

Communicative Dynamism and Nonverbal Elements (a study in functional sentence perspective, bodily movements and communication strategy)

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Abstract

The paper deals with the issue of communicative dynamism. It investigates the relation between speech and nonverbal features performed by the American actors in the American feature film American Beauty (1999). It discusses different approaches to communicative dynamism and presents conclusions based on the gesture-speech analysis within the theory of functional sentence perspective. It introduces the concept of visual prominence and presents the statistics showing the co-occurrences between speech and the places of visual prominence.

Keywords: communicative dynamism, communication strategies, eye expressions, functional sentence perspective, visual prominence.

Introduction

The present paper forms part of a study dealing with the theory of functional sentence perspective and bodily movements. The study is based on an analysis of the stylized dialogues and posed nonverbal elements accompanied by speech performed by the American actors in the American feature film *American Beauty* (1999). The paper attempts to shed light on the relation between the concept of communicative dynamism and the nonverbal aspect of utterances.

Firstly, the issue of communicative dynamism will be discussed. Further, the present gesture-speech topic will be examined in the context of the results achieved in this field by the world's leading gesture-speech analysts. Finally, the analysis based on the *American Beauty* database (part of the Ph.D. thesis titled *Nonverbal features accompanying communicative units in an American feature film*) will be presented.

Theoretical background

First I will investigate the way in which Firbas's functional approach to linguistic analysis shares similarities with the approaches adopted by the world's two leading experts in nonverbal communication, David McNeill and Adam Kendon. At this point it should be emphasized that Professor Jan Firbas primarily worked in the field of linguistics, while the American Professor David McNeill is a psychologist and linguist, heavily drawing on Adam Kendon's micro-analytic gesture-speech studies. The British Professor Adam Kendon is a psychologist, anthropologist and biologist. Therefore any discrepancies in their respective approaches to the study of language seem to also stem from their distinct perspectives on the interdisciplinary field.

Jan Firbas states that communicative dynamism is "a quality displayed by communication in its development (unfolding) of the information to be conveyed and consisting in advancing this development" (Firbas "Functional view" 30). He defines the degree of communicative dynamism carried by a sentence element as "the extent to which the sentence element contributes to the further development of the communication" (31). Firbas views

communication as a dynamic phenomenon, therefore he considers it necessary to take its dynamic character into account when carrying out linguistic analysis.

Drawing on Firbas, Aleš Svoboda summarizes that the communicative dynamism (CD) of particular sentence elements can be compared in terms of the relative degrees of CD carried by them. What determines the relative degree of communicative dynamism is the interplay of the four factors at the moment of utterance, i.e. linearity, semantics, context and intonation. Relative degrees of communicative dynamism represent degrees of communicative importance (Firbas "Functional view", Svoboda *Encyklopedický* 2002).

McNeill makes an attempt to adopt Firbas's concept of communicative dynamism in his *Hand and Mind (What Gestures Reveal about Thought)* (1992), though he does not stick to the original Firbas's definition of CD (first introduced in Firbas "K otázce"). McNeill does not consider Firbas's four factors and their interplay. He only seems to select one of them – context – defining it in different words. To support my claim I quote his statement that "Since word order is insufficient as an index of CD in English, we need some other measure. I have chosen the *amount* of linguistic material used to make the reference." (McNeill *Hand* 210). The discrepancy between McNeill's and Firbas's or Svoboda's conception of communicative dynamism is thus apparent, although the basic notion of it concerning "pushing the communication forward" (Firbas "Functional view" 30-31; McNeill *Hand* 207) might overlap.

When discussing communicative dynamism, McNeill states that "the discourse structure not only has a highly differentiated effect on the types of gesture that a speaker performs but it also is a major determinant of when a gesture is likely to occur, and of how complex it is if it does occur" (McNeill *Hand* 206-207). Approaching the issue of gesture-speech correlations from his perspective, McNeill argues that "Variations in CD [communicative dynamism] have a decisive effect on the occurrence of gestures. Gestures appear at the peaks of the CD on their level; points of low CD tend to be devoid of gestures of any type." (207-208). Furthermore, McNeill divides his considerations on communicative dynamism and gesture into those concerning sentence level and those at the level of episode, i.e. text.

