APPLIED COGNITIVE LINGUISTICS: THE STATE OF THE ART AND NEW DIRECTIONS

KYOKO MASUDA

*Georgia Institute of Technology**

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1. Introduction

The late 1990s and early 2000s have witnessed growing interest in applied cognitive linguistics, as represented by the series of papers given at conferences on this topic.¹ Several major publications on this topic also are another indication for this noticeable rise of interest in applied cognitive linguistics.² The book under review here, *Cognitive Linguistics, Second Language Acquisition, and Foreign Language*

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¹ For instance, at the 6th International Cognitive Linguistics Conference (ICLC) in 1999 in Stockholm, there were three featured plenary talks and workshops on language acquisition. At the 7th ICLC in 2001 in Santa Barbara, several papers on this topic were presented, including some of the papers in *CSF*. At the 8th ICLC in 2003 in Logroño, there was a theme session entitled 'Cognitive Approaches to the Bilingual Lexicon.' Recently, at the 9th ICLC in 2005 in Seoul, there was a theme session on 'Cognitive Models of Interlanguage' organized by Carlee Arnett. Moreover, the topic of GURT 2003 at Georgetown University was 'Cognitive and Discourse Perspectives on Language and Language Learning.'

² See "Applied Cognitive Linguistics vol. 1: Theory and Language Acquisition," "Applied Cognitive Linguistics vol. 2: Language Pedagogy." These two books were initiated by the theme of 28th LAUD Symposium in Landau (Germany) in 2000.

Teaching (thereafter *CSF*) is representative of a cutting-edge field. This book reads not only as an introduction to applied cognitive linguistics but also as ‘food for thought’ for all language teachers, as it contains a wide range of papers from empirical-based studies which test theories in Cognitive Linguistics to pedagogical papers which underscore the practical issues of classroom instruction.

CSF consists of twelve different articles starting with an introductory section by the editors of *CSF*, Achard and Niemeier. This section offers a concise explanation of basic background knowledge such as *cognitive domain*, *semantic network model*, *profile* vs. *base*, *extension* vs. *elaboration* (Langacker (1987)) and the *usage-based model* (Langacker (2000), Barlow and Kemmer (2000)) among other notions.³ The following eleven articles, which shed light on different aspects of the applicability of cognitive linguistics, can be subdivided into three major groups: (a) empirically-based acquisition studies, (b) classroom instruction centered around cognitive linguistics principles, and (c) teaching specific lexical items by using insights from cognitive linguistics. In what follows, I summarize the main points of each paper. Then, I present my viewpoint on Cognitive Linguistics and second language learning and pedagogy as well as make suggestions for new directions in applied cognitive linguistics.

2.1. Empirical-based Acquisition Studies

The first three papers, by Cadierno, Waara, and Lowie & Verspoor, fall into the first group mentioned above of empirically grounded acquisition studies which examine the learners’ gradual processes for tuning in to specific details of the target language. First, in “Expressing Motion Events in a Second Language: a Cognitive Typological Perspective,” Cadierno employs Talmy’s (1985) typology as well as Slobin’s (1996) ‘thinking for speaking hypothesis’ and examines how adult language learners whose the first language (L1) is characterized as a satellite-frame language (Danish) express motion events in a verb-

³ Section 4. Cognitive Grammar (pp. 173–180) in Achard’s paper is also a good introduction for those who are not familiar with the central notions of Cognitive Grammar.

frame language (Spanish).⁴ The question of how human beings express spatial relations including motion events cross-linguistically has been intensively explored within the field of L1 acquisition research (Berman and Slobin (1994), Choi and Bowerman (1991), Bowerman (1994, 2005)), while the second language (L2) acquisition research on this theme has lagged behind (Becker and Carroll (1997), Inagaki (2001)). According to Slobin's 'thinking for speaking hypothesis,' there is a special kind of thinking that is intimately tied to language, e.g. the thinking that is carried out on-line in the process of speaking.⁵ That is, language that we speak directs our attention to particular ways of filtering our experiences of the world. Inspired by Slobin's work, Cadierno tries to test the hypothesis that learning a second language involves learning another way of thinking for speaking. More specifically, when L2 learners learn to express a motion event, they are learning how the semantic components of a motion event are mapped onto L2 surface forms.

