The Possibility of Mutual Benefit from Exchange

between

The Philosophy of Language and Second Language Acquisition Research and Pedagogy

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ABSTRACT

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Language Acquisition Research and Pedagogy

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This dissertation has three parts. The first part is an ESL textbook that is based on a grammar which I call term and predicate grammar. This name reflects the view that all simple and complex sentences of English consist of one predicate and one or more terms, or are simple transforms of such sentences. There are four predicate types and seven term types, all of which can be specified precisely. The term and predicate grammar itself is based on the syntactic component of a semiotic system I developed, which standardly includes as well a semantic component and a pragmatic component. The second part of the dissertation establishes a connection between the philosophy of language and second language acquisition research and pedagogy by presenting two cases in which an analysis of a feature of English in the one discipline is juxtaposed with an analysis of the same feature in the other discipline. On the basis of these two cases, it is proposed that a merger of interests and lines of work between the two disciplines would be mutually beneficial, and that an ESL text book that is based in the philosophy of language should foster such a merger. The third and final part of the dissertation has a general aspect and a specific aspect. On its general aspect, it is a philosophical examination of the relationship between the implicit knowledge of language vs. explicit knowledge of language distinction in second language acquisition research and pedagogy and the knowing-how vs. knowing-that distinction in the philosophy of language. The two distinctions are found to align and it is claimed on this basis that the second language acquisition distinction has an antecedent in the earlier philosophical distinction. On its specific aspect, the third part of the dissertation is an analysis of what is called the interface issue in second language acquisition research. This issue addresses the question of how implicit knowledge and explicit knowledge contribute to the acquisition of a second language. Three positions have been taken on the issue, viz. the strong position, the no position and the weak position. On the strong position the explicit knowledge of language developed by instruction and practice plays a major role in acquisition, on the no position such knowledge plays no role in acquisition while on the weak position such knowledge plays a facilitating role in acquisition. But there is a consensus in the second language acquisition research community that the strong position should be rejected and yet it is this position that accords with the views of traditional language pedagogists, and with thoughtful common sense generally. This poses a dilemma that I claim can be resolved by making a philosophical interpretation of ideas and information that can be found in recent second language acquisition theory and research.

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Chapter Three: An Essay

An Examination of the Relationship between Implicit and Explicit Knowledge in Second Language Acquisition Theory and its Connection to the Distinction between Knowing-How and Knowing-That in the Philosophy of Language

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Without your leadership, I would not have been able to complete my work. I greatly appreciate all of the advice and guidance you provided me with. And I admire you for being the kind of person that you are.

Prof. Haim Gaifman

I admire your subscription to the highest standards. I greatly appreciate all of the time and effort you put in to help me try to meet them. And I value the friendship that we developed.

Dedication

To my parents, Alice and Harold

Thank you for your patience.

Thank you for your love and support.

And thank you for being the very fine people that you are.

A

SYSTEMATIC GRAMMAR

OF

ENGLISH

A New Approach to the Development of ESL Proficiency

Harold Ingram

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1.

INTRODUCTION

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There are many textbooks designed to help English as a second language or English as a foreign language students but this one is distinctive. All of the other textbooks that I am aware of present English as something like a collection of its parts and aspects: verbs and prepositional phrases and dependent clauses, on the one hand, possession and mood and the count-mass distinction, on the other. The parts and aspects may well add up to the whole language but if there is any claim to this effect then it is decidedly implicit. The presentation of the parts and aspects follows a definite order but is not as order set by any constructive idea of the language, i.e. any idea of the language as a single construction of its many and various parts and aspects. Rather the order of presentation seems to be set by some idea of pedagogy, that the students are ready to learn this now and that later. I do not mean to suggest that there is anything wrong with this approach, and indeed there are excellent textbooks that implement it. I do not mean to criticize this approach but only to characterize it so that it can be contrasted with the approach taken here. The approach here is inspired by contemporary research in the philosophy of language and in linguistics, and especially in the burgeoning area that represents the intersection of the two disciplinary enterprises. It treats English as a single system. Certainly the language is characterized by its parts and aspects but all of these have to come together to form a coherent whole, no matter how large and complex. As will be seen, the central idea is that the grammar of English is a 'term and predicate grammar'. That is to say, in the vast majority of cases, a simple sentence of English, as opposed to a complex or compound one, breaks down into one predicate, most typically a verb phrase, and one or more terms, each most typically either a name, a pronoun or a noun phrase. However, the full set of predicate types and the full set of term types, and the way in which they all fit together, will be specified precisely. The system of English that will emerge is one that is simple, orderly and intuitive, all of this being very much to the advantage of the ESL student.

The student must be thought of as highly competent in natural language, as having a complete understanding of structure and meaning in their native language. Despite the enormous number of differences between the student's native language and English, whether we speak in terms of a universal grammar, in the manner of Chomsky, or in some other terms, all natural languages are at some level, no matter how basic, more or less the same. Given this, if the student of English as a second or foreign language is presented with a systematic grammar of English that is also simple, orderly and intuitive then they should be able to encompass the new language within their general understanding of natural language. Over time, and with the great effort that is nonetheless required, they should come to recognize the correspondence between the L1, their native language, and the L2, English. By a rational, self-conscious process, they should be able to establish a system of analogical relationships of structure and meaning between features of the L1 and features of the L2. The meaning of 'edificio' in Spanish is the analogue of the meaning of 'building' in English. The structure 'noun-adjective' in French is the analogue of the structure 'adjective-noun' in English. These are of course the simplest of cases. Other cases are much more complex. If the L1 is article-less, like Russian and Mandarin, then what are the L1 analogues of the L2 'a', 'an' and 'the'? The student must find something implicit in the L1 noun, or its context of use, to serve as the analogue of the L2 article. But, because the grammar of this text has the precise character that it does, because it is 'open' to the student in being systematic and in being simple, orderly and intuitive, even the most difficult task of the student will be brought within the realm the possible. Also, the style in which the text is written, and the large number of highly structured and real world-related exercises in includes, should engage the student in such a way that they will make progress towards proficiency much more easily and much more rapidly than they would by other instructional means.

The text will serve the student in at least two basic ways. The patterns of terms and predicates will be specified precisely and the student will be able to advance their proficiency in English by practicing the production of phrases that follow these patterns. There are for example eight noun phrase configurations and the student can be given a subject, sports, literature, fashion, international affairs, or whatever, and be asked to produce a phrase that conforms to each of these configurations while at the same time referring to the given subject. The same thing can be done at the sentence level where, given a restriction to just two object phrases, the number of configurations allowed by the pattern for simple sentences is large but manageably finite. In this way, the student will be helped greatly with their production in English. Over time, practice of the kind described here will naturally inform the student's sub-conscious capacity to speak and write English according to its conventions. But the text will also serve the student by facilitating the evaluation of the English they produce naturally, out of the competence they bring to the study of the text. The teacher, a tutor, or even the student themselves, can show precisely how any sentence produced naturally by the student conforms to or fails to conform to the patterns established by the text. Since sentences produced by non-native users of English can vary away from proper usage in such a wide variety of ways, it is important that the text covers the micro-structure English in a manner that other texts do not, although there is no question that the teacher or a well-trained tutor will have to, first, determine the exact nature of the variation and, then, explain this variation patiently to the student. The text is designed mainly for what might be called the intermediate student but the advanced student can benefit in at least some ways from its systematic

and precise presentation of the language, and the beginning student can concentrate on the text's comprehensive accounting of the word level grammar of the language, and the simpler of the sentence configurations it covers.

