Abstract: The aim of the paper is twofold. Firstly, to briefly re-examine the status of contrastive analysis and its future role among other linguistic branches, starting from Whorf’s definition of the discipline, which asserts that contrastive linguistics “plots the outstanding differences among tongues – in grammar, logic, and general analysis of experience” (Whorf 1967 (1941): 240). Following his vision that it is will be of great importance “for the future technology of thought” (Whorf 1967 (1941): 240), we shall briefly discuss the main theoretical and methodological issues, proposing certain innovations in that respect. And secondly, to report on the main results of a corpus-based and pedagogically oriented contrastive analytical project envisaged initially to complement and supplement the existing reference, descriptive and contrastive grammars of English and Serbo-Croat languages, and consequently other pedagogical materials. The analysis utilised the cognitive linguistic theoretical approach and focused on the ways in which the conceptualisation of reflexivity and middleness, defined in terms of their prototypical features, was grammatically encoded in the observed languages.

The analysis itself had a very strong pedagogical bias and tried to recommend ways of direct implementation of the obtained results into foreign language teaching and learning.

Key words: contrastive analysis, contrastive linguistics, English, Serbo-Croat, reflexivity, middleness, prototypical features, grammatical encoding, foreign language teaching and learning.

1. Contrastive analysis and its raison d’être
Contrastive analysis is traditionally defined as the systematic study of a pair of languages ascertaining in which aspects they are alike and in which they differ (cf. Filipović 1975: 13). It includes the two main processes – description and comparison (cf. James 1980: 63; also Chesterman 1998: 52), set up in four basic steps: a) assembling the data, b) formulating the description, c) supplementing the data as required, and d) formulating the contrasts (James, 1980/Chesterman, 1998: 52). Although the term contrastive analysis is widely accepted and used, the problem of terminological diversity was very present in the relevant linguistic literature, where it was referred to as ‘parallel description’ (Fries 1945: 9), ‘differential studies’ (Lee 1974: 141), ‘differential description’ (Mackey 1965: 80), ‘dialinguistic analysis’ (Nemser 1971: 15), ‘analytical confrontation’ (Nemser 1971: 15), ‘analytical comparison’ (Mathesius 1964: 60), ‘interlingual comparison’ (Filipović 1975: 6), as well as ‘comparative descriptive linguistics’ (Halliday-McIntosh-Strevants 1964: 112, 113), or ‘descriptive comparison’ (Catford 1968: 159). The very term ‘contrastive linguistics’, however, was coined by Benjamin Lee Whorf in his article Languages and logic published in 1941, where he drew the distinction between comparative and contrastive linguistics, maintaining that the latter was “of even greater importance for the future technology of thought” (1967: 240), and defining it as a discipline which “plots the
outstanding differences among tongues – in grammar, logic, and general analysis of experience” (1967: 240).

Fifty years after Robert Lado’s (1957) seminal book *Linguistics across Cultures* was released and in turn triggered the establishment of contrastive analysis as a separate linguistic branch, the discipline is thriving, its scope and depth is ever increasing and the variety of approaches and theoretical ramifications deployed quite impressive. Modern linguistic approaches as well as modern technology have opened new horizons for contrastive analysis and the new direction into which it strives can now be recognized quite clearly. More precisely, cognitive linguistics, pragmatics, corpus linguistics, etc. have all offered precious new theoretical frameworks and methodology that have been incorporated into recent contrastive studies, thus laying the foundation of contrastive analysis of the 21st century (cf. Kurteš 2003; 2005; 2006a).