Examining a written narrative of Danish-speaking intermediate and advanced learners of Spanish (DL) (in both Danish and Spanish) as well as native speakers of Spanish (NS) by means of the 'frog story,' the author found that the results partially support the hypothesis. The supportive results are; (a) DLs exhibited a 'satellization' of the Spanish locative construction (i.e. the use of redundant and anomalous path particles), while NS did not; (b) DLs tended to add more ground adjuncts to the motion verb than NS. These results can be interpreted as the influence of L1 lexical patterns, because they indicate relatively higher degrees of complexity and elaboration of the semantic component of path, which DLs have been trained to do in their L1. However, DLs did not transfer all of the characteristic typological patterns of motion

⁴ Talmy (1985) claims that there are six cognitive components that play a role in the conceptual structure of a motion event: Motion, Figure, Ground, Path, Manner, and Cause. He argues that there are two major typological patterns in which the universal components of motion events are expressed by different means in different languages: (a) satellite-frame languages where the main verb conflates Motion + Manner/Cause, and Path is expressed by means of a satellite and (b) verb-frame languages where the main verb conflates Motion + Path, and Manner and Cause are expressed separately by means of an adverbial or other constituent.

⁵ In more recent work, Slobin (2003) argues that 'thinking for speaking' also can be applied for other modes such as writing, listening, and translation.

events in the L1 to the L2; for example, DLs did not produce event conflation in Spanish, a construction which is easily allowable in Danish, but not in Spanish. The author conjectures that these mixed results of transfer could be due to the learners' psychotypology or a developmental factor.⁶ Yet, the author made a problematic assumption that undermines the methodological issue of using written data. She generalized about the thinking process in spoken language from written data. Although there is a debate as to whether speaking and writing consistently produce different types of languages (Biber (1988)), no one doubts that the acts of speaking and writing themselves involve fundamentally different processes. One of the differences between speaking and writing is the tempo related to the degree of conscious experience. The pace of writing allows for modification and revision, while the fast pace of speech does not allow such editing. Although this study might have had stronger claims if spoken data had been collected and examined, it clearly serves as a good model of adopting Talmy's and Slobin's work to second language acquisition research.

In the second paper, Waara analyzes various argument structures related to one of the frequently used verbs of English, 'get.' In this paper, she offers both qualitative and quantitative analyses of the learners' interlanguage, which she calls *learner constructions* under the usage-based approach. Under this approach, the primary issues are the speaker's perspective, language use and context. Accordingly, this approach makes it possible to give a complete account of the L2 acquisition process which is not only limited to syntax but also covers semantic and pragmatic domains. In other words, viewing learners' speech in light of the surrounding context makes it possible to give a complete picture of the intentions of the speaker, which explains why learners produce 'slightly off' utterances, but they do not suffer communicative break-down.

For the analysis of 'get,' the author, by adopting Goldberg's (1995) construction grammar, claims that L2 speakers also rely on constructions to carry meaning.⁷ In the corpora (consisting of four speaking

⁶ The learners' psychotypology refers to the perceived distance between the characteristic construction of the two languages (Kellerman (1986)).

⁷ The basic idea of Goldberg's construction grammar is that basic sentences of English are instances of constructions that consist of a form-meaning pair that is independent of particular verbs and that these 'constructions' themselves carry meaning, independent of the words in the sentence (Goldberg (1995: 1)).

tests) of 14–15 years old Norwegian learners of English (NNS) and an equivalent group of native English speakers (NS), ‘get’ frequently appeared like other basic verbs ‘have’ and ‘be.’ Although NNS successfully communicated in the speaking test, a close examination of the data reveals that NNS seem to lack the precise knowledge of allowable argument structures in a given situation. As such, NNS rely on the application of a constructional sense, which results in the emergence of *conceptual blends*, *transfer*, and *overgeneralizations*. The following examples (1)–(3) from the NNS corpus illustrate each case. (For more examples see pp. 69–72)

(1) Can I get a dance with you?

(2) She sees a man get to the car.