2.

OVERVIEW: TERM AND PREDICATE GRAMMAR

_____

Because the grammar of English to be studied here has three distinct levels, the level of the word, the level of the phrase, and the level of the sentence, clauses being assimilated to sentences for the sake of simplicity, it was necessary to decide whether to present the grammar 'bottom up', i.e. from words to sentences, or to present it 'top down', i.e. from sentences to words, and because the text is designed to position the ESL student to compose the sentences that allow them to express their thoughts, it seemed more natural to go bottom up. But his means that the student will have to plod patiently through nouns and prepositions and verbs and determiners, and then through verb phrases and noun phrases before they are able to see the big picture of sentences and the way in which they are structured. So I ask the student to lend me their patience, assuring them that they will be rewarded for doing so. However, I will also provide a preview of the grammar as a whole so that the student will actually be able to see the big picture at the outset, albeit only in its most general outline. The preview runs as follows.

The focus is on simple, declarative sentences but there is a chapter in which questions, commands and exclamations, and complex and compound sentences are studied.

Now, the word level of the grammar takes the form of a 15 member set of categories of basic expressions, words for the most part. The 8 traditional parts of speech are included among the 15

categories, but so are more specialized categories like relative pronoun, copula and determiner. At the phrase level, there is a division into phrases that will be called terms, and phrases that will be called predicates. Phrases of the term type are essentially nominal. They include names, pronouns, noun phrases, infinitive phrases, gerund phrases and W/TH phrases. Phrases of the predicate type are essentially verbal. Each one of them consists of a 'predicate base' and one or more 'term position blanks'. There are four types of predicate base, each type being distinguished by its key constituent. The four types, their respective key constituents and an example of each type of the simplest possible kind can be given compactly as follows:

Type	Key Constituent	Example
Action	Verb	runs
Quality	Adjective	are wealthy
Relation	Preposition	was in
Identity	Copula	is

We can add term position blanks to the predicate bases above to get the predicates

_____ runs

_____ runs _____

_____ are wealthy

_____ is _____

Sentences are achieved by filling in the term position blanks with appropriate terms. Possibilities for the predicates above are:

Jane runs.

John runs marathons.

All Silicon Valley executives are wealthy.

Jane is the C.E.O.

So this is the general outline of the grammar. The remainder of the text will work towards providing as much as possible of the massive detail of which English, like any natural language, finally consists.

3.

WORD LEVEL GRAMMAR

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    This chapter presents the word level of the grammar. It is natural to handle the word level grammar of English by means of a set of categories of words, or more precisely, a set of categories of basic expressions since some of the truly primitive expressions of the language consist of more than one word: simple examples are the preposition 'because of' and the conjunction 'if-then'. To accommodate this fact, we will take the term 'word unit' rather than the term 'word' to be the official designation of the truly primitive expressions of the language, although for naturalness in the exposition we will typically use the term 'word'. Now, it is possible to characterize the word level grammar of English by means of a 15 member set of categories. This set is based on the 8 traditional parts of speech but it also includes name, as a category separate from noun, and six highly specialized categories that give the grammar much more descriptive and explanatory power. The 15 categories divide into two broad types, the substantive type, words that can be seen as, in one way or another, referring to something in the world, and thus as having 'substance', on the one hand, and the functional type, words that facilitate the formation of more complex substantive expressions from simpler ones, starting at the level of the word, on the other hand. The 15 categories are as follows:

1. Name (Na.)	6. Copula (Cop.)	11. Verb (V.)
2. Relative Pronoun (R.P.)	7. Determiner (D.)	12. Adverb (Adv.)
3. W/TH Word (W/TH W.)	8. Pronoun (Pro.)	13. Noun (No.)
4. Particle (Pa.)	9. Conjunction (Con.)	14. Adjective (Adj.)
5. Modal (M.)	10. Preposition (Pre.)	15. Interjection (I.)

The order of the categories can be explained as follows. Category 1., Name, is by far the largest category. It is speculated that there are approximately 1,000,000 words in English. Just think about how many more names, even in English, there are than that. But Name goes first because, in a sense, names are the most basic type of expressions in the language, and they are simple, fixed entities such that they pose no challenge to the student. And, category 15., Interjection, goes last because interjections are perhaps the least important expressions for true communicative purposes. They do not convey information, or even express opinion, so much as they 'demonstrate' emotion. And, like names, interjections are simple, fixed entities and thus are easy to learn. Now, categories 2. through 10. contain relatively small, mostly exact numbers of words, and are presented in an order of size from the category W/TH Word, which has just 5 members, to the category Preposition, which as represented here has about 70 members . Finally, categories 11. through 14. follow an order of explanation, modified a bit for aesthetic purposes, as will be seen later. The next two chapters will be devoted to the presentation and discussion of the categories of functional expressions and the categories of substantive expressions, respectively.

4.

FUNCTIONAL EXPRESSIONS – RELATIVE PRONOUNS

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The relative pronouns are

who

whom

whose

which

that

Putting aside their use in questions, which will be discussed later, relative pronouns serve as 'stems' or bases for the formation of relative clauses, and relative clauses serve as modifiers of nouns. Thus, for example, in the noun phrase

the student who loves Shakespeare

the expression

who loves Shakespeare

is a relative clause that modifies the noun

student

and this relative clause has two parts, the relative pronoun

who

and the incomplete sentence

loves Shakespeare

What makes the incomplete sentence incomplete is that it has a missing subject term or a missing object term. The missing subject term or object term is, in effect, the portion of the noun phrase that precedes the relative clause, and the incomplete sentence 'says something about' what that expression on its own refers to. Thus for example the incomplete sentence of the noun phrase under consideration

>loves Shakespeare

has a missing subject term. That subject term is the portion of the noun phrase that precedes the relative clause, namely

>who lives Shakespeare

which is of course

>the student

and if we supply the incomplete sentence with its missing subject term, we get the complete sentence

>The student loves Shakespeare.

Consider a somewhat more complex example, the noun phrase

>the new student from China who is studying physics

Here the relative clause is

>who is studying physics

which has two parts, the relative pronoun

>who

and the incomplete sentence

>is studying physics

What makes the incomplete sentence incomplete is a missing subject term. That subject term is the portion of the noun phrase that precedes the relative clause, namely

>the new student from China

and if we supply the incomplete sentence with its missing subject term, we get the complete sentence

>The new student from China is studying physics.

