

## Original Contributions - Originalbeiträge

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## Moving Words

### 1. Topic and Aim

With ‘moving words’, a title that plays on ambiguity and is permitted by proper word order in English, I wish to suggest a double direction in reading: ‘words’ both as the complementary object of its preceding predicate (we move words) and as the head of a noun phrase, that is, as a whole, determined subject (words that move). In other words, in this article, I focus on the role of word order (*Wortstellung*, see Tenchini 1993, 1997, 2012) in shaping and moving the addressee’s thoughts and passions (mental and affective states).

### 2. Focus on Prague Traditions

In doing so, I highlight the focus on morpho-syntax from a semantic-pragmatic point of view, first in the philosophy of language developed within the Brentanian school, especially by **Anton Marty** (1847–1914), and subsequently in Prague Linguistics, throughout the twentieth century till now, beginning with the founder of the Prague Linguistic Circle, **Vilém Mathesius** (1882–1945), up until the *Communicative Dynamism Model* of the Brno School, which was developed by **Jan Firbas** (1921–2000) and is still flourishing from both a theoretical and an applied perspective. See Kozubíková Šandová, 2014. Some recent critical observations by **Eva Hajičová**, on the basis of a great deal of experience in computational linguistics (developed at the Prague Institute of Formal and Applied Linguistics, UFAL: <http://ufal.mff.cuni.cz/>) and strong theoretical foundations, are added in the conclusion.

In addition, a number of comments and present-day possible, crucial applications will be inserted.

Why should we focus on this research trend? Because the *time* of its origin (the turning point between the nineteenth and the twentieth centuries) and the *location/area* of its establishment and development (Brentano’s Middle European school and the town of Prague) are especially linked to the spatiotemporal coordinates of the *Gestalt* theory and movement. Furthermore, the relationship between parts and wholes in motion with their psychic counterparts is particularly relevant here.

### 3. A Semantic and Syntactic Approach: Asymmetric and Inferential Exchanges

The main topic will be the more or less free processes of a sentence and textual linearization on the speaker's side, and the corresponding nonsymmetrical processes of global comprehension on the addressee's side. The principle *Das Ganze unterscheidet sich von der Summe seiner Teile* will then orient our inquiry.

Earlier in 1893, Marty [Symbolae Pragenses 1920, p. 93] pointed out that syncategorematic expressions (the “crumbs” of our talks, we might say) easily and continuously *direct* [*hinlenken*] the combined *attention* of speaker *and* listener. He was dealing with the relationship between grammar and logic (to be understood as a theory of knowledge: see Raynaud 2016, p. 166), regarding those linguistic expressions that do not have an autonomous meaning (syncategorematic expressions, in fact). So, the *dialogical* setting and the cognitive approach to verbal *exchange* had already been in place.

In 1908, Marty published his *magnum opus*, the *Untersuchungen zur Grundlegung der allgemeinen Grammatik und Sprachphilosophie* [*Research on the Foundation of Universal Grammar and Philosophy of Language*].

Here, we focus primarily on his writings on the notion of *constructive inner linguistic form*. I quote:

“Mostly, when we speak to each other, we do it through a plurality [*eine Mehrheit*] of words, which only thanks to their syntactical cooperation [*syntaktisches Zusammenwirken*] convey their meaning.” [...]

“No one language expresses everything explicitly, what we want to communicate. Each of them resembles more or less a *shorthand* or a *sketch*. There is always a certain difference, often even a great one, on the one hand between what the speaker *thinks* or *feels* and the understanding listener has to *think* and to *feel*, and on the other hand, between what comes explicitly to expression. The discrepancy<sup>1</sup> is in different languages and ways of expression gradually different.” (Marty, 1908, pp. 144–145).

<sup>1</sup> Cf. Konvička, 2017. Roman Jakobson—according to Konvička—expresses similar thoughts with his equivalence in difference (1959, p.235) when discussing the problems of translation and untranslatability. Others, such as Guchman (1966, p.269) or Mel'čuk (1960 [1974, p.100]), have, however, also expressed comparable thoughts around the same time. Before them—but still after Marty—Franz Boas (1938, p.132) advocated these ideas. Roman Jakobson explicitly mentions Boas as his inspiration on several occasions.