(3) She gets to know that she must be home. (Waara (2004: 69))

A conceptual blend contains some aspects of two different types of input, yet it has its own structure. As can be seen in (1), two otherwise conventional uses, ‘Can I get —?’ (an expression to obtain or offer something to someone) and ‘May I have this dance?’ (an expression to obtain a dance with someone) are the sources for the learner construction. Example 2 is an overgeneralization, because ‘a man get to the car’ is used in an unconventional way to express ‘X moves to or into Y.’ It is because when ‘get’ is used in an intransitive motion construction, it has restricted conventional usage. Example 3 is L1 transfer combined with an overgeneralization in the L2, since in Norwegian, there is an expression ‘å få vite noe’ meaning ‘to get to know something.’

In the quantitative analysis, since ‘get’ occurs in a variety of constructions, the author classified 15 different constructional meanings. While NS and NNS exhibited strong similarities with respect to the high frequency senses of ‘Obtain’ and ‘Move,’ the overall distributional comparison between NS and NNS shows different patterns. That is, the causative-related construction occurred far less often than the non-causative construction in the NNS data, whereas this tendency was not observed in the NS data.⁸ Given that both NS and NNS dealt with the

⁸ Cause-Obtain sense of ‘get’ is shown in ‘He got me some stamps.’ The Cause-Move sense of ‘get’ is seen in ‘She got me into the show.’ Non-causative senses such as Obtain are observed in ‘I got it at the store’ or the Move-sense in ‘I get on the bus.’

same speaking tasks, it is reasonable to suggest that NNS and NS employ different constructions to express the same events. I believe that future studies in this line of research could benefit from examining data from learners at different ages as well as various language proficiency levels in order to investigate the progression of learning a particular construction.

Third, Lowie and Verspoor's paper "Input versus Transfer?—The Role of Frequency and Similarity in the Acquisition of L2 Prepositions" is different from the previous two papers in that it examines the L1 transfer effect by utilizing a psycholinguistic model of a bilingual mental lexicon: the Interactive Activation Model (Lowie (1998)). The assumption behind this model is that "all individual lexical entries are stored identically, but that major differences between the entries can be expected based on their frequency, expressed by their relative level of activation." (Lowie (1998: 80)). Accordingly, unlike (conventional) compositional models (cf. Jiang (2000)), this model accounts nicely for the fact that cross-linguistic similarities in languages such as English and Dutch facilitate the acquisition of L2 lexical items. This paper argues that two main factors, *input frequency* and *cross-linguistic similarities*, play a major role in L2 lexical acquisition.

To prove the main idea, the authors designed an experiment in which Dutch learners of English at four different proficiency levels answered a cloze test of English prepositions. Since *frequency* and *similarity* are variables at issue in this study, the test materials were prepared based upon frequencies in CELEX (Cobuild Corpus) as well as using similarities in orthography and meaning.⁹

Overall the results support their hypothesis. First, frequency had some influence on the acquisition of English prepositions at the beginning level, but not at the higher level. Second, cross-linguistic similarities (phonological/orthographic resemblance e.g. English 'by' and Dutch 'bij') mediated by conceptual representation played a role in the acquisition of prepositions at the beginning and intermediate levels, but not at the higher level of proficiency. In sum, as the model predicts, up to the intermediate level of acquisition, the factors in question play a cru-

⁹ The frequency list based upon CELEX should be checked with other major corpora since there is some possibility that different corpora might exhibit different frequencies of prepositions.

cial role in the acquisition of English prepositions.¹⁰

This study gives us a clear demonstration of how input frequency (an important factor for Cognitive Linguistics) and similarities interact at different proficiency levels. I hope that further cross-linguistic psycholinguistic studies in L2 lexical acquisition will confirm the results and yield pedagogical implications for teaching vocabulary.