Most recent trends in the discipline show a few important characteristics that are worth mentioning in this context. Firstly, modern contrastive studies include a growing number of languages other than English, in many cases including some regional lingua francas, languages of demographically more prominent migrant communities, or of special historic and cultural importance, etc., which some of the more recent projects persuasively show: e.g. French-Finnish (Välikangas-Helkkula 1995), French-French-based Creoles (Arends 2003); Macedonian-Bulgarian (Topolinjska 1996), Ukrainian-Russian (Bubleinyyk 1996), Arabic-Persian (´Abd al-Mun’im 2004), German-Arabic (Ahmad 1996), German-Russian (Paul-Maslova 1999), German-Bulgarian (Petkov-Wiegang 2000), Estonian-Finnish (Grinthal-Kasig 1998), Turkish-German (Johanson-Rehbein 1999), Yiddish-Polish (Sitatz 2000), Italian-Polish (Latos 2006), Mandarin Chinese-Korean (Lehonkoski 2000), Brazilian Portuguese-Spanish (Simoes 1992), etc. Secondly, there is a growing number of trilingual contrastive grammars, some on them including some less widely spoken or endangered languages (e.g. Islander-Caribbean Standard English-Spanish, cf. Bartens 2003; Spanish-Catalan-French, cf. Camprubi 1999; Greek-Polish-Swedish, cf. Lindvall 1998), etc. Finally, there is a growing number of studies contrasting language phenomena other than grammar itself, such as registers (Biber 1995), aspects of rhetoric and composition (Connor 1996), elements of culture (Kurteš 1991, 1999; Kniffka 1995; Baryaktaroglu-Sifianou (eds) 2001, etc), text and discourse (Yarmohammadi 1995), lexicon (Altenberg-Granger 2002), conceptual metaphors (Barcelona 2001), grammatical prototypes (Zhang 1995; Manney 2000; Kurteš 2005, 2007; etc), to name but a few.

1.1 Comparability criterion and tertium comparationis
Comparability criterion is one of the key concepts and has to be established prior to any analysis. Effectively, the analyst is supposed to answer the question what can be compared in the observed languages. Traditionally, there are three main ways of dealing with the problem of comparability. Originally, it used to be established either at the semantic or formal/grammatical level. The third way of establishing comparability criterion assumes defining the relations of equivalence, similarity and difference in the observed languages.

The notion of equivalence was originally taken from theory of translation and it involved the concept of translation equivalence (cf. Ivir 1969). More specifically, equivalence in contrastive studies assumes that there is “a shared common denominator in terms of which the comparison can be carried out” (Chesterman 2005: 162), the so-called *tertium comparationis*, which enables the comparison to be performed. It is, in other words, a background of sameness, and the *sine qua non* for any justifiable, systematic study of contrasts (Chesterman 2005: 163). To determine the *tertium*
comparationis essentially means to set the comparability criterion, to establish that shared ground. Classical contrastive analysis made use of various kinds of tertium comparationis (cf. James 1980) that were either formally or semantically based. In the former case, similarity is established by means of ‘formal correspondence’, a relation established at the formal level, while in the latter case, similarity judgements are essentially dependent on translation (which can include use of corpora, native speaker’s intuition, bilingual translation competence, etc.) (cf. Chesterman 1998: 58). Contrastivists today focus on “overlap between different ways speakers of different languages tend to speak” (Chesterman 1998: 50), committing themselves “neither to an identical universal base nor to insurmountable difference” (Chesterman 1998: 50) of the languages in contrast. Although every analysis performed in such a way is bound to be partially biased by the analyst’s own culture-specific cognitive perception of reality, it is certainly true that human beings can function mentally at the metaphorical level which enables them to perceive reality from a different perspective (Chesterman 1998: 52).

1.2 Methodological considerations

Traditional contrastive methodology incorporated two basic processes – description and comparison. The description of the observed segment of the languages in question must be based on the same model in order to enable the analysis to be performed. Chesterman (1998: 52ff) proposes a new methodology, slightly more elaborate, essentially derived from the traditional one. He draws mainly from Popper’s philosophy of science (e.g. Popper 1972), claiming that objective knowledge is gained through an endless process of problem solving. The process consists of suggesting, testing and refuting initial hypotheses, which are revised and tested again, etc. Following this line of argument, Chesterman proposes the methodological framework comprising the following main stages:

1) Collecting primary data against which hypotheses are to be tested. Primary data involve all instances of language use, utterances that speakers of the languages in question produce;
2) Establishing comparability criterion based on a perceived similarity of any kind;
3) Defining the nature of similarity and formulating the initial hypothesis;
4) Hypothesis testing: determining the conditions under which the initial hypothesis can be accepted or rejected. This process will normally include selection of a theoretical framework, selection of primary and additional data and use of corpora, appeal to one’s own intuition or other bilingual informants, even the results of error analysis of non-native usage;
5) Formulating the revised hypothesis;
6) Testing of the revised hypothesis, and so on.

Those contrastive formulations can be successfully tested by finding them in a corpus or checking the behaviour of speakers. The real task for the contrastivist is to specify the conditions under which the formulations are valid, which is essentially in traditional contrastive studies known as the contrastive rule. Depending on the comparability criterion, these conditions can be syntactic, semantic, pragmatic, stylistic, contextual, etc. (Chesterman 1998: 60; cf. also Kurteš 2006a).