What Marty describes as the discrepancy among languages, however, is later reconsidered from the point of view of communication format by McLuhan (1964, pp.22–23), as the difference between hot and cold media. A hot medium, such as a lecture, requires the addressee to participate less, while a cold medium, such as a workshop, requires more participation by the audience.

Analogically, some linguists (Ross, 1982, Huang, 1984) suggested the categorization of languages along similar principles. Hot languages would be those that allow the hearer to infer a great quantity of information. Cold languages, on the other hand, would require the speaker to express more grammatical categories explicitly. I owe this survey to Martin Konvička, thanks to an e-mail exchange occasioned while writing this article.



Fig. 1 « Le circuit de la parole » (Saussure *Cours de linguistique générale*, 1916 ch. 3, § 2), an aporetic symmetry

In this way, Marty explains different styles (telegraphic vs. epistolary, poetic vs. didactic) and laborious expressions [*umständlichere Redeweisen*], which leave too little for the listener to guess.

**Guessing** is, therefore, in its technical meaning, one of the abilities to be concerned with, at this level, especially in language disorders or in testing writing or reading performance (f.i. through measuring **ocular fixations**, i.e., eye position and motion, while reading both on paper or using electronic support, with their different configuration designs). Something similar happens with **anaphora resolutions**, both on human/manual and automatic processing, that is, how resolving references to earlier or later items in the discourse. New methods<sup>2</sup> are required and encouraged!

Different—Marty says further—could be what is chosen to become explicit and what is left to be completed [*Ergänzung*].

Therefore, the effect of the differences of individual ways of speaking on the development of the comprehension and the construction of thoughts in the listener, undoubtedly “belongs to what we want here to call inner linguistic form and, to distinguish it from the figurative, *constructive* inner form.” (1908, p. 146); see also Raynaud, 1988.

Some examples?

*Amavi* vs. *J’ai aimé*

The meaning is the same, but there is no parallelism between thinking and speaking. The thought of the person *merges* with the action or *disappears* into it, whereas a separate personal pronoun is *incorporated* and *absorbed* by the expression for the action (1908, p. 146).

<sup>2</sup> In computational linguistics anaphora resolution, as well as coreference resolution, are specific tasks, taken over by dedicated programs. See Mirkov, 2005–2012 for anaphora resolution, and the competition among tools for coreference resolution here: <https://conll.cemantix.org/2011/task-description.html>

#### 4. Beyond Description, Explanation, and Principles

Explanation follows description. Marty explains this state of affairs, the lack of parallelism between thinking and speaking, the lack of correspondence between composition [*Zusammensetzung*] in what has to be expressed and a combination [*Kombination*] of signs, through the impossibility of conceiving languages as results of invention [*Erfindung*], while they result from an unplanned evolution. In the case of a one-to-one correspondence between the totality of the content to be designated and one simple sign, there would be a risk of a recourse to infinity and an unsustainable effort on human memory: anything new to be expressed would necessarily require that a new expression be coined, whereas, through the modes of combination, a finiteness of signs is raised to infinity (1908, p. 535). Furthermore, any successful result of the syntactic method generated a habit, that drove toward similar structures [*Gebilde*] not only in the same circumstances but also in similar ones (1908, p. 536), thus becoming a model for a number of analogous constructions.

Not just the choice of *word order*, rather the choice of *words*, of *expressions* can be undertaken (see Pavlov, 2009), especially by poets, because of their ability to suggest to their listeners or readers [*des empfänglichen Hörers*] a psychical life through images (often derived from the physical world), which are not equivalent to the intended meaning but are still able to drive feelings and comprehension in the desired direction (e.g., in expressions like the “nostalgic self-bowing of weeping willows” or “the audacious upwards stretching of the silver firs,” when talking of trees and rocks, streams and seas of psychic life, but even in financial news, when we call the rapeseed “steady” and the cotton “willing”). This result rests on the usual assumption, inasmuch as the habit connects not simply equal and equal, but analogous and analogous in representing something and *expecting* it and taking it to be true. Metaphors can, therefore, help the desirable empathy (*Einfühlung*) between author and reader, speaker and listener; they show how figurative inner linguistic forms provide an esthetic approach to meaning (1908, pp. 175–180).