Consider another example, one in which the incomplete sentence is incomplete because it has a missing object term:

>the new student from China whom I taught last semester

Here the relative clause is

      whom I taught last semester

and it has two parts, the relative pronoun

      whom

and the incomplete sentence

      I taught last semester

Note that in another context this would be a complete sentence but here it is incomplete because it is missing the direct object term of its verb

      taught

and the missing object term is the portion of the noun phrase preceding the relative clause, namely

      the new student from China

and, again, if we supply the incomplete sentence with its missing object term, we get the complete sentence

      I taught the new student from China last semester.

    Now, the fact that the second component of a relative clause is (what might be thought of as) an incomplete sentence should not be seen as representing any kind of mistake. Rather, if we take the incomplete sentence to have a blank term position where the missing subject term or object term would go then we can say that there is a link between that blank position and the noun of the of the noun phrase, and that this link is the mechanism English has established to allow the relative clause to modify the noun. Thus for example the incomplete sentence in the noun phrase

      the student who loves Shakespeare

can be seen as having a blank subject term position as follows

      the student who _____ loves Shakespeare

and the link between that blank term position and the noun of the noun phrase can be represented as follows

      _____

      | |

      v   v
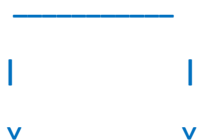
the [student] who _____ loves Shakespeare

This link is what allows the relative clause

who loves Shakespeare

to modify the noun

student

It will be instructive to consider another case, one in which there is a missing object term. In the noun phrase

the new ambassador from China whom the university invited to lecture on geopolitics

we might take there to be a blank object term position as follows

the new ambassador from China whom the university invited _____ to lecture on geopolitics

and the link between that blank position and the noun of the noun phrase can be represented as follows:

_____

| |
v v

the new [ambassador] from China whom the university invited _____ to lecture on geopolitics

This link is what allows the relative clause

whom the university invited to lecture on geopolitics

to modify the noun

ambassador

Further, in both cases, the incomplete sentence can be made complete if the portion of the noun phrase that precedes the relative clause is filled into the blank term position. Thus, with respect to the first case, if

the student

is filled into the blank subject term position of

_____ loves Shakespeare

then the result is the complete sentence

The student loves Shakespeare.

And, with respect to the second case, if

the new ambassador from China

is filled into the blank object term position of

the university invited _____ to lecture on geopolitics

then the result is the complete sentence

The university invited the new ambassador from China to lecture on geopolitics.

Note that this procedure of filling in the blank term position can be used to test the structural correctness of a relative clause.

A very important feature of the use of relative pronouns is that there is a scheme of selectional restriction for them: 'who' and 'whom' are to be used only with nouns that refer to persons and 'which' and 'that' are to be used only with nouns that refer to things, but 'whose' can be used with nouns that refer to persons and with nouns that refer to things. Thus in the relative clauses of the noun phrases

the student who loves Shakespeare.

the new ambassador from China whom university invited to lecture on geopolitics

the nouns 'student' and 'ambassador' refer to persons and the relative pronouns 'who' and 'whom' are used, respectively, and in the relative clauses of the noun phrases

a computer that has adequate memory capacity

an early edition of Milton which sold at auction for $100,000

the nouns 'computer' and 'edition' refer to things and the relative pronouns 'that' and 'which' are used, respectively, but, in the relative clauses of the noun phrases

the artists whose work I admire

the paintings whose origins have not yet been determined

the noun 'artists' refers to persons while the noun 'paintings' refers to things, but the relative pronoun 'whose' is used in both cases.

Another very important feature of the use of relative pronouns is that all of them except 'that' can serve as the stem or bases of a relative clause which does not attach to the noun of a noun phrase but to a complete noun phrase occurring as a term in a sentence, or to a sentence itself. However, the content that the relative clause provides is considered to be auxiliary to, or in addition to, the content expressed by what might be called the 'host' sentence, i.e. the sentence containing the noun phrase

term that the relative clause attaches to or the sentence itself that the relative clause attaches to. And, the fact that the content that the relative clause provides is auxiliary to the content provided by the host sentence is indicated by setting the relative clause off by a comma or a pair of commas, depending on whether it occurs at the back of the host sentence or somewhere inside it. The following three examples reveal all of the possibilities:

> She scrapped her old computer, whose processor was a bit slow.

> She bought a new computer, which was a risky thing to do given her financial situation.

> Her clients, who are all struggling with their own businesses, will appreciate her greater productivity.

In the first example, the 'whose' based relative clause attaches to the term 'her old computer' and takes one coma since it occurs at the back of the host sentence. In the second example, the 'which' based relative clause attaches to the whole host sentence 'She bought a new computer.' and also takes one comma since it occurs at the back of that host sentence. And, in the third example, the 'who' based relative clause attaches to the term 'Her clients' and takes two commas since it occurs inside the host sentence. Note that the fourth combinatorial possibility, a relative clause that attaches to the whole host sentence and occurs inside of it, thus taking two commas, is ruled out since a relative clause can attach to an expression, a noun, a term, a whole sentence, only if that expression, in its entirety, occurs at the left of the relative clause. In traditional English grammar, relative clauses that attach directly to the noun of a noun phrase are called 'restricted 'relative clauses while relative clauses that attach to the terms of sentences or to sentences themselves, and thus take commas, are called 'unrestricted' relative clauses.

   One of the most troubling things related to relative pronouns is the question of whether to use 'who' or 'whom' in the composition of a relative clause when the noun to be modified refers to a person or some persons. Effectively, however, the question has already been answered. The two relative clauses

> the student who _____ loves Shakespeare

> the new ambassador from China whom the university invited _____ to lecture on geopolitics

were discussed above. The first one was presented as having a missing subject term as we can see from

> the student who _____ loves Shakespeare

and it uses the relative pronoun 'who' while the second one was presented as having a missing object term as can be seen from

> the new ambassador from China whom the university invited _____ to lecture on geopolitics

and it uses the relative pronoun 'whom'. So, 'who' is used where the noun being modified refers to a person or some persons and the incomplete sentence of the modifying relative clause has a missing subject term whereas 'whom' is used where the noun being modified refers to a person or some

persons and the incomplete sentence of the modifying relative clause has a missing object term. And, in fact, in traditional English grammar, 'who' is called the subjective relative pronoun while 'whom' is called the objective relative pronoun.

A final note here, however, is that there are many contemporary prescriptive grammarians of English, i.e. grammarians who make recommendations regarding English usage, who say that 'whom' should be eliminated from the language. They seem to think that it is anachronistic. Where a sentence has been composed in such a way that it contains a relative clause employing 'whom', they recommended that the sentence be restructured so that there is no longer a need for the 'whom'. An opposing view is that mastery of the 'who'/'whom' distinction deepens one's understanding of the grammatical structure of English, and that the correct use of 'whom' in particular is a mark of distinction both in writing and speech, but especially in speech.