2. Taking it further: contrasting grammatical prototypes

In what follows we shall briefly illustrate an analytical model devised to explore the potentialities of the more recently established contrastive methodologies discussed
above. More specifically, we shall take a closer look at grammatical prototypes and the possibility to analyse them contrastively by reporting on the main results of a corpus-based and pedagogically oriented contrastive analytical project that utilised the cognitive linguistic theoretical approach examining the ways of grammatical encoding of the notions of middleness and reflexivity, taking their prototypical representation as the platform of reference, or the tertium comparationis.

In order to delimit the boundaries between the two concepts and identify their prototypical features, an important semantic property of the middle was taken into consideration. Termed by Kemmer (1994: 181; 1993: 73) as the relative elaboration of events, this in essence “is the parameter along which the reflexive and the middle can be situated as semantic categories intermediate in transitivity between one-participant and two-participant events, and which in addition differentiates reflexive and middle from one another” (Kemmer 1994: 181). In particular, the two participant events represent prototypical transitivity (cf. Givon 1984) with two clearly distinguishable participants – the animate Agent and the inanimate Patient, the relation between them involving “some kind of transmission of force or energy from the animate participant to the second affected participant” (Kemmer 1994: 191). It is also important to notice that the participants are completely separate entities (Kemmer 1993: 73). At the other end of the continuum, however, there is the one-participant verbal event, or prototypical intransitivity. Reflexive and middle semantic domains occupy the central position, the former approaching the left side of the continuum, the latter coming closer to the right side (cf. Fig.1).

<table>
<thead>
<tr>
<th>Two-participant Event</th>
<th>Reflexive</th>
<th>Middle</th>
<th>One-participant Event</th>
</tr>
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<tbody>
<tr>
<td>hit</td>
<td>go</td>
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Fig. 1 Degree of distinguishability of participants

Kemmer further argues that the crucial property of middle semantics is not the question of the subject-affectedness, but the low degree of participant distinguishability, approaching prototypical intransitivity, where this conceptual differentiation simply does not exist. The prototypical reflexive idea, however, still maintains the conceptual separation between Initiator and Endpoint, although they are co-referential, “filled by the same entity” (Kemmer 1994: 207). The middle domain, on the other hand, “refers to a single holistic entity without conceptually distinguished aspects” (Kemmer 1994: 207; cf. Fig. 2-3).

<table>
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<tr>
<th>A</th>
<th>B</th>
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<tbody>
<tr>
<td><img src="image1.png" alt="Diagram" /></td>
<td><img src="image2.png" alt="Diagram" /></td>
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A/B
Fig. 2 Prototypical reflexivity
Fig. 3 Prototypical middleness
(cf. Kemmer 1994: 207)

Another crucial defining feature, derived from Manney (2000), maintains that middleness is notionally characterized either by a non-initiative emotional response or a spontaneous change of state, whereas prototypical reflexivity, subsuming co-reference between the two nominal arguments, “invokes a scene in which an individual acts on
itself, intentionally or otherwise” (Manney 2000: 214). It is also possible to observe a steady decrease in agentivity and volition too (cf. Fig. 4-5).

**Fig. 4 Defining features of prototypical reflexivity**

**Fig. 5 Defining features of prototypical middleness**

(cf. Kurteš, 2007)

Prototypical reflexivity, as defined above, is expressed in the following pair of sentences of the contrasted languages:

(1) I cut myself.

\[ \text{Posekao} \quad \text{sam} \quad \text{se}. \]

\[ \text{cut-PART: ACT SING MASC} \quad \text{be-PRES:1SG} \quad \text{se-REFL} \]

Prototypical middleness, on the other hand, presented graphically in Fig. 5 and described as notionally clustering around two main ideas – a noninitiative emotional response and a spontaneous change of state – can be exemplified in the following pair of sentences:

(2) Grandpa tires easily.

\[ \text{Deda} \quad \text{se} \quad \text{lako zamara}. \]

\[ \text{grandpa-NOM} \quad \text{se-MIDDLE} \quad \text{easily tire-PRES:3SG} \]