2.2. Classroom Instruction Centered Around Cognitive Linguistics Principles

The next four papers by Niemeier, Grundy, Goddard, and Achard demonstrate the applicability of Cognitive Linguistic approaches to classroom instruction and offer new understanding of what is at issue in the classroom. First, in "Linguistic and Cultural Relativity—Reconsidered for the Foreign Language Classroom," Niemeier, from the German perspective, argues for Whorf's idea of Linguistic Relativity (Gumperz and Levinson (1996)), i.e. that language affects our way of thinking is very much present in today's foreign language teaching methodologies such as *raising language awareness*, *intercultural competence*, *autonomous learning*, *action-oriented approach*, *focus-on-form*, and *discourse-based approach*.¹¹ Her reason why Whorf's insight is related to these new approaches is that culture is treated as an inherent part of language and these approaches integrate learning and culture. The author claims that it is important to cultivate intercultural competence and suggests that the students' learning of intercultural competence is measurable by a portfolio assessment over a longer period of time. Among cognitive-linguistic concepts, the author specifically

¹⁰ An additional advantage of this model, according to the author, is that it is possible to explain different developmental stages of semantics, phonology, orthography and syntax, as the different units of information are associated with each domain. That is, syntax is not compositionally organized. This idea is compatible with the basic tenets of CG (Langacker (1987)).

¹¹ Among these new approaches, 'focus-on-form' has been the most influential in the field of SLA. The basic idea of 'focus-on-form' is to join processing of forms, meaning and use in one cognitive event (Doughty (2001)). Examples of activities of 'focus-on-form' in classroom instruction are: input flooding, task-essential language, input enhancement, negotiation recast, output enhancement, dictogloss, and consciousness-raising tasks (cf. Doughty and Williams (1998)). See Muranoi (2000) on the application of 'focus-on-form' to English articles by Japanese learners of English as a Foreign Language (EFL).

focuses on the usefulness of the concepts of *categorization* and *prototypicality* as well as *metaphor* and *metonymy* for foreign language teaching. The first two concepts, which are extremely culture-dependent, are useful to teach vocabulary among other things, while the last two notions help raise the learner's awareness of structuring principles within the language and the cultural differences within this structuring. Throughout the paper, the author provides examples from ESL in Germany to support her argument.

Second, in "The Figure/Ground Gestalt and Language Teaching Methodology," Grundy brings in the discussion of Figure/Ground, which was originally applied to visual perception for second language instruction, because language structure, just like as visual objects, depends on a background which shows their salience. His main argument is that the successful second language learning never does happen with a discrete-item-syllabus. Rather it happens with the syllabus that fully acknowledges the role of Figure/Ground gestalt in language at multiple levels from lexical items to discourse patterns. After offering a summary of Figure/Ground accounts in linguistics (Talmy (1978), Wallace (1982)), the author emphasizes that 'meta-pragmatic grounding' is a central notion for language teachers and material developers, since it draws attention to how we process the language in pragmatically-defined contexts.¹² In short, a pragmatically-grounded text is intrinsically more learnable than a de-contextualized text which is often found in course books. Also, by taking *iconicity* and *indexicality* as examples, the author attempts to show that the understanding of the whole mechanism of the internal properties of language is vital for language instructors and material developers who tend to see only figure, what is to be learned, despite the fact that the Figure is hard to see without the Ground. His paper contains concrete examples of text analysis, discourse deictics, and temporal grounding to support his main idea.

Next, in "Cultural Script: a New Medium for Ethnopragmatic Instruction," Goddard discusses the applicability of 'natural semantic

¹² Note that Wallence's definition of Figure/Ground is the most relevant to pedagogy, since Wallence's idea is motivated by the explanation of discourse phenomena: "a speaker has the means at each point in a discourse to foreground some element of propositional meaning in relation to some other element" (Wallace (1982: 124)).

meta-language (NSM)' from Anna Wierzbicka and her colleagues to the teaching ethnopragmatics in the language classroom.¹³ The key idea of NSM is that at the core of every language there is a small set of simple basic meanings (semantic primes) which are not able to be further explicated without circularity. The meta-language of semantic primes is the tool for stating a hypothesis about cultural norms, which Goddard calls 'cultural scripts.' He argues that the cultural script approach has advantages over the conventional approach for teaching pragmatics and culture. For instance, under the conventional approach, labels such as 'indirectness,' 'politeness,' and 'respect' are often used to clarify speech acts (e.g. apology, compliment, and request) in one language. Because they are relatively vague, these culture specific labels simply tell the learners 'what' the L2 cultural values are, rather than 'how' and 'why.' On the contrary, cultural scripts, which explicate links between discourse practices and socio-cultural values, help the L2 learners come to realize 'how' and 'why' the L2 cultural values work, as the cultural scripts are well articulated about cultural values and linguistic routines. For instance, it is suggested that the cultural script for 'Anglo' ways centers around 'personal autonomy' (Wierzbicka (1991)) as represented in (4), while the cultural script for other cultures, like Japan centers around 'other' as shown in (5).