The most interesting thing about relative pronouns, however, is that they do serve as the stems or bases of relative clauses, and yet relative clauses are by far the most powerful modifiers of nouns. The most basic modifiers of nouns are of course adjectives but, despite the fact that there are thousands and thousands of them in English, at any given moment there is a finite and definite number of them. Thus it is likely, and in fact quite true, that there are occasions on which a user of English will not find an adjective that expresses their 'modification idea', i.e. whatever it is that the user wants to attribute to the individual or individuals referred to by the noun. There will simply be no adjective that has the right meaning for the purpose. But given sufficient powers of articulation, the user of English can compose a sentence that expresses any idea whatsoever that occurs to them, including any modification idea. And in the case of a sentence expressing a modification idea, the user has only to alter the sentence they have composed in such a way that it becomes an incomplete sentence that can serve as the second component of a relative clause that will modify the noun. Presumably the sentence will contain a term referring the same thing that the noun to be modified refers to, and perhaps consists in or be based on that very noun, such that the alteration takes the form of the deletion of that term from the sentence followed by the prefixing of the appropriate relative pronoun. So it might be said in sum that relative pronouns serve as the stems or bases of relative clauses, and yet relative clauses provide unlimited power in the modification of nouns.

EXERCISES

_____

1. Identify the noun phrases in the following sentences that have relative clauses and

      (a) identify the relative pronoun and incomplete sentence parts of the relative clause involved

(b) put a term position blank into the incomplete sentence to show how it is incomplete

(c) determine whether the term position blank is of the subject or the object type, and

(d) fill the portion of the noun phrase that precedes the relative clause into the term position blank of the incomplete sentence in order to produce the relevant complete sentence.

2. Use the relative pronouns and incomplete sentences provided to add relative clause modifiers to the noun phrases in the following sentences.

FUNCTIONAL EXPRESSIONS – W/TH WORDS

_____

There are 7 W/TH words. They are as follows:

who

what

when

where

why

how

that

Perhaps you can see now the logic of the term 'W/TH word'. Each word in the list above begins with letter 'w' or the letter 't' followed by the letter 'h', except for the word 'how', which at least has the letter 'h'. Implicit in this explanation is the fact that the '/' of the term means 'or'.

Speaking very generally, with respect to the words in each of the several categories of functional expressions we will cover here, we will want to specify two things, namely the grammar of the words involved and their meanings. However it will sometimes be the case that, precisely because we are dealing with functional expressions, like 'who', 'could' and 'be', as opposed to substantive ones like 'mountain', 'student' and 'fork', there will not really be separable grammar and meaning and instead there will be just 'function'. Further, we will tend to speak less in terms of meaning and more in terms of 'conditions of application', by which is meant whatever simple considerations can be presented to help the student to use the words involved.

Now what we will offer by way of conditions of application for the W/TH words is an association of each word with a certain basic concept word. The following chart delivers what is needed:

Who	person
What	thing
When	time
Where	place
Why	reason
How	manner
That	situation

Unlike the other associations, the association of 'that' with situation needs some explanation but it will be much more convenient to provide this explanation after the grammar of W/TH words has been given.

We will say that W/TH words serve as the 'stem', or basis, for W/TH phrases, and that W/TH phrases serve as subjects and objects in sentences. Thus, for example, the W/TH word 'who' serves as the stem for the W/TH phrase

who love Shakespeare

and the W/TH word 'what' serves as the stem for the W/TH phrase

what they want

Now the earlier W/TH phrase serves as the subject of the sentence

Students who love Shakespeare tent to love language as well.

and the later W/TH phrase serves as the object of the sentence

We have what they want.

We need two more examples as follows:

1) I know that the U.S. is at war in Afghanistan.

Here the W/TH phrase

    that the U.S. is at war in Afghanistan

serves as the object of the sentence and its parts are the W/TH word 'that' and the sentence

    The U.S. is at war in Afghanistan.

and yet this sentences presents a situation.

    2) I believe that the moon is made of green cheese.

Here the W/TH phrase

    that the moon is made of green cheese

serves as the object of the sentence and its parts are the W/TH word 'that' and the sentence

    The moon is made of green cheese.

and yet this sentence presents a situation. Now the situation in the case of 1) is a sad fact while the situation in the case of 2) is perhaps a fantasy entertaining to children. Still we can see now the justification for associating the W/TH word 'that' with the concept word 'situation'. In the second chapter on terms, the mode of construction of W/TH phrases will be specified.

EXERCISES

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1) Identify all of the W/TH phrases that occur in the article 'Literary Cubs' appearing on page E1 of the Thursday Styles section of the December 1st, 2011 *New York Times*.

2) Produce five W/TH phrases, having to do with style, sports, politics, art and business, respectively, making sure that each phrase uses a different W/TH word.

FUNCTIONAL EXPRESSIONS – MODALS

_____

Modals

There are 12 modals. They are as follows:

could	may	can	do
should	might	shall	does
would	must	will	did

Grammatically modals are very simple. They are optional components of predicate bases and when a modal does appear in a predicate base it appears as the first, or leftmost, component of that predicate base, and it forces the first or only verbal element to its right, either a copula or verb, to take the infinitive form. Let us consider five cases:

1. the modal 'can' is the first component of the predicate base

can compete effectively

which might appear in the sentence

The American team can compete effectively with the Russian team.

and 'can' forces the verb 'to compete' to take the infinitive form. Compare the sentence

The American team competes effectively against the Russian team.

where there is no modal and the verb 'to compete' is free to take the present singular form 'competes'.

2. the modal 'could' is the first component of the predicate base

      could be competing effectively

which might appear in the sentence

      The American team could be competing effectively with the Russian team.

and 'could' forces the copula 'to be' to take the infinitive form. Compare the sentence

      The American team was competing effectively against the Russian team.

where there is no modal and the copula 'to be' is free to take the past singular form 'was'.

3. the modal 'may' is the first component of the predicate base

      may truly be suitable

which might appear in the sentence

      This set of directives may truly be suitable as the protocol for the new division.

and 'may' forces the copula 'to be' to take the infinitive form. Compare the sentence

      This set of directives truly is suitable as the protocol for the new division.

where there is no modal and the copula 'to be' is free to take the present singular form 'is'.

4. the modal 'should' is the first component of the predicate base

      should probably be in

which might appear in the sentence

      Jones should probably be in Dallas.

and 'should' forces the copula 'to be' to take the infinitive form. Compare the sentence

      Jones probably was in Dallas.

where there is no modal and the copula 'to be' is free to take the past singular form 'was'.

5. the modal 'must' is the first component of the predicate base

must actually be

which might appear in the sentence

This politician must actually be the representative from our district.

and 'must' forces the copula 'to be' to take the infinitive form. Compare the sentence

This politician actually was the representative from our district.

where there is no modal and the copula 'to be' is free to take the past singular form 'was'.