On the former topic he concludes that "the greater the CD the (a) more probable the occurrence of a gesture, and (b) the more kinesic complexity the speaker will devote to it, if a gesture occurs at all." He expects the correlation between "a function of increasing CD" (208) and gestures as follows: highly thematic references are accompanied by no gesture, beats, pointing on the narrative level, observer-voice iconics with one hand and some highlighting, observer-voice iconics with two differentiated hands and finally character-voice iconics, which signal the places of the highest communicative dynamism according to McNeill (208-209).

The latter subchapter in McNeill's book is titled *Dynamics at the Episode Level* (McNeill *Hand* 213-217). It attempts to describe "peaks of CD on the text and representational event lines" (213). In terms of Firbas's theory of functional sentence perspective, the analyses presented in the above-mentioned subchapter investigate the relation between occurrence of gestures and the context-dependence of their semantically connected spoken counterparts. The results show that gestures seem to mainly accompany newly or recently introduced elements, which once established, do not require the nonverbal parallel any more.

Unlike McNeill, Kendon does not mention the concept of communicative dynamism at all. However, he speaks about "the high information word of the phrase" and its coordination with the stroke phase of the gesture (Kendon *Gesture* 119). Commenting on the gesture-speech issue, he claims that the tonic centre of the tone unit, the high information word or the information centre of the speech phrase and the stroke of the gesture phrase all occur at one moment (125).

Analysis

In what follows, the gesture-speech analysis of the posed bodily movements and spoken word in the American film *American Beauty* (1999) will be presented. Firbas's and Svoboda's results in the framework of the theory of functional sentence perspective are a unique starting point for the analysis of speech and its relation to bodily movements as the theory is capable of establishing a hierarchy of sentence elements carrying relative degrees of CD distributed over them. The analysis will also make use of the fact that this hierarchy can be related to the nonverbal aspect of the utterance. The present analysis thus attempts to shed light on the relationship between the two different manifestations of one underlying process, the spoken and the nonverbal one.

The theory of functional sentence perspective has already been referred to and mentioned as the framework for the analysis. The interdisciplinary character of the topic, however, requires a new approach which will provide a tool for relating the nonverbal aspect of the utterance to the spoken one. In correspondence with degrees of prosodic prominence (O'Connor and Arnold *Intonation* 1980), I claim that nonverbal elements seem to reflect distinct degrees of so-called visual prominence.

In 1970 Ray L. Birdwhistell described the phenomenon of "kinesic stress" (*Kinesics* 103-107). I have adopted the basic idea of his kinesic stress, modifying its definition. In the *American Beauty database* (part of Ph.D. thesis defended by Sedlářová in 2009), which forms the basis for the present analysis, the places of so-called "nonverbal stir", marked as 'Kinesic stress', involve any gestures and facial expressions bearing symbolic or deictic meaning, and rhythmic movements such as blinks, head nods, slight body shifts, even those made for extralinguistic purposes, e.g. lifting things etc. Such gestures, facial expressions and other bodily movements can thus be connected with distinct levels of abstraction and vary in their size or volume. These different levels and volumes of the movements may be compared to the factors contributing to the prominence of stressed syllables, i.e. loudness, length of syllables, distinction of pitch, and distinction of vowel quality (Roach *English Phonetics* 93-94) (the analogy was suggested by Svoboda at a meeting on 28 May 2008). In summary, the factors contributing to what we call visual prominence involve stroke phases of gestures, movements distinct from the others in terms of their volume (size), shape, the force used at their production, their place of production, as well as the level of abstraction. Therefore, for example a slight synsemantic head nod and an autosemantic symbolic hand gesture can reflect a certain hierarchy in which the symbolic hand gesture wins.

In the *American Beauty database* (2009) the hierarchy of kinesic stresses was marked. The visually most distinctive places were marked in capitals, KS. If more places of visual prominence appeared within one distributional field, and it was not possible to establish a hierarchy among them by means of comparing their volumes or levels of abstraction, they were all labelled KS, no matter which linear position they took. Furthermore, kinesic stresses of secondary character, which were of minor distinction in relation to the places of visual prominence, were denoted with lower case kss.