“(4) People think like this: when I do something it is good if I do it; because I want to do it

(5) People think like this: if something bad happens to someone because of me, I have to say to this person something like this: I feel something bad because of this.”

(Goddard (2004: 145))

The author suggests that the cultural script approach helps develop positive attitudes toward the L2 culture and promotes integrative motivation. His paper ends with two examples of cultural scripts and cultural key words from English and Malay (Bahasa Melayu).

Finally, in “Grammatical Instruction in the Natural Approach: a Cognitive Grammar View,” Achard argues that the adaptation of general

¹³ The term 'ethnopragsmatics,' sometimes called 'cross-cultural pragmatics,' refers to “speech practices which begin with cultural-internal ideas, i.e. with the shared values, norms, priorities, and assumptions of the speakers, rather than with any presumed universals of pragmatics” (Goddard (2004: 1211)).

CG principles (e.g. *construal, conventionalized linguistic unit, entrenchment, categorization, usage-event*) to classroom instruction is most effective and fits the Natural Approach model (Krashen and Terrell (1983)).¹⁴ The CG-aspired guidelines for grammar instruction are summarized as follows; first, CG-inspired instruction is not meta-linguistic. The purpose of grammar instruction is to make the learner focus on the conditions that motivate a specific/target choice of the language, rather than explaining those choices in a meta-linguistic manner. Second, grammar instruction should be inductive so that the natural process of schema extraction should occur. Third, grammar instruction should be given in the target language, not in the student's native language. These last two points are good for communicative teaching, since the learners can construe schemata out of real language use. Under the CG approach, grammar activities should be natural, focused, and repetitive enough to favor entrenchment of the target item. It is also effective to put the students in situations where native speakers are the most likely to exercise a specific choice of the language, as determined by the presence of a cultural schemata.

This paper is the most explicit in terms of how the CG approach is situated in the field of SLA, since the author discusses how the CG approach is related to one of the major SLA models, Van Pattern's (1996, 2002) Cognitive Input Process Model.

According to Archard, CG can most profitably contribute to L2 research at level II (from 'intake' to 'developing system') within the cognitive process model, since CG can offer a linguistic description of the target system as well as a way of capturing the patterns of regularity in that system. CG also can make a contribution at level III (from 'develop-

¹⁴ As explained in *CSF* (p. 169), the basic idea of the Natural Approach is that the natural conditions of language acquisition outside the classroom should be reproduced as much as possible in the classroom. The principles of this approach are: comprehension precedes production; production should occur after non-verbal responses, the syllabus is communicative, not grammatical in orientation.

ing system' to 'output'), because CG addresses the speaker's choice to represent her conceptualization with a specific subset of the expressions she has at her disposal. I will discuss challenges that both CG and classroom SLA models such as Van Pattern's Input Processing and Doughty's Focus on Form Instruction have been facing in Section 3.

2.3. Teaching Specific Lexical Items by Utilizing Cognitive Linguistics Insights

The last four papers by Athanasiadou, Boers, Csábi, and Tyler and Evans offer analyses for teaching specific lexical items by utilizing cognitive linguistics insights. First, in "Teaching Temporal Connectors and their Prototypical Non-temporal Extensions," Athanasiadou discusses the temporal connectors of English such as *when*, *as long as*, *as soon as*, *as*, *since*, *while* and their various non-temporal, abstract uses. She claims that these temporal connectors can be extended to a wide variety of abstract meanings such as contrast, condition, reason, and adversativeness, which native speakers of English are able to easily interpret, while L2 learners are not. The extension of meanings is motivated by not only the process of metaphor from the temporal to the abstract domains, but also their temporal specifications. The author offers a detailed analysis of their temporal specifications by examining the temporal structures of complex events and the prototypicality of the corresponding abstract domains.

