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The Effects of Applying Cognitive Grammar to the Teaching of English Articles

Introduction

Cognitive linguistics with its meaningfully- and pragmatically-based explanations is a very attractive theory of language. For many linguists, it presents the most psychologically convincing and comprehensive account of all language phenomena. Because of that, it appears to be also ideally suited for pedagogical purposes. An increasing number of studies on the applicability of the cognitive linguistics teaching (for an overview, see Puetz 2004) focuses around such aspects of language as phrasal verbs (Rudzka-Ostyn 2003; Kurtyka 2001; Dirven 2001), idioms (Lennon 1998) and metaphors (Deignan, Gabryś, and Solska 1997). Ronald Langacker (2001: 3) regards "the effectiveness of pedagogical application as an important empirical test for linguistic theories." He also expects that "cognitive grammar will not fare badly in this regard."

This article presents the theoretical implications of applied cognitive linguistics, and indicates how those tenets can be used in teaching English articles to Polish learners; it also gives an account of two studies whose aim was to examine the effects of introducing the "cognitive" pedagogical grammar of articles into the teaching practice.

Pedagogical Implications of Cognitive Linguistics

The Priority of Meaning

One of the most fundamental principles in all cognitive linguistic analyses is that meaning takes priority over form. This predilection for processing meaning rather than form has clear implications for a very special treatment of syntactical phenomena in the process of teaching. Especially less salient forms, or the forms that seem redundant ought to be taken into consideration. English articles are an excellent example of such forms.

Grammatical Structures Are Meaningful

Since the meaningfulness of grammar is one of the fundamental assumptions made by cognitive linguists, the centrality of meaning in speaking about syntax is also evident in cognitive pedagogical materials. It follows that pedagogical rules should be organised and explained in terms of their syntactic behaviour, as it is done in most pedagogical grammars; instead, clarifying the meaning and function of grammatical patterns ought to constitute the main target.[1]

Apprehending Meaning Is Related to the Creation of Appropriate Concepts

The third implication arising from the cognitive approach to language and language learning is related to the claim that language reflects the world of concepts in our mind (Langacker 1987: 5) and communicating meanings can be equated with communicating mental images. This assumption has important consequences for teaching a foreign language, as it implies that explaining the meaning of a particular structure is tantamount to conveying the mental concept which is embodied by this construction. In the case of L1/L2 contrasts this task is particularly diffi-

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[1]This claim is advocated by most of the contemporary approaches to pedagogical grammar (Widdowson 1988; Little 1992; Tomlin 1994).

cult, since before learners acquire the meaning and the form of a linguistic unit, they must create new conceptualisations in their mind (Dirven 1986).

The English article system taught to Polish learners is an example of such a situation: it seems that from the cognitive perspective teaching various uses of "the" and "a" will be ineffective as long as learners will not grasp the underlying conceptual meaning of articles. It follows that a pedagogical grammar should first and foremost aim at elucidating the meaning, i.e. the conceptual image conveyed by a particular structure.

Creating Conceptualisations Is Rooted in Perception and Experience

Mental concepts are created from perception and experience. This means that in order to help learners apprehend the meaning (i.e. create an appropriate concept) the teacher can rely on visual, aural and kinaesthetic stimuli, which will be conducive to forming appropriate cognitive representations. Describing the meaning verbally, using drawings, diagrams, pictures as well as gestures can facilitate conceptualisation and, consequently, learning (Stevick 1986; Bransford 1979).

Metaphor Is a Powerful Tool Used in Teaching

The importance attached to metaphor in cognitive science has bearing upon its role in the cognitive pedagogical materials (Low 1988). There are two ways in which metaphor can be useful in language teaching. Firstly, the concepts of metaphor and metonymy can be introduced into the explicit presentation of meanings. Of course, the effective use of such metalinguistic concepts depends on the stage of cognitive development and the educational background of the learner, but it seems that introducing and applying those notions does not seem to be problematic, at least with teenagers and adults in Poland: already at the lower secondary school pupils are made familiar with those terms. The pervasiveness of metaphor and metonymy in language will ensure that on many occasions teachers will find it convenient to refer to these notions. Furthermore, once learners grasp the idea behind the mechanisms of metaphor and metonymy, the comprehension and acquisition of a vast array of lexical and morphosyntactical units will be greatly facilitated.