To sum up and comment on these two theories of the inner *form* of language—the figurative and the constructive—we highlight the following inadequacy of a sort of **principle of compositionality** (Frigerio, 2019), according to which the meaning of a complex expression is exhaustively determined by the meanings of its constituent expressions and the rules used to combine them. As we have seen from the example, a challenging task of transposition, integration and conjectural organization has to be assured, in order to attain the intended meaning. Psychology, from an empirical point of view, especially involved in language processing, is brought to the fore in such a semantic (semasiological) and pragmatic (communicative) research.

What is happening now in the same years, still in Prague, but rather with regard to the new trends in linguistic research? In **Vilém Mathesius** (1882–1945), the next founder of the Prague Linguistic Circle (1926), we consider the theoretical development from the first contrastive studies on Czech and English word order and ellipsis up to the so-called Prague *Functional Sentence Perspective* (FSP). See also Daneš, 1974.

Mathesius began his research by comparing the formal syntactic devices of the English and Czech languages, thus showing the greater rhetoric moves that are easily accessible to Czech-speaking or writing fellows, who can rely on the richer morphological system granted by their native language and consequently assign different “emotive” functions to different word orders concerning the same basic (nonmarked) expression.

Between 1907 and 1910, Mathesius published five articles in Czech *On the History of English Word Order*. He was an Anglicist, had attended Marty’s lectures some years earlier (1904/05, in the German University of Prague) and may have assimilated Marty’s theory about syntax, conceived on both levels, as *Sprachen und Sprechweisen*.

Here, we will not follow the step-by-step development of Mathesius’ linguistic theory, with his main distinction between formal and functional syntax. We will, rather, quote a number of passages from his posthumous book, *A Functional Analysis of Present-Day English on a General Linguistic Basis*, published in Czech in 1961 and translated into English in 1975.

First, “encoding” is considered. In the context of the Warsaw conference of the Gestalt Theory Association, I have little choice but to quote Mathesius’ mention of perception, wholes, and mutual relations.

“The content of thought underlying encoding is diverse; it mostly reflects outward experiences e.g. the fact that someone is writing on the black-board. What we see is a *mixture of visual perceptions*. If all of it were taken as the raw material, it would be a *tremendous mixture*, incapable of being expressed *directly*; its expression only becomes possible on the basis of *selective analysis*. The mixture is broken up into several wholes which, however, do not contain all its elements. We select only such elements as they attract our attention and are capable of being denominated by language. This is the first stage of encoding; the content of thought is subjected to selective analysis which provides the elements capable of being denominated by language. [...] In different languages the elements capable of being determined differ, though in the Indo-European languages they often display much similarity.

However, the described procedure does not constitute the entire encoding process. After the elements capable of being denominated have been

selected they must be **brought into mutual relations** in the *act of sentence formation*, this *process* constituting an *utterance*. [...] Accordingly, the following discussion [Mathesius' teaching of present day English on a general linguistic basis] will be *divided* into two parts: (a) functional onomatology (the study of the naming units) and (b) functional syntax (the study of the means by which naming units *are brought into* mutual relations). Across both these parts runs morphology, which is concerned with the linguistic forms arranged into systems according to formal criteria" (Mathesius, 1975, pp. 15–16).

The neurocognitive addition carried out by Mathesius is also a point of interest. "Evidence for the existence of the two parts of the encoding process is found in different types of *aphasia*. [...] For a linguist, speech disorders are important in that their different types prove the existence of the different language centres corresponding to the described stage of encoding. [forming sentences without understanding words or *viceversa*, understanding words, without being able to make a sentence = agrammatism]" (Mathesius, 1975, p. 16).

Is not "*bringing* some entities *into* mutual relations" a verb of motion?

Furthermore, "The English Sentence as a Whole" is dealt with. "We shall now consider some points concerning the structure of the English sentence as a whole. The first feature to be pointed out might be called complex condensation. We use this term to describe the fact that English tends to express by non-sentence elements of the main clause such circumstances that are in Czech, as a rule, denoted by subordinate clauses. This results in making the sentence structure *more compact* or, in other words, in *sentence condensation*" (Mathesius, 1975, p. 146).