Athanasiadou's pedagogical suggestion for teaching temporal connectors is that L2 learners should be taught the non-temporal, more specific meanings of the connectives such as contrastive and causality when they reach intermediate or higher level. The author speculates that teaching non-temporal usage can be facilitated by presenting a continuum situation 'i.e. when there are no breaks, but a succession or simultaneity of the described events on the temporal axis.' There is no doubt that the effect of teaching non-temporal meanings of the connectives by means of temporal specifications merits further study.

Second, in "Expanding Learners' Vocabulary Through Metaphor Awareness: What Expansion, What Learners, What Vocabulary?," Boers argues for expanding learners' vocabulary through metaphor awareness. The author touches upon several issues of metaphor and the three most essential issues are: (a) the type of possible expansions of metaphor awareness; (b) the type of learners who would be most likely to benefit from metaphor awareness; and (c) the type of vocabulary that is most

learnable through metaphor awareness. By providing the results from an experiment in the author's previous work, the author suggests that recurrent awareness-raising activities of a metaphoric nature have a long-term beneficial effect on learning metaphorical expressions. Further, the author states that advanced language learners can get the most benefit by applying metaphor awareness when they have a large scale of lexical knowledge to interpret the figurative language. However, this might not work most efficiently for advanced learners in producing figurative language, since they can be skeptical about the acceptability of L1 equivalents in the target language. A transparent idiom (e.g. 'barking up the wrong tree') is easier to learn than an opaque idiom (e.g. 'paying through the nose'). The degree of transparency of idioms is determined by multiple factors including a common metaphoric theme or conceptual metaphor, and suggests that there is a need for empirical research which measures the effect of metaphor awareness on learners' retention of different types of metaphor. His paper ends with six suggestive research questions on metaphor awareness in the context of SLA.

The last two papers are about teaching polysemy in English. Based upon Lakoff 1987's motivation of meaning, in "A Cognitive Linguistic View of Polysemy in English and its Implications for Teaching," Csábi hypothesizes that L2 learners can learn polysemous words and idioms better if they are explicitly taught the motivations of the senses of polysemous words and of the idioms where they appear. Experiments with Hungarian learners of English were conducted in order to see if knowledge of the motivation of senses of two polysemous words facilitates learners learning the senses of these words and their idioms better than those who only memorize the words and their senses. The two polysemous words 'keep' and 'hold' were presented to the students in an experimental group with keywords (e.g. 'hand' and 'control') and schematic drawings (e.g. a circle with an X inside and outside indicated the phrasal verbs 'keep in/out'). Body language was used to strengthen the motivation for the meanings along with some example sentences from dictionaries with Hungarian translations and a couple of the gap-filling exercises. To students in the control group, the same example sentences and the same gap-filling exercises were given and they were instructed to memorize the meanings of the target words. The students took a fill-in-the-blank test on the day when the treatment was given and the one day later, the test was re-administered.

The results of the test scores support the hypothesis that explicit knowledge of motivated meanings helps learners learning polysemous words more than learners who memorize the words and their Hungarian equivalents. The author suggests that there is a further advantage of employing this method in classroom. For instance, it encourages students to guess meanings and to actively participate in creative mental work and it yields better results in the long run as the experiments have shown. This is a good example of how CG-inspired instruction can improve the teaching of polysemous words.

The problems that we need to consider in this research are methodology. First, this study failed to employ a pre-test; which is important to check if both the experimental and the control groups are the same in terms of their knowledge of polysemous words prior to the treatment. Namely, in this research design, it is not quite accurate to interpret that the better scores in the experimental group were entirely due to the effect of the treatment they had. Second, it is questionable to measure their skills on polysemous items with a single test given on subsequent days. As Tarone (1982, 1988) states, there are task-related interlanguage variations which exhibit learners' different accuracy rates depending on function and 'attention-to form.' It is better to use a more production-based test or at least conduct multiple tasks to access their knowledge. Third, the instruction about the target polysemous words seems to be given in Hungarian, the native language of the learners, not the target language. This contradicts one of Achard's suggestions for CG-inspired instruction. It is helpful to consider the pedagogical issues raised by CG-inspired researchers when one designs an empirical study to measure the effect of the instruction.