The second way in which metaphor can be applied into language teaching consists in its employment in the description and explanation of meaning (Radden 1994). Since metaphor and metonymy are two of the most frequent mechanisms used on the way from perception to conceptualisation, I suggest that they can be used in a pedagogical grammar as a means to aid visualisation, which will subsequently lead to a better and faster apprehension of meaning.

Context (Linguistic, Situational, Social, Cultural) Is Extremely Important in Language Use

Recognising the role of context in effective language production and comprehension affects also the content of pedagogical description of language. Therefore, apart from the explanation of the conceptual imagery realised by various structures, pedagogical grammars and other teaching materials should also emphasise the fact that the choice of a particular linguistic unit is often dependent on the situational, social and cultural context.

The Cognitive Analysis of the Articles

Langacker's account of the meaning of articles is anchored in the fundamental difference between nouns and nominals and the cognitive process of grounding. In Langacker's framework, the semantic content of a noun specifies the type, i.e. it refers to the thing which is a representative member of a particular class but is not related to any particular member of that class. By contrast, a nominal phrase designates one or more instances of a particular type. An instance differs from the type in that it is thought of as having a particular location in the domain of instantiation, i.e. in the domain in which it has its primary manifestation (Langacker 1991: 57). An instance does not have to be definite or specific; in fact, many nominals designate instances that are indefinite and sometimes unspecific (e.g. *no job, any book*).

The general function of a nominal is to select a particular instance(s) and make it/them a momentary focus of attention (Langacker 1991: 53). To serve this function, the nominal has to cue the hearer towards a particular instance. The noun, together with its modifiers, specifies the type; the whole nominal expression must therefore additionally give some in-

dication about the anchoring of the designated entity in some place in the domain of instantiation (albeit, as has been mentioned, the exact place may remain unspecified). This supplementary information is most often conveyed by grounding expressions (determiners), which indicate how the profiled entity relates to the speech event and its participants, i.e. to the ground. In particular, grounding refers to whether a particular instance is or is not uniquely apparent to both the speaker and the hearer (Langacker 1991: 53). This function is most frequently fulfilled by the definite and the indefinite article.[2] In other words, the definite and the indefinite article are both grounding expressions, i.e. they indicate that the referent can be anchored in some domain of instantiation, but they differ in that that the first designates an instance which cannot be uniquely identified with a particular entity, whereas the latter is used with reference to things that can be immediately associated with a unique and definite entity in the so-called current discourse space.

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This abstract theoretical account explains the fundamental function of articles and provides a framework for further linguistic analyses of articles. From the point of view of applied cognitive linguistics, the concepts of type, instance and grounding are essential in making learners understand the underlying function and meaning of the article in English. It seems that the problem lies in a clear and comprehensible translation of the theory into the language of the learner.

A Pedagogical Grammar of English Articles

Ideas and Examples

The pedagogical grammar I designed opens with a question about the reason for which we use or need articles at all. Since the grammar is directed to teenage and adult learners, I suggested a way of answering the question which refers to the Platonic distinction between IDEAS and EXAMPLES. The former correspond Langacker's nouns or types, while the

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[2]Also possessive pronouns, demonstratives, any(body, -one), some(-body, -one) and some quantifiers (some, most, all, each, every) perform this function.
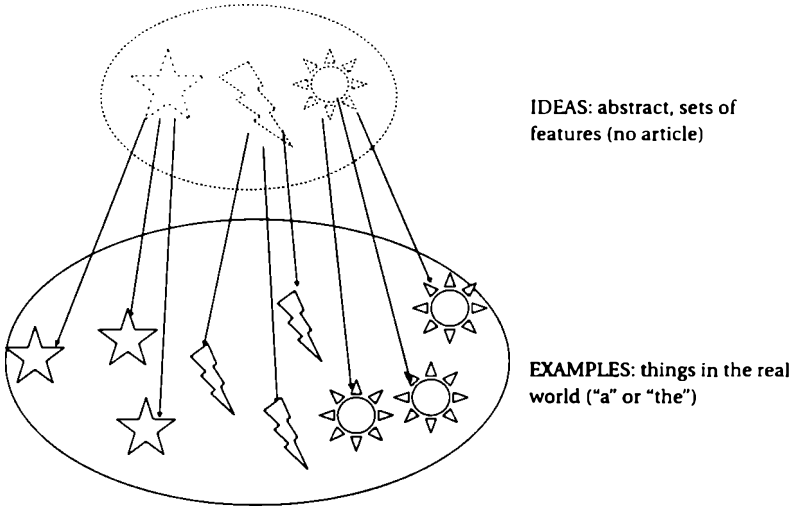
Figure 1. Ideas and Examples.