But now, the meanings of modals are as complicated and their grammar is simple. To capture their meanings effectively, I will enlist the help of a dictionary, where all of the senses of each modal are clearly specified. The dictionary I have chosen is the ESL dictionary *Merriam-Webster's Advanced Learner's English Dictionary*, which is excellent generally. However, what is offered here goes well beyond what the dictionary provides because

A. all of the modals of English have been collected into a neat set of 12

B. from among the senses specified by the dictionary, the main one for each modal will be selected

C. a 'condition of application' will be provided for each modal as it is understood in relation to its main sense, and the condition of application will be simpler to understand and use than the sense of the modal it is related to

D. the 12 modals will be divided into just five groups of two or three modals each, and each of these groups will be seen to fall under a basic concept. The concepts for the five groups are

ability

decision

interest

possibility-probability

emphasis

E. a simple relation will be established between/among the members of each group

The effect of A. – E. will be a dramatic simplification of the modal part of English for the student.

Now I will present here the complete set of senses only for the modal 'must'. For each of the other 11 modals, I will present only the main sense. The student will use the indicated dictionary to access the others. The dictionary lists 5 senses for the modal 'must', but the first sense is broken down into two sub-senses so that effectively there are 6 senses. These senses are as follows:

1. a. Used to say that something is required or necessary

1. b. Used to say that something is required by rule or law

2. Used to say that someone should do something

3. Used to say that something is very likely

4. Used in various phrases to emphasize a statement

5. Used in questions that express annoyance or anger

The main sense is, no surprise, 1.a. in relation to it, the dictionary provides 11 example sentences as follows:

You must stop.

I have told him what he must do.

One must eat to live.

You must follow the rules.

We must correct these problems soon or the project will fail.

I must remember to stop at the store.

Must you go? Yes, I'm afraid I really must.

Must you go? No I really don't have to.

If you must go, at least wait until the storm is over.

It must be noted, however, that the company was already in financial difficulties.

We must keep/bear in mind that she didn't have any previous experience.

Now, it is time to provide the condition of application for the modal 'must', the device so to speak that will make it possible for you to control its use, its main use. I want to say that we use 'must' in relation to an interest, in relation to the possibility of gaining something that is of value to us, or of losing something that is of value to us. So if I say,

You must attach your transcript to the application for the scholarship.

then I am specifying an action the taking of which will increase the chances of your gaining funding for your study. And if I say,

You must go to the dentist.

then I am specifying an action the taking of which will decrease the chances of your losing a tooth. The effort here is to make things simple but with human language, things are never really simple and thus, in the case of the scholarship sentence above, it could be argued that the attachment of the transcript is an action the taking of which will decrease the chances of your losing the opportunity to be considered for the scholarship by having your application declared incomplete. I think that in many if not most cases of the use of 'must' there is this kind of ambiguity of interpretation, or perspective. A loss can often be seen as a failure to gain, and a gain can often be seen as the avoidance of a loss. It's the same phenomenon we have in relation to the question, 'Is the glass half empty, or is it half full?'. And this is fine. I still think that the condition of application provided here for the modal 'must', seeing it as a term to be used in a case of interest, a case in which there is something of value to be gained or something of value to be lost, will make it much easier for you to control the term, to understand sentences produced by others that contain it, and to produce sentences of your own that employ its power.

Let us consider next the modal 'should'. The dictionary lists 9 senses for it, although three of them are British, not American. I take the first one, 1.a., to be the main one. It is as follows:

Used to say or suggest that something is the proper, reasonable, or best thing to do

Consider the first example sentence given, namely

You should get some rest.

I want to say that the condition of application for the modal 'should' is the same as that for the modal 'must'. That is to say, we use 'should' in relation to an interest, in relation to the possibility of gaining something that is of value to us, or of losing something that is of value to us. In the case of the example sentence the interest is feeling good or being healthy. The example sentence specifies an action the taking of which will increase our chances of gaining good feeling or health. But there is a difference between the case of 'should' and the case of 'must', and it is that the interest in the case of 'must' is a *critical* interest. So if we compare

You should go to the doctor.

with

You must go to the doctor.

Then you can see the difference. That is, we have interest in both cases but in the first case, there is the possibility of gaining a sense of well-being. The interest is not critical. But in the second case there is the possibility of losing one's life. The interest is critical. We are now in a position to say that the modal 'should' and the modal 'must' form one of our five sub-groups of modals, the sub-group characterized by the concept of interest. Let us now specify the other four sub-groups schematically as follows.

The modal 'can' has 9 senses. I take first one, 1., to be the main one. It is as follows:

To be able to do something

and the leading example is

I don't need any help. I can do it myself.

The condition of application for 'can' can be given by saying that we use it in relation to the existence, or presence, of an ability.

The modal 'could' has 7 senses. I take second one, 2.a., to be the main one. It is as follows:

Used to say that something is possible

and the example that is most convenient in relation to my scheme here is

They could still succeed, although it's not likely.

The condition of application for 'could' can be given by saying that we use it in relation to the existence, or presence, of an ability, provided that a certain condition is met. In in relation to the example sentence, the condition might be getting a line of credit with a bank. If the condition of getting a line of credit with a bank were met then the ability to succeed would come into existence, would be present.

Now, we are in a position to say that the modal 'can' and the modal 'could' form one of our five sub-groups of modals, the sub-group characterized by the concept of ability.

The modal 'will' has 9 senses. I take first one, 1., to be the main one. It is as follows:

Used to say that something is expected to happen in the future

and the leading example is

We will leave tomorrow.

The condition of application for 'will' can be given by saying that we use it in relation to a decision, to express the fact that a decision has been made.

The modal 'would' has 16 senses. I take second one, 2., to be the main one. It is as follows:

Used to talk about a possible situation that has not happened or that you are imagining

and the example that is most convenient in relation to my scheme here is

If I could leave work early, I would.

The condition of application for 'would' can be given by saying that we use it in relation to a decision that has a precondition. If the precondition is met then a decision will be made. In in relation to the example sentence, the pre-condition might be being on top of your work, of having the boss be out of the office. If the precondition is met then the individual will decide to leave work early.

We are in a position now to say that the modal 'will' and the modal 'would' form one of our five sub-groups of modals, the sub-group characterized by the concept of decision.

The modal 'may' has 8 senses. I take first one, 1., to be the main one. It is as follows:

Used to indicate that something is possible or probable

and the leading example is

> They may still succeed.

The condition of application for 'may' can be given by saying that we use it in relation to possibility or probability.

The modal 'might' has 10 senses. I take the first one, 1., to be the main one. It is as follows:

> Used to say that something is possible

and the leading example is

> We might go if they ask us, but then again we might not.

The condition of application for 'might' can be given by saying that we use it in relation to possibility or probability. In in relation to the example sentence, decision is involved but what is being expressed is mere possibility, or low probability - it's difficult to make a distinction between the two.

But now we have used the same condition of application for both 'may' and 'might', so clearly they form one of our five sub-groups of modals, the sub-group characterized by the concept of, we might say, possibility-probability.

The situation is a bit different with 'do', 'does' and 'did'. They are really three forms of one word, which really has a single sense

> Used to make a statement stronger

in relation to which the most convenient example for my scheme is

> Well, I did warn you that it would sting a little.

So the three form the fifth and final sub-group, which is characterized by emphasis.