In addition to places of the occurrence of kinesic stresses, sections of the film appeared which were accompanied by nodding, shaking the head, or a hold phase of the gesture during particular words. These sections were marked at their beginnings as *KSBS*, or *ksbs* and at the ends as *KSES*, or *kses*.

Table 1 illustrates the hierarchy of visual prominence within one of the distributional fields of communicative dynamism in *American Beauty* (1999). It shows the way the actor playing the role of Lester Burnham accompanies his statement with nonverbal elements. The actor

starts raising his head at the moment when he pronounces the theme proper and transition proper "I'm". Further, the head is held high from the words "an ordinary guy" onwards, emphasizing and drawing attention to the rheme proper of the sentence. It could be stated that the change in head position expresses enhanced self-confidence, thus placing the movement among conventional gestures. Moreover, the latter part of the rheme proper is highlighted with a gesture expressing modality, head shakes.

Table 1: Visual prominence illustrated in one of the distributional fields of CD.

Text	<i>"I'm just an ordinary guy with nothing to lose."</i>									
Character speaking	Lester									
Distributional field of CD	14.19.									
Communicative units	theme proper, transition proper	rheme proper								
The head movements	raising the head			the head raised			shaking the head			
The eyes	watching the addressee									
Visual prominence				KS			KS			

In the example in Table 2, the character Brad resents Lester's blackmailing suggestion that Lester should get benefits after giving up his job. At the moment when Brad pronounces the theme proper and transition proper "That's", he raises his brows to emphasize what he is saying. At the same time Brad starts shaking his head, signalling the modality of the sentence, i.e. negation. Raising the brows in the first part of the utterance seems to convey conventional meaning, supporting expressing resentment.

Table 2: Visual prominence illustrated in one of the distributional fields of CD.

Text	<i>"That's not going to happen."</i>			
Character speaking	Brad			
Distributional field of CD	14.13.			
Communicative units	theme proper, transition proper	transition proper, rheme proper		
The movements of the brows	the brows raised			
The head movements	starts shaking the head		shaking the head	
Visual prominence	KS, KSBS		KSES	

Table 3 presents an example which conveys greater complexity in the hierarchy of visually prominent places. Besides blinking, which occurs throughout the utterance, expressing nervousness or emphasizing individual words pronounced, the actor nods his head on the theme proper and transition proper and on the rheme proper. Further, he moves his head a little during part of the diatheme "bloodless, money-grubbing" while he moves it a bit more on the head of the phrase and the diatheme "freak", which could be considered a free diatheme. As the utterance seems to be an act of defence against Lester's wife's accusation that Lester corrupts their daughter, and an attack on her at the same time, the actor expresses

intense emotions employing his head and facial expressions. Most of the movements in this utterance are rhythmic. Therefore the respective words seem to be underlined by means of head nods, head movements and blinks. The hierarchy among these nonverbal elements is then established by their volume.

Table 3: Visual prominence illustrated in one of the distributional fields of CD.

Text	“ <i>You’re one to talk, you bloodless money-grubbing freak.</i> ”					
Character speaking	Lester					
Distributional field of CD	13.6.					
Communicative units	theme proper, transition proper	rheme proper	diatheme			
The eyes and gaze	the eyes blink	the eyes blink		the eyes blink	the eyes blink	the eyes are staring at the addressee
The head	the head nods	the head nods		the head moves a little	the head moves a little	the head moves a bit more
Visual prominence	KS		KS	kss	kss	KS

The examples above were meant to show three out of a number of patterns of the hierarchies of visual prominence. The first example showed the conventional head movements, expressing modality and conventionalized meaning. The second example again presented conventionalized brow and head movements. The third example showed rhythmic head movements and eye expressions which accompanied an emotional surge in the actor playing the role of the resenting husband.

Some of the patterns of visual prominence in the *American Beauty database* are more frequent than the others. Statistics in tables 4 and 5 show the distribution of places of visual prominence over communicative units in distributional fields of communicative dynamism of basic level. The places of visual prominence seem to be the most frequent with rhemes, then transitions, themes and finally diathemes.