latter are supposed to relate to noun phrases or instances. The explanation, aided by a schematic picture, which is supposed to aid conceptualisation, tells learners that we can imagine that there is a world of IDEAS, where there is for example one idea of *star*, one of *flower* and one of *thunder*, and the world of EXAMPLES, in which we can have many different *stars*, *flowers* or *thunders*. The "rule" says that we can say that when we speak about IDEAS we do not have to put any article before the noun. But when we want to indicate that we speak about some actual EXAMPLE, then we use an article before the noun (see Figure 1).

The concept of IDEA is also helpful in the explanation of certain phrases with occur with the so-called zero article. The learners are acquainted with the fact that since it is more difficult for us to think about abstract ideas than about concrete examples, we most often avoid speaking about IDEAS. There are, however, phrases in which we talk about IDEAS rather than the actual examples, for instance:

1) When we use nouns describing places to refer to the main ideas behind them, that is to their primary purpose:

| | HOME | one's own place |
| to be in/at | PRISON | be imprisoned |

to go to	CHURCH	with the meaning	observe religious practices
	HOSPITAL		be ill or operated on
	BED		sleep
	SCHOOL		receive education

2) With nouns describing meals when they stand for the idea of "eating." It is also pointed out that when those nouns are not used with reference to the general idea "eating," but describe actual events or parties or when they refer to some particular meals, then they are treated as EXAMPLES, as in:

BUT:

have	BREAKFAST
at	LUNCH
after	TEA
stay for	DINNER
	SUPPER

- *We had* **a** gorgeous breakfast *last Sunday.*
- *I was invited to* **a** dinner, *but I stayed at home.*
- *We enjoyed* **the** dinner.
- *Mother prepared* (**the**) supper.

3) The same principle applies to nouns describing vehicles when we refer to the idea of a particular means of transport; again, it stated that when the nouns are treated as vehicles as such, they no longer stand for IDEAS

BUT:

		CAR
go		TRAIN
come	by	PLANE
travel		SHIP
		BUS
		BOAT

- *to sit on* **the** *bicycle*
- *to be on* **the** *bus*
- *to sleep in* **the** *car*
- *to sit in* **the** *boat*
- *to take* **the**/**a** *train*
- *to be on* **the** *plane*

4) Also in many idiomatic expressions, where the meaning is not literal and IDEAS behind the expressions are important, e.g.:

take ship	*make/take place*	*be on deck/board*
take/lose heart	*talk shop*	*go to sea*
keep house	*sent word*	*sit at table (=eat)*
keep/lose face	*be with child (pregnant)*	*take account*
lose sight	*keep/lose track*	*take care*

(a)
I want to buy a flower – ANY
of the flowers the speaker
AND the hearer have in mind
can be an example.