## 5. Mathesius' Four Principles

"What are the principles that govern the word order of a particular language, often in a conflicting manner? **The first principle** might be called grammatical. It means that the position of a particular sentence element is determined by its grammatical function, i.e. by its being the subject, predicate, object, adverbial etc" (Mathesius, 1975, p. 154).

Let us consider the sentence *John loves Mary* vs. *Jan má rád Marii*

"Owing to the simple morphological system of English, changes in word order are very often unfeasible since they would involve a change in the grammatical [or rather logical] function of the words concerned" (Mathesius, 1975, p. 155). In inflectional languages, in fact, the nominative case is sufficient to mark the subject, wherever it is placed, while in noninflectional languages the subject is identified thanks to its position, before the verb. In the first case, it is a matter of grammatical (morphological) analysis, in the second one of logical analysis.

“The **second principle** that determines the order of words in a sentence is the rhythm” (1975, p. 155), as shown in the following sentences:

*Das Wetter wird sich ändern, sagte der Vater.* Or *Das Wetter wird sich ändern, sagte er.*

vs.

*The weather will change, said father.* But *The weather will change, he said.*

*Er nahm den Hut ab* or *Er nahm ihn ab*

vs.

*He took off his hat.* but *He took it off.*

“The **third principle** that determines the order of words in a sentence is the principle of functional sentence perspective. [...] In essence, it can be described as follows: when observing different utterances, we find that they are more or less clearly composed of two parts. One part expresses what is given by the context or what naturally presents itself, in short what is being commented upon. [...] this part is called the theme of the utterance. The second part contains the new element of the utterance, i.e. what is being stated about something; this part is called the rheme of the utterance. The usual position of the theme of an utterance is the beginning of the sentence, whereas the rheme occupies a later position, i.e. we proceed from what is already known to what is being made known. We have called this order objective, since it pays regard to the hearer. The reversed order, in which the rheme of the utterance comes first and the theme follows, is subjective. In normal speech this order occurs only in emotionally coloured utterances in which the speaker pays no regard to the hearer, starting with what is most important for himself” (Mathesius, 1975, p. 156),

as is shown here:

*Doma mi pomáhá tatínek.*

*Zu Hause hilft mir der Vater*

*At home I get the help of Father* or *At home I am helped by Father.* [...]

The **fourth factor** that determines the order of words is the principle of emphasis, i.e. the principle of putting special stress on some sentence element” (Mathesius, 1975, p. 159). As in

*Right you are*

*Sorry I am*

*...and a thrilling story it is./and a thrilling story he tells.*

It is important to highlight a method frequently adopted by Mathesius to check the best ever possible wording of an utterance and to monitor the relationship



between the potentiality of language and the actuality of speech, according to one of his favorite and most precocious themes (Mathesius, 1911).

The method consists of working with the semantics of the verb being the predicate, which can always be substituted by another verb within the abstract system of a language, each with its own valency structure. If the verb includes or does not include, among its arguments, the agent of the action it expresses and the speaker needs to eliminate the agent, he fulfils this need through the systemic means of their language ( cf. Hoskovec, 2012; Mathesius, 1940; Mathesius, 1947).

*Il s'est tué en grim pant au Cervin:: il a succombé aux blessures causées par sa chute:: il a été victime d'une avalanche*

*He killed himself climbing the Matterhorn: he succumbed to the wounds caused by his fall:: he has been victim of an avalanche.*

Here, we may wonder whether beyond objective and subjective order, another, an intersubjective order, maybe envisaged: to surprise somebody, to astonish them, to threaten them, but not to shock them.

## 6. Firbas's Four Factors

According to the line of scholarship, which runs from Mathesius to Josef Vachek (1909–1996), and from Vachek to Jan Firbas, all of them being general linguists and anglicists, in 1992, a more systematic work is published by Cambridge University Press: *Functional Sentence Perspective in Written and Spoken Communication*. Jan Firbas, Brno University, is its author.

Its departure is a textual and an interlinguistic one: a comparison between the original concluding page of *Les misérables* by Victor Hugo and three translations: the English, the German and the Czech. Firbas distinguishes between a presentative *orientation* (a term which will substitute *perspective*) as the communicative function of the first sentence and another *orientation* for the remaining sentences and subclauses: “they ascribe a quality to a phenomenon, the *development of communication* being oriented towards this quality, or towards its specification if it is present as an amplifying *piece of information*.”