But now you should ask what happened to the modal 'shall'? I have not saved it for last because it seems to be passing out of the language, becoming archaic. Rather I saved it for last because I see it as having the same condition of application as 'will' so that it joins the 'will', 'would' sub-group as a variant of 'will'

Now, we can represent a good deal of what was established above by means of the following chart:

Concept	Modal Sub-Group Component	Modal Sub-Group component
Interest	'should' – non critical interest	'must' – critical interest
Ability	'can' - ability	'could' – ability on condition
Decision	'will'/'shall' - decision	'would' – decision on condition
Possibility-Probability	'may' - possibility	'might' – probability
Emphasis	'does' – singular, present 'do' – plural, present	'did' – singular, past 'did' – plural, past

EXERCISES

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1) Identify all of the modals in the article 'Literary Cubs' appearing on page E1 of the Thursday Styles section of the December 1st, 2011 *New York Times* and say in each case specifically what corresponds to the concept associated with the modal.

2) For each of the 12 modals, produce a sentence that uses that modal and say what specifically corresponds to the concept associated with the modal. Let the subjects of the sentences vary over your interests.

FUNCTIONAL EXPRESSIONS – COPULAS

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There are 17 copulas. They are as follows:

be	have	have been	am being
am	has	has been	is being
is	had	had been	are being
are			was being
was			were being
were			

The copulas in the first column are forms of the verb 'to be', the ones in the second column are forms of the verb 'to have', the ones in the third column will be called 'mixed forms' since each one combines a form of the verb 'to be' with 'been', which seems to be etymologically related to the verb 'to be', and the ones in the fourth and final column will be called 'experimental', or 'provisional', copulas because the expressions involved are not recognized as copulas and yet I will try to make the case that a functionally complete copula sub-system requires them. Now the case with respect to grammar and meaning as regards the copulas is just the opposite of that as regards the modals. We said that the grammar of modals is very simple but the meaning is very complicated. Well, to the extent that copulas have separable meaning and grammar, the meaning is very simple in that each copula indicates number, either singular or plural, of course, and tense, either past or present, while the grammar of copulas is very complicated indeed. However, it might be better to say that copulas are true functional expressions

in that they do not in fact have separable meaning and grammar but instead serve functionally in the production of complex expressions that do have meaning, and of course, as complex, have grammar as well.

Now what the copulas do is to work with the other elements that serve as components of predicate bases to produce the characteristics of predicate bases. And, we will see that while there are four columns of expressions that are morphologically related, i.e. related in the sense that, in the history of the language, one of the expressions appeared first and then the others developed from it, and possibly also all of the expressions are formed from more or less the same parts, the same syllables and/or letters, there are actually five groups, or sets, of copulas because *'be'* has a unique, and highly specialized function, and thus constitutes the first group on its own. It helps predicate bases to produce *modality* because, wherever a predicate base with a copula takes on a modal, that copula must transform into 'be'. So, for example, if the predicate bases of the sentences

They [are performing well].

The boy [was very lonely] when he was away at boarding school.

The candidates [are from] the south.

She [is clearly] the leading authority.

Take on modals, say, 'could', 'must', 'should' and 'will, respectively, as follows

They [could be going soon].

The boy [must be very lonely] when he is away at boarding school.

The candidates [should be from] the south.

She [will clearly be] the leading authority.

then, as we see, their copulas all automatically transform into 'be'.

And, the copula 'be' has no other uses.

The copulas in the other four groups, however, function in a more complicated way. Thus the ones in the second group, the ones in the first column other than 'be', namely 'is', 'are', 'was' and 'were', have three distinct functions.

(1) *Formation of Predicate Bases*

The copulas *'is'*, *'are'*, *'was'* and *'were'* help to form predicate bases of three of the four types of predicate base, namely the type having an adjective as its main component, the type having a preposition as its main component and the type a copula as its main component. The following sentences illustrate this:

The boy [was lonely] when he was away at boarding school.

The candidates [are from] the south.

She [is] the leading authority.

The key components of the three predicate bases are the adjective 'lonely', the preposition 'from' and the copula 'is', respectively. All of the predicate bases are structurally simple in that they contain only the essential elements of their type, i.e., they contain no adverbs and or modals. The copulas 'is', 'are', 'was', and 'were' then serve to indicate **number**, either **singular** or **plural**, and **tense**, either **past** or **present**. The following chart shows how this works out in particular.

	Singular	Plural
Present	Is	are
Past	was	were

(2) *Characterization in Terms of Aspect*

The copulas *'is'*, *'are'*, *'was'* and *'were'* help predicate bases that have a verb as their main component, and do not have a modal component, to produce **aspect**. There are two characteristics of aspect, the **indicative** and the **progressive**. The following two sentences illustrate this distinction:

Jane [plays] tennis.

Jane [is playing] tennis.

The predicate base of the first sentence has the indicative aspect while the predicate base of the second sentence has the progressive aspect. In order to have the progressive aspect a predicate base must have a verb as its main component and that verb has to be of the present participle form, which is the form of the verb that has the '-ing' ending. And when the verb of the predicate base is of the present participle form, the predicate base must have a copula component, either 'is', 'are', 'was', or 'were'. Predicate bases that do not have the progressive aspect have the indicative aspect, so all predicate bases whose main component is an adjective, a preposition or a copula are indicative, and so are predicate bases whose main component is a verb that is not in the present participle form. When we say that the predicate base of a sentence has the indicative or the progressive aspect, we can also say that the sentence containing that predicate base has the indicative or the progressive aspect, respectively.

Perhaps the nature of the progressive aspect can be brought out by considering the following three sentences in relation to a time line.

John hunts deer.

John shot a deer.

John is barbequing the deer now.

The second sentence indicates an action at a point along the time line. The third sentence indicates activity through a span along the time line. The first sentence is something of a generalization and it indicates activity of a certain type through more or less regularly occurring spans along the time line. It has the progressive aspect. Perhaps it is fair to say that, when a sentence has the progressive aspect, it emphasizes the active in time. Compare the past tense sentences

John barbequed the deer.

John was barbequing the deer.

The sentences don't have the same meaning because John might have been barbequing the deer and yet failed to finish the job. But we can get rid of this difference by comparing

John played the guitar.

John was playing the guitar.

In both of these sentence pairs, the first sentence emphasizes the end, more or less, while the second sentence emphasizes the means: in both pairs, the first sentence emphasizes a result, more or less, while the second sentence emphasizes the action or activity that led to the result. Now, emphasis on the action or activity forces recognition of a span or period of time, and quite often the progressive aspect is employed where the speaker or writer wants to provide a temporal reference point, but can't be precise and thus settles for a 'reference span', for an action or activity other than the one given by the verb in the present participle form. Thus consider

John was playing the guitar when the guests began to leave.