(b)
The flower *must have cost a
fortune* – both the speaker
AND the hearer think about
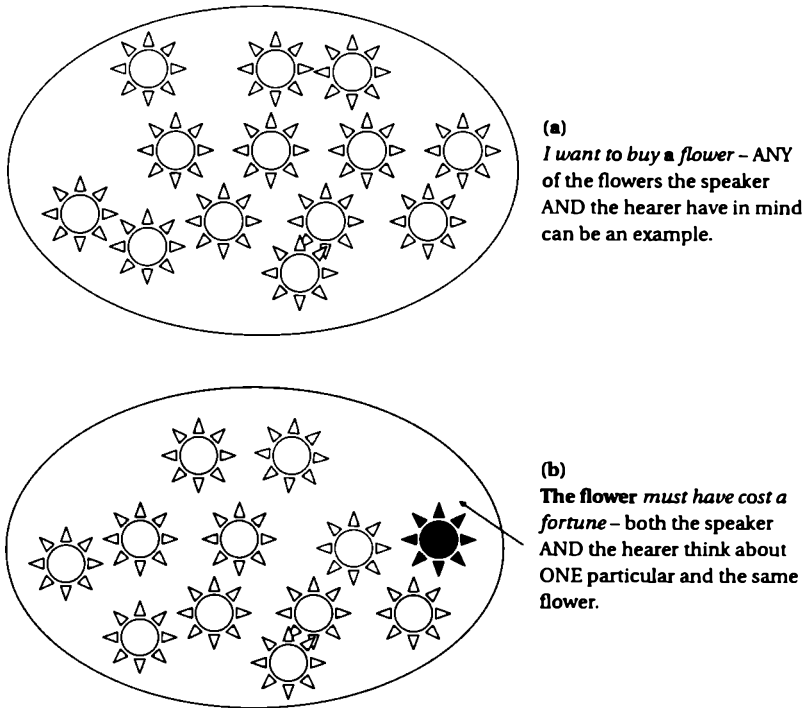ONE particular and the same
flower.

Figure 2. The indefinite (a) and the definite (b) article.

The Definite and the Indefinite Article

The difference between the use of "the" and "a/an" is elucidated in terms of the shared SPEAKER'S and HEARER'S knowledge. The students learn that typically speakers use **the** before a noun when they are sure that the hearer will be able to or should think about ONE definite thing or person. By contrast, by using **a**, the speaker wants to mention something or someone, but it is not important that the hearer should think about one specific thing/person.

The explanation of the function of "the" and "a" is followed by some exemplificatory sentences and two schematic drawings (Figure 2), which illustrate two sentences:

I want to buy a flower
The flower must have cost a fortune!

The Use of the Definite Article

As regards the use of "the," in the first place the learners are informed that the appropriate use of the definite article in speaking or writing is to a great extent determined by making correct assumptions about what the hearer/reader has in mind or should have in mind. Before using "the," learners are advised to think about the answer to the following question: Will the hearer know exactly which thing or person I am talking about?

To help learners predict what the hearer should have in mind the learners are told to search for "files" (Figure 3) which can tell whether the hearer is able to identify the definite example:

1) The first file is the shared general knowledge of the world: "the" is used if there is only one identifiable example in the world, for instance:

   The earth is the third planet from *the sun*.

2) The second file is the shared knowledge of cultural, social and situational context. We use "the" if there is only one specific example in the context of speaking, as in:

   Mum is in *the kitchen* and dad is in *the garage*.

3) The third source of definiteness may come from the shared knowledge of all referents already mentioned in a given speech act

   I saw *an elephant. The elephant* was waiting at the traffic lights.

4) Finally, a noun phrase can be definite because of the very meaning of the noun phrase, which is such that it uniquely defines the referent

   The President of the US arrived yesterday.

It is also made clear that the inherent meaning of "the" is sometimes used by speakers who know that the hearer does not know about a given thing, but he/she wants to stress that the hearer SHOULD know about it.
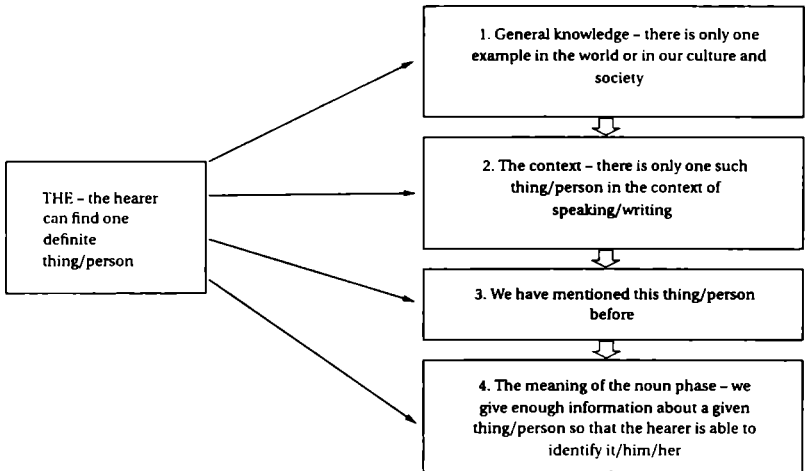
Figure 3. Sources of definiteness.

