of nodes, connected with one another as a network system. Some (higher) nodes represent partial but "constant" knowledge and some others are filled with variable "default" assignments, which are loosely attached to the nodes, so that new information can be added there, or some changes can be incorporated. A set of frames related by connection pointers produce a FS, linked by an information retrieval network.

Stimulated in the act of perception, a matching process assigns values to "defaults", and a frame is activated. A high frequency of activating of certain frames by identical stimuli leads to developing a routine response in form of a *stereotypical* frame, in which the majority of the nodes are filled with "constant" type values and stored as "ready-to-use" matrices. Such frames constitute a basis of language understanding and are an expression of the least effort tendency. The lack of one-to-one correspondence between the signal and the prototypical frame can cause failure in assigning values to default nodes. In this case the information retrieval network provides a new, replacement frame, and again the matching system starts operating. In the event of success, the other frame is instantiated, in the event of failure, an alternative frame is selected, etc. If no values are found to match the defaults, the situation remains beyond the addressee's comprehension, in other words, no communication can be achieved. The speaker then, in order to be understood, has to find ways to activate such frames in the interlocutor's mind that have at least some nodes (features of the concept) common with his, and then, either fill in the defaults with the imposed values or leave room for possible interpretations of the addressee.

The basic classification of frames accounts for the discrimination between conceptual (universe organizing), linguistic (structural and semantic) and communicative (message oriented) units. The frequent activation of identical interacting frames develop in the addressee a stereotypical system of comprehending, which, in turn, stereotypes the productive skills.

Any novelty in this respect imposes on the reader/hearer a greater interpretative effort in terms of search for a matching frame. In this sense it is a failure to fulfil the addressee's system of expectations. This can bring about a restructuring of stereotypic frames that he possesses in reference

both to conceptual as well as to linguistic aspects of production, perception, and interpretation. Such innovations or "deviations" may concern the form of language (phonology, morphology, syntax), and thus they may pertain to meaning and message, i.e. to what is said and what is meant. They may affect the frames of objects and those of relations such as action and events (known as 'scripts' or 'scenarios', cf. Schank op. cit.), reasoning, conversational maxims and implicatures, etc.

Any verbal exchange involves an attempt of the participants of the interaction to transcend their visions of the world by finding ways to demonstrate one's "private" FS to the interlocutor. The closer the psychological and socio-cultural background of the individuals the less drastic differences are likely to occur in their FSs, while speakers from distant cultures and different psychological predispositions will possess FSs more diverse. In both the cases, though, a certain number of conceptual and also linguistic Fs exhibits a close equivalence on the higher level, i.e. on the level of the nodes of the "constant" knowledge, reflecting some facts of the outside world as well as linguistic universals. This factor is a warranty of mutual understanding, facilitates language expressibility, and serves as a starting point in meaning negotiation of the verbal interaction.

The FS contains sets of relational rules mapping conceptual frames onto linguistic structures. Both can be either prototypical (open for default values assignment) or stereotypical (with premarked default values). Processes of encoding and decoding the message involve a continual selection from the pool of concepts and available linguistic resources. The range of items accessible to selection reflects the intellectual equipment of the individual and the afore-mentioned socio-cultural parameters. The addressee comprehends the message identifying linguistic and conceptual Fs, at the same time, however, an array of connected (associative) frame sets is activated that are unique to the addressee, frequently not intended or even not shared by the speaker.

The essence of linguistic creativeness seems to consist in a proper evaluation and a conscious use by the speaker, of the most effective linguistic stimuli activating desired frame sets in the interlocutor.