Here it is the leaving of the guests that that is featured, that the speaker or writer is interested in, and John's playing of the guitar has the subservient function of indicating, just approximately, when the guests began to leave. I believe that this function is the dominant function of the progressive aspect. But note in this connection that a predicate base that has the progressive aspect should not be confused with a gerund phrase serving as a subject or object term. Thus the sentence

Segovia [was playing] Spanish ballads.

has the progressive aspect in view of the indicated predicate base, but the sentence

Playing Spanish ballads [was] Segovia's passion.

does not have the progressive aspect in view of the indicated predicate base: it has instead the gerund phrase subject term 'playing Spanish ballads', which is certainly therefore featured in the sentence.

(3) *Characterization in Terms of Voice*

The copulas *'is'*, *'are'*, *'was'* and *'were'* help predicate bases that have a verb as their main component to produce **voice**. There are two characteristics of voice, the **active** and the **passive**. The following two sentences illustrate this distinction:

Jane calls John.

John is called by Jane.

The first sentence is in the active voice because its subject 'Jane' performs the action given by the verb 'calls', the action of calling, and the second sentence is in the passive voice because its subject, 'John', receives, so to speak, the action given by the verb 'called', again the action of calling. If for the sake of convenience, and nothing else, we say that the active voice sentence is basic then the passive voice sentence is arrived at by transforming the active voice sentence in four steps:

(1) the subject term and the object term are transposed, i.e. the order of appearance of the subject term and the object term is reversed: thus the subject term 'Jane' becomes the object term and the object term 'John' becomes the subject term

(2) the verb of the active voice sentence is changed to the past form, if necessary: thus the verb 'calls' is changed to the past form 'called'

The verb 'to call' is a regular verb and thus it has four forms, or parts

'to call'	Regular
Present – plural	call
Present – singular	calls
Past	called
Present Participle	calling

Thus if the active voice sentence were

Jane called John.

Then the corresponding passive voice sentence would be

John was called by Jane.

so that a change of the verb to the past form would not be necessary.

(3) the copula from among 'is', 'are', 'was', and 'were' that agrees with the new subject of the emerging passive voice sentence is installed as a copula component in the predicate base of that emerging sentence

(4) the preposition 'by' is installed in the first connector position, which is the connector position just after the predicate base.

Let us consider now a more complex case:

He [must willingly give] them all of the profits of the company.

They [must be willingly given] all of the profits of the company by him.

There are several particular things to note here.

- the predicate base has the modal component 'must' and the adverb component 'willingly', which are unaffected in the transformation

- where the verb of the active voice sentence is irregular and has a past participle form it is changed to that form: thus the verb 'give' is changed to the past participle form 'given'

The verb 'to give' is an irregular verb and has five forms, or parts

'to give'	Irregular
Present - plural	give
Present - singular	gives
Past	gave
Present Participle	giving
Past Participle	given

- the subject term and the object term of the active voice sentence are pronouns and when they transpose they have to change case: thus when the subject term 'he' becomes an object term it changes into the objective pronoun 'him', and when the object term 'them' becomes the subject term it changes into the subjective pronoun 'they'

The subjective and objective personal pronouns and their cases are

Subjective Case	Objective Case
I	me
you	you
he	him
she	her
it	it
we	us
you	you
they	them

- in the active voice sentence, the object term 'them' appears before the object term 'all of the profits of the company' but, in the passive voice sentence the object term which transposed with 'them', and thus replaces it, namely 'him', appears after the object term 'all of the profits of the company': the apparent reason for this is that the verb 'to give' wants to have either the term representing whom something was given to ('them'/'they') or the term representing what was given ('all of the profits of the company') as its direct object and thus who gave something, the giver, ('he'/'him') cannot appear directly after the verb in the passive voice sentence.

The copulas in the third group, 'have', 'has' and 'had', are used to form three of the six basic tenses of English, which are as follows:

	Singular	Plural
Past	He worked.	They worked.
Present	He works.	They work.
Future	He will work.	They will work.
Past Perfect	She had worked.	They had worked.
Present Perfect	She has worked.	They have worked.
Future Perfect	She will have worked.	They will have worked.

So 'had' is used to form the past perfect tense, both in the singular and in the plural, 'has' is used to form the present perfect tense in the singular, 'have' is used to form the present perfect tense in the plural, and 'have' is also used, along with the modal 'will', to form the future perfect, both singular and

plural. The verb in each case must be in its past form, or where it has one, its past participle form. In the chart, each occurrence of the verb 'to work' in a perfect construction is in the past form 'worked'. We will see a case involving a verb that has a past participle below. Regarding terminology, the past, the present and the future can all be called simple tenses, so that we can say that there are simple tenses and there are prefect tenses, and both break down into the past the present and the future.

Now you probably have a pretty good understanding of the simple tenses but the perfect tenses need some explanation. Let us say that we have three 'time zones' as follows:

the past zone	the present zone	the future zone

We can let the left zone represent the past, the middle zone the present and the right zone the future, but the explanation of the perfect tenses will be based on a comparison of them with the simple tenses so we need a two tier time zone structure as follows:

the past zone	the present zone	the future zone

We associate past, present and future with left, middle and right as above but devote the upper zone sequence to the simple tenses and the lower zone sequence to the perfect tenses. Take care to note the difference between the past, present and future time zones and the past, present and future tenses. We are using the zones to explain the tenses. To make the explanation as intuitive as possible, let's use a little story that involves a husband and a wife. The wife is very secure in her job and is able to leave work at five every day but the husband is new in his job and in order to secure his position, he works late every day. The couple have a loving relationship but by personality she is very practical and no nonsense while he is romantic and very sentimental. He loves nothing more than to have dinner and a glass of wine with her, and if under low light the table is adorned with a long stemmed rose in a slim vase and a hand crafted candle, then he is in a state of bliss. The guys at his job however have come to understand

all of this and we will use three sentences they might utter in order to express their sympathy for him. In relation to the past zone, we have:

By the time he arrived, she had already eaten dinner.

Here we clearly have a sentence whose main clause, 'she [had already eaten] dinner', is in the past perfect since its predicate base, indicated as usual by the bracketing, contains the copula 'had', and the verb 'to eat' has a past participle form, namely 'eaten', and thus, according to the rule above to the effect that the verb in a perfect construction must be in its past participle form, if it has one, and in its past form otherwise, the past participle form 'eaten' is what appears. The word 'already' is of course an adverb. The verb 'to eat' is quite irregular but it is perfect for our story here. Its parts are as follows:

'to eat'	Irregular
Present-plural	eat
Present-singular	Eats
Past	ate
Present Participle	eating
Past Participle	eaten

Now to explain what is involved in the case of a past perfect sentence, let us represent the one above in tandem with the simple past tense sentence that corresponds to its main clause as follows:

She [ate] dinner.

By the time he arrived, she [had already eaten] dinner.