In other words, the speaker may use the information conveyed by the definite article to hint that there is something (e.g. in the context) that the hearer should be able to identify, e.g. *Mind **the step***.

Count and Mass Nouns

In the next three sections the pedagogical grammar deals with the generic "the," predicative constructions and gives some hints on the use of articles with proper names. In the final section, the issue of countability is analysed in detail. Again, schematic drawings (Figure 4) and examples illustrate the cognitive concept of bounding.

Students' attention is drawn to the fact that nouns are not count or mass in themselves, but rather they are typically count or typically mass, because people typically see things in a particular way. Occasionally, the perspective may be changed, which is reflected in the language: some mass nouns can occasionally take articles and typically count nouns can sometimes occur with the zero article (Figure 5), e.g.:

I don't like coffee.
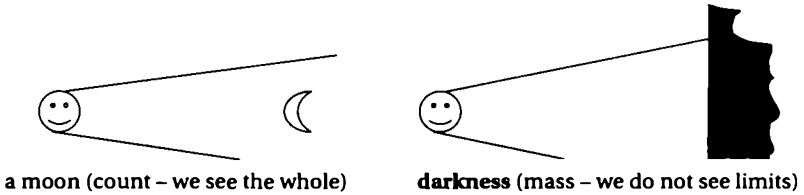A coffee, please. (one cup)

a moon (count – we see the whole)   **darkness** (mass – we do not see limits)

Figure 4. Count vs. mass nouns.

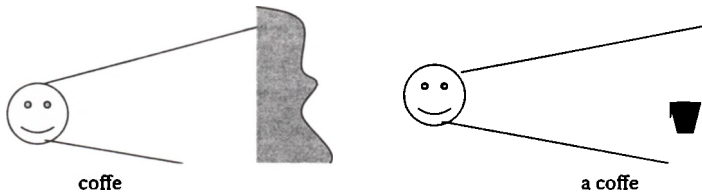coffe   a coffe

Figure 5. A mass noun made countable.

The explanations and schematic visual illustrations, followed by a great deal examples have been applied into actual teaching. To validate the hypothesis that the cognitive presentation will help learners use English articles more accurately I conducted two studies in which the pedagogical grammar was applied in teaching.

Cognitive Grammar in Teaching: Study I

Subjects

The subjects were 36 secondary-school learners, aged 16–8; the sessions took place during English classes at school; there were two groups at different levels of proficiency (elementary and intermediate).

In a questionnaire about the subjects' past experience with learning and using articles, both groups reported that they had problems with articles, which means that they have already noticed the form and the gap between TG and IL as far as articles are concerned. The students in the Elementary Group had never received any instruction on articles. Some

Group	Pre-test (%)	Immediate post-test (%)	Delayed post-test (%)
ELEMENTARY	53.2	77.5	68.3
INTERMEDIATE	50.7	69.3	60.4

Table 1. Mean test scores (%) for groups in Study I.

of the students said that they used other reference sources such as grammar books or information from the lesson to solve their problems, but for the majority of the learners the explanations were not clear and comprehensible.

The Treatment

The treatment during five sessions in each of the groups consisted of both, explicit rule explanation (inductive and deductive instruction) and practice (pair work and group work). A careful analysis of all variables influencing the efficiency of teaching articles to Polish learners has indicated that the best method and techniques for teaching articles would comprise explicit instruction, accuracy-focused tasks, implicit learning activities and input enhancement; the tasks used were designed to trigger automatisation and restructuring by means of activating the cognitive processes of noticing, noticing the gap, hypothesis testing, analysis, synthesis, categorisation and entrenchment. The most frequent techniques consisted in input- and output processing, filling the blanks, metatalk and classification.