The above framework was used as an overall platform of reference, *tertium comparationis*, in a corpus based contrastive analysis that examined the ways of grammatical encoding of the idea of reflectivity and middleness in Serbo-Croat and English. The performed analysis was monodirectional and corpus-based, starting from Serbo-Croat (confining itself only to the so-called ‘se-verbs’, verbs followed by the morpheme *se*, a multifunctional grammatical device) and observing their translation equivalents in English. Following the results of the analyses done so far (cf. Ivić 1962; Djordjević 1989; 2000; Kurteš 2003; 2005; 2006b), ten different classes of Serbo-Croat *se*-forms were identified according to their form and the function they perform (cf. figures 6 and 7). The existing classification was tested against the proposed model of analysis and the results showed that there was a clearly discernible semantic core...
denoting prototypical reflexivity grammatically encoded by those se-instances known as ‘pure reflexive verbs’ (prototypical reflexivity, $se_1$, cf. (1)), while the se-forms denoting reciprocity (prototypical reciprocity, $(se_3$, cf. (3)) were notionally clustering around it:

(3)  
Volimo $se_3$
love-PRES:1PL se-RECIP
We love each other.

Two basic notions of prototypical middlen ess, on the other hand, were found to be grammatically encoded by means of the instances exemplified by the se-forms known as ‘quasi-reflexive verbs’ (middleness as a noninitiative emotional response, $se_6$, cf. (2); or a spontaneous change of state, $se_6$, cf. (4)), where the morpheme $se$ simply stands as a verbal affix, exuding no detectable meaning on its own:

(4)  
Drvo $se_6$ suši
tree-NOM se-MIDDLE wither-PRES:3SG
The tree is withering away.

Other se-manifestations embraced by the middle semantics involved some notional passives (‘reflexive passive’, $se_8$, cf. (5)), as well as some impersonal ($se_9$, cf. (6)) and modal structures ($se_{10}$, cf. (7)):

(5)  
Knjiga $se_8$ čita $lako$.
book-NOM se-PASS read-PRES:3SG easily
The book reads easily.

(6)  
Govori $se_9$ o tome.
speak-PRES:3SG se-IMPERS about it-LOC
People talk about that.

(7)  
Spava mi $se_{10}$
sleep-PRES:3SG I-DAT se-MODAL
I feel sleepy.

2.1 Reflexivity and middlen ess contrasted: results of the analysis
The results of the analysis have shown that in Serbo-Croat there is a clearly discernible semantic core denoting prototypical reflexivity grammatically encoded by the pure reflexive (and reciprocal) verbs (e.g. (1), (3), cf. fig. 6). Two basic notions of
prototypical middleness, on the other hand, are grammatically encoded by means of the
quasi-reflexive verbs (e.g. (2), (4), cf. fig. 7). Other instances, denoting, passive,
impersonal and modal semantics (e.g. (5), (6), (7)), were found to be within the scope of
middleness as defined above. Their English translation equivalents, however, have
shown a number of grammatical manifestations capable of conveying the meaning of
the observed notions. Clearly they include structures with the reflexive and reciprocal
pronouns as that semantic core denoting prototypical reflexivity. Verbal intransitivity,
however, has proved to be the grammatical category comfortably accommodating the
majority of instances expressing prototypical middleness. More precisely, mutative and
inchoative semantics seemed to be occupying the central position in this context,
rendering into, and being rendered from, the majority of the Serbo-Croat se-instances
denoting prototypical middleneless. Other relevant categories include passive, some
impersonal structures, and, finally, that NP V PP type of English ‘middle’ structures,
that stand further away from prototypical Serbo-Croat middleness as defined here (cf.
Kurteš 2005; 2006b).

3. Where next?
The paper discussed the research potentialities of contrastive analysis in light of its
openness and adaptability to modern theoretical frameworks and interdisciplinary
approaches, and briefly presented the results of a contrastive analytical project that
introduced certain innovative features in the field’s methodological and theoretical
apparatus.

In concluding remarks, we would like to call for further and more systematic
investigation into grammatical prototypes using the proposed analytical model, which
would hopefully yield more profound insights into the ways meaning is conveyed
generally, and how it is grammatically encoded more specifically. They would
furthermore confirm the conceptual universality that lies in the very foundation of
human cognition. Finally, but equally importantly, the model can find its place in
language learning materials and foreign language classrooms, both directly and
indirectly, inviting the learner to reflect upon their own experience and understanding of
the world and to rediscover the motivated structures and principles underlying a foreign
language. This can potentially help them to develop metadiscoursal and metacognitive
strategies that will in turn ensure more successful and more autonomous foreign
language learning and learning in general (Kurteš, 2007).

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