The issue of teaching polysemous words is further pursued by Tyler and Evans who present a linguistically detailed and pedagogically plausible analysis of the English preposition, 'over.' In "Applying Cognitive Linguistics to Pedagogical Grammar: The Case of *Over*," the authors argue that their proposed network model provides the learners four benefits. First, the model shows that a relatively small numbers of principles offer motivations for the various and extended senses associated with 'over.' Thus, it provides more systematic account of the semantics to the learners. Second, the model is based upon the notion of the experiential basis of meaning representing the extended senses as arising from observations of external worlds. As such, learners can utilize their own experiments with the world to interpret the senses of the

prepositions. Third, the model serves as a visual rubric which aids the learners in capturing how these senses are connected. Fourth, it gives an overall solid foundation. Their paper ends with suggested lesson plans for teaching 'over' to intermediate learners where both the proto-sense and two of the extended senses are explicitly taught.

Although they mentioned that the suggested teaching was piloted in a small and quasi-experimental classroom intervention, we still need to adequately evaluate if/how effective this teaching method is. In addition to the practical limit of time, we also need to consider if the average teacher who is not trained as a cognitive linguist can understand the linguistic description that underlines the lesson enough to present it to the students.

3. Conclusion and New Directions for Applied Cognitive Linguistics

In this review article, I have summarized the main points of the papers in *CSF* and critically reviewed the empirically based studies. In this section, I first present my view on CG briefly, then go on to make some remarks on the application of the CG view to the field of SLA and language pedagogy to support the position of *CSF*, and finally make three suggestions for future research. It is crucial to bear in mind that usage-based CG models are the best suited for describing the semantic and discourse complexity of language use in our daily life to communicate, rather than pursuing the logical problem of language acquisition, or searching for learnt origin of linguistic knowledge in the tradition of Universal Grammar (UG) (cf. Pinker (1994), White (2003), and Ayoun (2003)). I argue that usage-based models provide adequate accounts for the description of L2 learners' interlanguage grammar as well, since all linguistic knowledge is based upon the instances from the both comprehension and production of specific utterances in specific occasions of use. I would like to emphasize that usage-based CG models are concerned with not only language function but also gradual and dynamic processes by which learners gain more autonomy and cognitive processes in the course of linguistic development. To some linguists, CG usage-based models lack explanatory power or the ability to predict. My argument is that since CG and UG have different perspectives on human language, it is natural to have different applications and/or contributions to SLA and pedagogy (cf. Langacker (1987: 40–55) for his analysis of CG and economy and predictiveness). Furthermore, CG is

in a position to explain developmental processes in L2 learning by employing central notions in cognitive linguistics and psychology. CG has multiple implications for language pedagogy, since this framework takes a holistic approach where meaningful input (semantics) is focused in context. Given that classroom input is one of the important and recurrent issues in SLA in the last twenty years as discussed in Gass and Schachter (1989) and Gass and Selinker (2001), one can easily see that CG can make a contribution to second language teaching.

In a paper entitled "Some pedagogical implications of cognitive linguistics," Taylor (1993: 212) advocates that many aspects of cognitive linguistics can be of use to pedagogical grammar. He states that "learning a foreign language will involve not only learning the forms of the language but simultaneously learning the conceptual structures associated with these forms." In a paper entitled "Cognitive linguistics, language pedagogy, and the English present tense," Langacker (2001) suggests that a usage-based model has certain implications for language pedagogy. Langacker (2001: 5) specifically states that:

"cognitive grammar is contextually grounded because all linguistic units are abstracted from usage events, comprising the full contextual understanding of socially engaged interlocutors with specific communicative objectives in connected discourse. ... Hence, the usage-based perspective provides a theoretical underpinning for what we all know in practical terms, namely the essential role of context and culture in language understanding and language learning."