Table 4: Distribution of places of visual prominence over communicative units in DF of CD of basic level.

Communicative units	Th	DTh	TrPr	Tr	Rh	Total
Occurrences	147	111	33	214	681	1186
Percentage	12.4%	9.4%	2.8%	18.0%	57.4%	100%

Table 5: Distribution of secondary kinesic stresses over communicative units in DF of CD of basic level.

Communicative units	Th	DTh	TrPr	Tr	Rh	Total
Occurrences	24	19	7	27	59	136
Percentage	17.6%	14.0%	5.1%	19.9%	43.4%	100%

Conclusion

It is necessary to take into account the total number of occurrences of particular communicative units if we want to consider the capacity of communicative units to co-occur with the places of visual prominence. The capacity is the highest with rhemes (Table 6 and Figure 1) and it decreases with the other communicative units reflecting decreasing relative degrees of communicative dynamism. Secondary kinesic stresses, however, do not reflect the increasing degrees of communicative dynamism (see Table 7 and Figure 2), which leads to the conclusion that their character, patterns of use and their function requires further investigation. The fact that rhemes are the most frequently signalled by visual prominence is not, however, as clear-cut as it might appear to be either. From the perspective of linearity, rhemes usually occur at the ends of phrases. Thus their frequent co-occurrence with the places of visual prominence may simply be the reflection of turn-taking and other, cognitive patterns in the nonverbal aspect.

Table 6: Capacity of communicative units to co-occur with the places of visual prominence in DF of CD of basic level.

Communicative units	Th	DTh	TrPr	Tr	Rh
Capacity	0.5	0.8	0.7	0.8	1.5

Table 7: Capacity of communicative units to co-occur with secondary kinesic stresses in DF of CD of basic level.

Communicative units	Th	DTh	TrPr	Tr	Rh
Capacity	0.7	1.2	1.3	0.9	1.2

Figure 1: Capacity of communicative units to co-occur with the places of visual prominence in DF of CD of basic level.

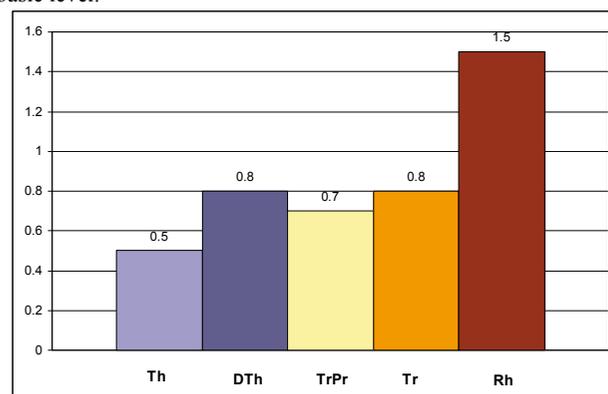
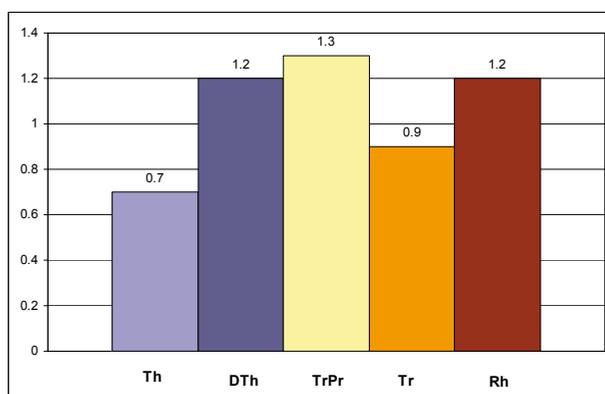


Figure 2: Capacity of communicative units to co-occur with secondary kinesic stresses in DF of CD of basic level.



Abbreviations:

CD – communicative dynamism
 DF – distributional field
 DTh – diatheme
 KS – kinesic stress
 kss – secondary kinesic stress
 Rh – rheme
 RhPr –rheme proper
 Th – theme
 ThPr – theme proper
 Tr – transition
 TrPr – transition proper

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