Information and communication become, therefore, the core concepts of this semantic-pragmatic theory. The emotive component seems to be relegated to the periphery.

Both actual linear and interpretative arrangements are considered. Sentences are seen as fields of relations. The carriers of communicative dynamism (CD) are hierarchically distributed and, according to the extent to which they contribute to the development of the communication, they are assigned degrees of CD within



the distributional field. The contextual factor receives special attention, as does the semantic factor, mainly conceived as the role played by the semantic content of the verb and its semantic relations on the one hand, and its successful competitors, which must be context-independent, on the other.

Thinking of our shared topic “motion”, we may mention two sets of dynamic functions: the Presentation Scale and the Quality Scale, which can be further combined.

“In relation to the information conveyed by the subject, the information conveyed by the verb, or rather by its notional component, participates in the development of the communication in one of two ways. [...] It performs either (i) the dynamic semantic function of Presentation (Pr), or (ii) that of expressing a quality (Q). In consequence, the subject either (i) performs the dynamic semantic function of expressing the phenomenon to be presented (Ph), or (ii) the dynamic semantic function of expressing the quality bearer (B). The discussion of the competitors of the verb has dealt with two other dynamic semantic functions: that of expressing a setting (Set) and that of expressing a specification (Sp).

The qualification ‘*dynamic*’ is necessitated by the fact that the semantic content concerned is not viewed as unrelated to *the flow of communication*, but as linked with definite contextual conditions and as actively participating in developing the perspective of the communication. [...] The two types of perspective involve two sets of dynamic functions:

Set(ting), Pr(resentation of Phenomenon), Ph(enomenon presented) [Presentation Scale]

Set(ting), B(earer of Quality), Q(uality), Sp(ecification) and F(urther) Sp(ecification) [Quality Scale]” (Firbas, 1992, pp. 66–67).

A good deal of Mathesius’s English examples of emotive word order shows the phenomenon that is referred to by CGEL [i.e., Quirk et al., see below] as ‘fronting’. It consists of moving into an initial position an item that is otherwise unusual there (Quirk et al., 1985, p. 1377). By returning to this phenomenon I wish to illustrate further the character of the relationship obtaining between the system of word order and that of FSP. [...]

- (1) Wilson his name is.  
An utter fool she made me feel.  
Really good meals they serve at that hotel.
- (2) That much the jury had thoroughly appreciated.  
Most of these problems a computer could take in its stride.  
This latter topic we have examined in chapter 3 and need not reconsider.  
To this list may be added ten further items of importance.

Whereas the sentences of the first group are perspective towards the information conveyed by their initial elements, the sentences of the second group are perspective towards the information conveyed by their final elements” (Firbas, 1992, pp. 125–126).

Eventually, Firbas examines spoken communication and includes intonation among the FSP factors that interplay at the level of spoken language. Through prosodic intensification, it raises the degrees of CD as they are determined by the interplay of non-prosodic factors” (Firbas, 1992, p. 226). Intonation, with its fall and rise of the voice, is evidently another relevant factor of *motion in language*, both from the intellectual and emotive viewpoints.

We cannot leave the present *status quaestionis* and its discussion without mentioning two conferences, which took place in Bohemia and Lorraine, in 2011 and 2012, respectively<sup>3</sup>.

## 7. Light and Shade

Although the entire reading of these proceedings is highly recommended, being among the results of a Czech project which developed throughout Europe<sup>4</sup>, I will limit myself to two conclusive points highlighted by Eva Hajičová (2012) in her paper *What we have learned from complex annotation of topic-focus articulation in a large Czech corpus*.

Having given the following motivation to her contribution—“Corpus annotation may bring an additional value to the corpus if the following two conditions are being met: (i) *the annotation scheme is based on a sound linguistic theory*, and (ii) the annotation scenario is carefully (i.e. systematically and consistently) designed.” The author observes, regarding Firbas’ model: “The so-called factors of linear arrangement, prosody, semantics and contexts as discussed by Firbas and his followers are not just four ‘factors’ of FSP, but they fundamentally differ in their nature: the first two (word order and prosody) belong to the means of expression of information structure and the other two (semantics and context) to its functional layers.”