As Taylor and Langacker and many of the authors of papers in *CSF* state, one of the strengths of applying CG to second language acquisition and language pedagogy is the nature of explanation for linguistic patterns emerging in learners in natural discourse data. L2 learners' patterns vary and could be drastically different from L1 patterns, but L2 patterns represent the learners' schemata which can be best accounted for in the framework of CG. It is vital to apply the CG approach for L2 acquisition research by examining various types of data including natural discourse data, rather than de-contextualized tests when researchers examine how L2 learners build up their schemata in the course of learning language. For pedagogical purposes, as Boers, Csábi, Tyler and Evans in *CSF* advocate, it is important to attempt to incorporate CG inspired techniques in the classroom, so that we can enrich intake for more and better schemata building (form-meaning con-

nections in the SLA sense).

In this section, I will make three points regarding directions for further research. First, we need scarcely add more arguments regarding how CG seems to be a natural fit in SLA and pedagogy because of its concern with the role of meaning in determining forms, and because of the important role of classroom input. However, we need more well-designed empirical studies which support the generalizability of the effect of CG-inspired methodologies in the study. This is the case in the second category of papers in *CSF* as well as a series of research papers which have attempted to prove the effects of Van Pattern's Processing Instruction (Van Pattern (1996), Van Pattern (2002)). When we conduct research, the researchers have to be careful about methodology, research design, and interpretation of the results. For instance, Lam (2005) who tried to examine a CG-inspired teaching method in her Spanish classroom, makes the critique that previous studies (Csábi (2004), Kurtyka (2001)) face methodological problems, and thus she conducted a well-designed research study which included a pre-test and delayed post-test.¹⁵

Second, I would like to emphasize that researchers should give careful consideration to the method of data collection (speaking, writing, contextualized production task, de-contextualized fill-in-blank test, etc). Chafe (1994) claims that spoken discourse reveals a more intricate connection between cognitive processes and linguistic expressions. There is no doubt that collecting and analyzing spoken data takes time; however, I highly encourage researchers to include spoken data because it has its own merits and might reveal cognitive processes in the learners' minds.

Third, the language most discussed in *CSF* was English, the most commonly-taught language in the world. Thus, there is a need to expand the CG approach to other foreign language teaching.¹⁶ Also, by

¹⁵ The research design in Lam (2005) is a good empirical study since it has a pre-test and delayed post tests. However, the pitfall of her study was the fact that treatment (relationship between individual meanings of the test items and central meaning and schematic drawings) was given not in the target language, but in the students' native language.

¹⁶ One of the examples of applying CG to foreign language teaching other than English was the theme of a session at ICLC 2005, 'Cognitive Models of Interlanguage,' which consists of empirical data dealing with Spanish (Zyzik (2006)), German (Arnett (2005)), French (Fonseca-Breber (2005)), Japanese (Masuda

reading *CSF*, one might get the impression that CG approaches only discuss prepositions, metaphorical expressions, polysemy, and cultural knowledge. However, I maintain that CG can also take on important issues in the second language lexicon such as dative vs. accusative case (cf. Arnett (2005), Zyzik (2006)), auxiliary selection (Arnett and Martin (2004)), morphological processes (Panther and Thornburg (2001)), and word order and ellipsis which have been examined in the Universal Grammar-based acquisition literature.¹⁷

One possible weakness of current CG models is the distance between L1 and L2. Except for typologically based-studies such as Talmy and Slobin, it would be difficult to explain away the different degrees of difficulty in different language groups. It is hoped that more empirically based cross-linguistics studies using CG will be carried out in the future, so that we can appreciate the applicability of CG in the classroom and that CG will become well established in the SLA field. In sum, *CSF* is highly recommended for anyone who is seriously interested in a link between Cognitive Linguistics and SLA as well as anyone who wants to improve classroom instruction.

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(2005)), and Chinese (Yang (2005)).

¹⁷ Pinemann (1987) deals with word order in German in the framework of CG. Recently Pinemann's model has been used to test other languages.

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School of Modern Languages
 Georgia Institute of Technology
 613 Cherry St. Atlanta, GA 30332-0375, USA
 e-mail: kyoko1230@hotmail.com