The ways of stimulating the instantiation of the desired frames may be topical, connected with the selection of the subject matter, or structural, having to do with the choice of unconventional linguistic forms. Both can be demonstrated in different language styles. The linguistic highlighting may be either positive when it fulfills the addressee's expectations attaining his norm, or negative when it exhibits a departure from a norm either in the form of a deviation (ungrammaticality or unacceptability in Chomsky's (1965) sense) or deflection (departure from the expected pattern of frequency) (cf. Halliday 1973:113). The departure from a norm may, when widely ac-

cepted, start functioning and establish a norm itself. Cases of a mixed type are also met when a new language creation partially satisfies the addressee's expectations, utilizing in lexicon, for instance, stereotypical combinatory patterns filled up with unconventional lexical material. Similarly to other stereotypes, positive instances provide confirming, while negative ones — disconfirming evidence in the system of the addressee's expectations.

Creative use of language, especially of the above mentioned mixed type, is not a domain reserved to poetry or some other literary genres. The interpretation of such utterances as *Let's go travelling* or *Margarine Thatcher* is achieved by computing the meaning and originating new frame sets by combining stereotypical linguistic knowledge with the knowledge of the outside world.

Classical rhetorical devices based on similes and metaphors, paradoxes or hyperboles also introduce the rearranged frames or frame sets both in poetic styles and in everyday language use. They constitute a set of fairly conventional techniques, known already to Aristotle as *toposes* ready to use in a variety of language styles. Rhetoric, however, is only an instrument. It may be used in a cliché-like way, utilizing frames with fixed emotional values, regardless of the communicative significance of the text as, for instance, in the language of propaganda (Lewandowska 1979). On the other hand, it may function as a set of genuinely resourceful techniques in different styles, introducing originative, non-stereotypic values to the frame defaults.

Devices such as metaphors are not only techniques of an ornamental type. They are used to activate associative frame sets by imposing new connection pointers. The assignment of such introspectively perceived connection pointers between previously unrelated frames is one of the mechanisms of creativeness. In this way, in some cases metaphors make understanding richer and more complete, while in some others, as with abstractions, they may be responsible for making understanding possible (cf. Lakoff and Johnson 1980).

Rhetorical devices utilized in everyday language interaction activate imagination by deliberately rejecting used up, expected forms with stereotyped meanings and by proposing new unconventional ones. In such cases frames different from the expected ones are instantiated:

Zyjemy ze sobą jak dwaj nudyści. (after Pisarkowa 1978:171) (We live together like two nudists=there are no secrets between the two of us)

A woman without a man is like a fish without a bicycle. (after Danks 1980)

Different language levels, however, will accept different degrees of originality as well as different registers and styles will limit, for pragmatic

and communicative reasons, the scale and range of the process. Language specific rules of word formation, for instance, will dictate a new term in engineering but similar rules can be broken in some literary styles. Poetic experiments in morphology, syntax, etc. motivate the activation of associative frames where defaults are filled with varying values in a single instance of perception:

Liffeying waters of, hither and thithering waters of, Night (J. Joyce)

Some restructurings of a system in a norm-breaking language may become a part of a new system accepted by interlocutors. In this way the grammatical competence of individual language users can be perceived as a dynamic not a static concept. The existence of such dynamic competence within highly individualized FSs might explain inherent problems in establishing an exhaustive set of objective criteria of originality measure in language. Scales of grammaticalness and degrees of deviation touch upon one facet of the matter, viewing language texts as variables against a static competence of an idealized speaker-hearer. While such a level may prove necessary in establishing group linguistic norms and departures, the problem with creativeness lies in the individualized treatment of varying evaluating factors in both the author and the addressee vis-à-vis the variability of the text. One such factor may be the relation between novelty and favourability we shall come back to in the last paragraph of this work.

By manipulating frame arrangements, the author can achieve the following types of effect:

1. reinforce the pre-existing system of frames in the addressee by filling in defaults with conventional values;
2. introduce permutations and additions in the lower branching of the frame;
3. introduce major changes in the higher branching and fill the nodes with items of a low expectancy of occurrence, which may result in instantiating a new set of frames.