Although these may seem like sophisticated distinctions, I think they do contribute to make clear the continuous interplay between linguistic devices and cognitive processing, constant functions and variable actualizations.

<sup>3</sup> Each conference resulted in a review that was published a year later: Radimský (2012); Achard-Bayle et Chabrolle-Cerretini (2013). See especially Tenchini (2012) and Raynaud (2013), resp. on word order and FSP, and on the notion of articulation, related to that of motion.

<sup>4</sup> *Théories et Concepts du Cercle linguistique de Prague* : <https://www.ff.jcu.cz/veda-a-vyzkum/konference-1/theories-et-concepts-du-cercle-linguistique-de-prague-au-seuil-du-xxiesiecle>

What remains as a *fil rouge* throughout the inquiries belonging to philosophy of language, English studies, general and computational linguistics is the acknowledgment of the dynamism, both in construction and in fruition, of locutionary elements, their mutual relations, their illocutionary forces and perlocutionary effects. A dialogical, intersubjective viewpoint has to regard not only the speaker's communicative freedom, in and beyond his following the rules, but also his co-operation toward the addressee's reception.

## 8. A Crucial Move: Corpus Annotation

One element is, however, still missing: the textual evidence of moving appeals, self-disclosures, stories, and reports. The annotation of a corpus should be the best way to produce such evidence (Hajičová, Mírovský, & Brankatschk, 2011).

In conclusion, both words and their mutual dispositions, within the sentences and sentence by sentence, design the stream of our thoughts and feelings while listening or reading. We cannot do without single items as well as their interrelation. It is a hint to appreciate Bühler's fourth axiom in his *Sprachtheorie*. "The structures of language are *words* and *sentences*. One or the other term alone must not be elevated to the rank of a category, rather both belong together and can only be defined correlatively" (1934/2011, p. 81). So textual/thematic progression, a *progressive motion* toward the speech or the conversation focus comes to the forefront.

## Summary

We move words and words move us. To describe and explain how and why this happens, the present article focuses on Prague traditions, both on the philosophical and linguistic elements. The semantic and syntactic approach is summarized, as developed by Anton Marty, belonging to the Brentano school, and by Vilém Mathesius, founder of the Prague Linguistic Circle, as well as by Jan Firbas, who developed the functional sentence perspective (FSP) into the theory of communicative dynamism (CD). The four Principles of FSP and the four factors of CD are highlighted, together with the related criticism that stems from a systematic work of corpus annotation, a true test procedure for any theory concerned with word order, the interplay between lexicon and morphology, rhythm, intonation and their effects on the addressee's psychic and emotive processes and life.

**Keywords:** Parts and wholes, intersubjectivity, language, word order, *motio affectuum*.

# Wir bewegen Wörter und Wörter bewegen uns

## Zusammenfassung

Wir bewegen Wörter und Wörter bewegen uns. Um zu beschreiben und zu erklären, wie und warum das geschieht, stellt dieser Beitrag Prager Traditionen in den Mittelpunkt, sowohl vom philosophischen als auch vom sprachwissenschaftlichen Standpunkt aus. Der semantische und syntaktische Ansatz, entwickelt von Anton Marty, einem Schüler Brentanos, und von Vilém Mathesius, dem Begründer des Prager Linguistischen Kreises, wird dargestellt, im Anschluss auch der von Jan Firbas, der die Funktionale-Satz-Perspektive (FSP) zur Theorie des Communicative Dynamism (CD) weiter entwickelte. Die vier Prinzipien der FSP und die vier Faktoren des CD werden herausgearbeitet und mit der diesbezüglichen, aus einer systematischen Arbeit eines annotierten Korpus abgeleiteten Kritik verbunden: eine wirkliche Testprozedur für jede Theorie über Wortstellung, Zusammenspiel zwischen Lexikon und Morphologie, Rhythmus, Intonation und ihren Auswirkungen auf die psychischen und emotiven Prozesse und auf das Leben des Empfängers..

**Schlüsselwörter:** Teile und Ganze; Intersubjektivität; Sprache; Wortstellung; *motio affectuum*.

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