Because of the limited time-span of the treatment, there was little time for immersing the instruction in meaning-focused lessons. Therefore, most tasks and texts were based on materials form the coursebook which were already known to the students. The content of the rules presented to students was based on the cognitive interpretation of articles depicted in section 3.

Results (I)

Table 1 presents mean scores (in %) for both groups on the test before, immediately after and five weeks after the treatment.

Assuming that the pre-tests are comparable to the post-tests, it seems that the treatment in both groups brought positive effects. More importantly, it appears that the benefits of instruction were still durable (lasted for at least five weeks)

Cognitive Pedagogical Grammar in Use: Study II

The aim of the second study was to examine whether the "cognitive" metalinguistic knowledge on its own, i.e. with no controlled practice will help learners use articles more accurately.

Subjects and the Method

32 adult students of English at an advanced level took part in the study. There were no significant differences in their proficiency in English, as judged on the basis of a lexico-grammatical test written before the study. The subjects were randomly assigned to three groups: experimental **ACL**, which was presented with the materials based on cognitive linguistics analyses (thus abbreviated ACL, for Applied Cognitive Linguistics); experimental **TRI**, who received treatment in the form of rules being traditionally quoted in most pedagogical grammars (**Traditional Instruction**); and a control group **NT**, who did not undergo any treatment (**No Treatment**).

After the pre-test, the students were given materials for self-study. The materials included:

- in the ACL group: a description of the meaning and the use of articles based on the cognitive analysis, together with examples and schematic pictures;

- in the TRI group: a list of rules for the use of "a," "the" and the zero article, together with examples.

The same instances of usage and the same examples were quoted in the materials for both, the ACL and the TRI group. The NT group did not receive any materials.

	Pre-test			Post-test		
	ACL	TRI	NT	ACL	TRI	NT
N	12	10	10	12	10	10
X	42.53	38.7	39.6	44.61	39	39.6
S^2	24.26	10	16.48	33.75	30.22	8.26

Table 2. Mean scores of the groups in Study II.

The post-test, identical to the pre-test, was distributed after an interval of one week.

Results (II)

Table 2 presents the number of subjects, mean scores and variance in all groups on the pre-test and the post-test.

The t-test was done to compare the scores on pre-test to the scores on the post-test. The differences proved to be insignificant in all three groups. This implies that reading about the meaning and the use of articles did not enhance students' accuracy on the post-test.

Conclusions

Bearing in mind the fact that the two studies do not fulfil the criteria for reliable proper research designs and that they cannot be cross-compared, one can only draw some tentative conclusions on the basis of the results.

Nevertheless, it is tempting to state that the disparate results obtained from studies I and II may indicate that perhaps it is not so much the content of the "cognitive" pedagogical grammar presented to students as the way articles had been taught that was responsible for the substantial improvements made by the subjects in Study I. In this study, metalinguistic knowledge about the use of articles was presented to students alongside a great deal of practice, awareness-raising, input-analysis and input-processing tasks as well as the teacher's feedback. All those factors were missing in Study II. Thus, one can conclude that the understanding of the meaning of the structure is either insufficient or

even unnecessary in making progress. Neither of the two studies allows for making any definite statements about what is actually essential in the acquisition of English articles, but it seems that apart from providing students with the metalinguistic knowledge (if it is necessary at all), it is also crucial to teach how to apply this knowledge into practice. This probably can be best done by means of a combination of input-processing and conscious grammar analysis activities.

Confronting the above observations with the theoretical pedagogical implications of cognitive linguists presented in the beginning, one may suggest that the explanation of the underlying meaning of a grammatical structure is ineffective as long as the concept is understood only in terms of explicit metalinguistic and metacognitive knowledge. After both studies presented above, the subjects testified that the rules were clear and understandable. Still, only in Study I was this alleged better understanding related to greater accuracy. It follows that a pedagogical grammar based on cognitive grammar cannot aid language acquisition on its own: rule explanation, illustrative examples and visualisation by means of diagrams and figures elucidate the meaning, but this may not be conducive to progress in linguistic proficiency.

Finally, I would like to emphasise once again that my attempts to investigate the role of "cognitive" grammar teaching are pilot studies rather than proper research designs. Although the results may not be quite reliable, I think that my conclusions may serve as guidelines for further studies in this area.

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