The effects are connected with the probability measure in the listener's prediction of the possible content and form of messages (cf. Rubenstein 1974: 217). The probability rate of form predictability is high in everyday speech and decreases in literary styles, reaching its lowest value in poetry. The probability rate of content predictability exhibits a similar property. In casual everyday language most frequently simple, stereotypical patterns introduce new notional frames or rearranged sets, less frequently an interaction of conventional notional Fs with novel forms activate rearranged or enriched Fs and, least frequently, non-stereotypical patterns introduce unconventional notional frames. In poetry and in some type of prose, on the other hand, the frequency seems to be reverse. It is most usually non-stereotypical forms and patterns that introduce rearranged or entirely novel notional (semantic and conceptual) frames.

The answer to the question, however, as to whether the newly created frame has a chance to affect and to be incorporated into the addressee's FS or not depends on a number of factors:

1. level of encoding the elements of the new message in the frame hierarchy of the addressee; if the higher nodes are "attacked", more drastic alterations are involved and the addressee needs more reinforcement to absorb the changes. The reinforcement is connected with the

1a frequency, and

1b dramatic intensity of the stimuli (Rothart 1979).

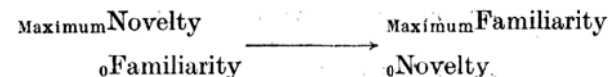
All three factors are universally connected with prior expectancies and judgements, which may be so strong as to be insensitive to external stimuli. What is more, they can create a self-confirmatory system which does not respond to direct or indirect disconfirming information.

Another problem is the lifetime of new creations. As Roger Brown (1958: 144) puts it

"The metaphor lives in language so long as it causes a word to appear in improbable contexts, the word suggesting one reference, the context another. When the word becomes as familiar in its new context as it was in the old, the metaphor dies."

What this means in the frame system is first the obscuration and then total vanishment of the connection pointers between the associative frames. Cases of reactivating dead metaphors, i.e. deliberate restoring of connection pointers, are also observed in language, e.g. in the language of advertisements (Lewandowska, op.cit.).

In an interesting study of liking words Sluckin et al. (1980) discuss the concepts of familiarity and novelty as related to the hedonic value which he calls *favourability*. Novelty and familiarity can be represented as a continuum of the following form:



Zero familiarity, i.e. complete unfamiliarity corresponds to complete novelty and may be changed to maximum novelty. With increasing familiarity, novelty decreases reaching zero. Zero novelty implies total familiarity with the stimulus. Maximum familiarity refers to stereotypical frames in our approach, while the degrees of novelty are pertinent to the estimation of language creativity range.

Sluckin suggests that these relations may have consequences for favourability (similar results are reported by Trzebiński 1981:121). Zero familiarity which, in frame terms corresponds to the situation where no matching frame can be found as a response to the stimulus, implies negative favourability.

Two sets of apparently conflicting findings are reported concerning relation between familiarity (measured in time and frequency of occurrence) and favourability. The first one indicates that familiarization reduces favourability, the other shows that the more familiar the stimuli the better they are liked. Sluckin proposes — and his view is cohesive with my judgement that when the factor of stimulus complexity is taken into consideration, simple and ordered patterns exhibit maximum attractiveness at low levels of familiarity, while complex unpredictable patterns are still favoured at high levels of familiarity. These dependences can also explain some reactions of addressees towards creative innovations in natural language. Totally unfamiliar words, sequences, patterns or concepts, to which no frames can be matched, may be felt as negatively favourable. Novel items, whose complexity in terms of number and arrangement of frame nodes as well as of the frames themselves in FS is low, will be attractive for a short time (possibly only in the first use). The reduction in favourability may reach zero, leaving the person indifferent to the item in question, or it may further decrease and be assigned negative values as in the case of dead metaphors, clichés, etc. New creations, though, whose complexity is high, i.e. the number of frames, frame node arrangements, in other words the potential of activating new associative frames, is very high and not predictable in the first instantiation, keep their attractiveness for some addressees for a long time, despite their frequent use simply because, for reasons given above, maximum familiarity may never be attained with them.

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