Note that I would have liked to bring the two sentences closer together by producing

She already ate dinner.

as the past tense sentence but it is at least slightly ungrammatical due to the meaning of the adverb 'already'. People use it in past tense sentences – 'I already told you.' – but this is not really acceptable usage. We see here how subtle English is, and of course the same is true no doubt for all natural languages. A tacit presupposition of the approach to English (natural language) language taken here is

that almost all, or at least most of this subtlety is due to the vocabulary of the language, what is called its lexical aspect, not its grammar, which is always clear, or becomes clear after reflection, even if it is a bit complicated in some cases. But let us get back to the explanation. If we use the upper zone sequence of the two tier time zone structure to represent the past tense sentence, we get:

the past zone	the present zone	the future zone
a:(she eats)		

where 'a' means action, and if we go on to represent the past perfect tense sentence, we get:

the past zone		the present zone	the future zone
a:(she eats)			
a:(she eats)	a:(he arrives)		

Thus, with the past tense, there is one action in the past zone but, with the past perfect tense, there are two actions in the past zone, one coming from the verb of the main clause of the sentence, the other coming from the verb of a *stated or implied* subordinate clause, and the action given by the main verb is presented with reference to the action given by the subordinate verb – the action given by the subordinate verb, being in the past zone, provides some *specification* as to the location of the action given by the main verb in that, quite vast, zone. So, in our example, the wife's eating dinner is presented with reference to the husband's arrival: his arrival's coming, very sadly for him, *after* her eating dinner helps us to locate her eating dinner in the vastness of the past – although, to us as social beings, his arrival seems to be the big deal, her eating dinner being just a set up factor. We will see that the future perfect tense works in a perfectly analogous way, and that the present perfect tense works in a somewhat less analogous way when we come to the section on predicate bases *per se*.

The copulas in the third group, 'have been', 'has been', 'had been' , can be dispensed with rather quickly as their function is to produce the perfect tenses in the progressive aspect, and we have already made a preliminary study of these linguistic phenomena. And notice, in this connection, how the three words that begin these copulas, 'have', 'has' and 'had', are the same as the three words that constitute

group 3, and the words in group three function to produce the perfect tenses, while the second word of the copulas here, 'been', seems to be etymologically related to 'to be', and yet its parts, 'is', 'are', 'was' 'were', plus 'am', function to produce the progressive aspect. But to get to the point, predicate bases that are in both the perfect tense and the progressive aspect must contain one of the copulas here and a verb in the present participle form, and, given the word relations just established, it is not surprising that the specific association of the three copulas here, and the modal 'will', with the three perfect tenses in the progressive aspect is perfectly analogous to the association of the three copulas in group 3, and the modal 'will', with the same three perfect tenses in the indicative aspect. The following chart makes this clear:

	Singular	Plural
Past Perfect Tense	He had been working.	They had been working
Present Perfect Tense	She has been working.	They have been working.
Future Perfect Tense	He will have been working.	They will have been working.

I call the copulas in group 5, 'am being', 'is being', 'are being', 'was being', 'were being', 'experimental', although a better term might be 'provisional', since I use them as copulas and yet they have not to my knowledge been recognized as such, so that I have to make a case for them. Note however that the way in which they are related to the copulas in group 2 is perfectly analogous to the way in which the copulas in group 4 are related to the copulas in group 3. That is to say,

am being   is being   are being   was being   were being   [group 5]

are to

am   is   are   was   were   [group 2]

as

have been   has been   had been   [group 4]

are to

have   has   had   [group 3]

In both cases, each two word copula = a one word copula + a variant of 'be'. Thus for example

'is being' = the one word copula 'is' + the variant of 'be' which is 'being'

just as

'have been' = the one word copula 'have' + the variant of 'be' which is 'been'

I do not know if this strikes you as elegant, as etymologically elegant, but if it does then it should all the more so in view of a very important fact about English that, somehow, has not yet come out, namely that 'to be' and 'to have' are the two basic verbs of English , on analogy to 'etre' and 'avoir' in French, and 'ser'/'estar' and 'tener' in Spanish. But this is not the argument I present to make the case for recognizing the group 5 expressions as copulas. The argument is fact as follows:

If in the active voice, progressive aspect sentence

He [is torturing] them with grammar.

'is' is a copula, then in the passive voice, progressive aspect sentence

They [are being tortured] with grammar by him.

'are being' must be a copula too!

To sum up, we have seen that copulas serve in the modification, formation and the characterization of predicate bases, and by extension the sentences these predicate bases are components of. The determiner in group 1 facilitates the modification of predicate bases that take on a modal. The determiners in group 2 facilitate the formation of predicate bases that have an adjective, a preposition or a copula as their main element. All characterization is in terms of the 3 P's – Progressive, Passive and Perfect. And, the determiners in group 2 also facilitate the characterization of predicate bases that have a verb as their main component as progressive in aspect. The determiners in group 2 as well facilitate the characterization of predicate bases that have a verb as their main component as passive in voice. The copulas in group 3 facilitate the characterization of predicate bases as perfect in tense, either past, present or future. The copulas in group 4 facilitate the characterization of predicate bases that have an adjective, a preposition or a copula as their main component as perfect in tense. The copulas in group 4 also facilitate the characterization of predicate bases that have a verb as their main component as progressive in aspect and perfect in tense, either past, present or future. And, the copulas in group 5

facilitate the characterization of predicate bases as progressive in aspect and passive in voice. But all of this will be much easier to take in if presented in chart form. Thus:

Group	Function
1 – 'be'	Modification of predicate bases that take on a modal
2 – 'am', 'is', 'are', 'was', 'were'	Formation of predicate bases that have an adjective, a preposition or a copula as their main element
2 – 'am', 'is', 'are', 'was', 'were'	Characterization of predicate bases that have a verb as their main component as progressive in aspect
2 – 'am', 'is', 'are', 'was', 'were'	Characterization of predicate bases that have a verb as their main component as passive in voice
3 – 'have', 'has', 'had'	Characterization of predicate bases that have a verb as their main component as perfect in tense
4 – 'have been', 'has been', 'had been'	Characterization of predicate bases that have an adjective, a preposition or a copula as their main component as perfect in tense
4 – 'have been', 'has been', 'had been'	Characterization of predicate bases that have a verb as their main component as perfect in tense and progressive in aspect
5 – 'am being', 'is being', 'are being', 'was being', 'were being'	Characterization of predicate bases that have a verb as their main component as passive in voice and progressive in aspect

FUNCTIONAL EXPRESSIONS – DETERMINERS

_____

There are 25 copula tokens and 3 copula types. They are as follows:

a	this	all	some	one/1	my	Jane's
an	that	every	few	two/2	your	Carter's
the	these	each	several	…	her	…
	those	any	many		his	a boy's
		no	most		its	a man's
					our	…
					your	
					their	

First, I need to explain what tokens and types are. Let us say simply that 'dog' is a type while Fido is a token, a token of that type. Here, 'one/1', 'two/2', … represents a type and all of the positive integers are its tokens, 'Jane's', 'Carter's', … represents a type and all names with possessive endings are its tokens, and 'a boy's', 'a man's', … represents a type and all noun phrases with possessive endings are its tokens. The entries above beyond the ones just mentioned are 25 in number, and they are all tokens. But now, this little bit of technical fastidiousness aside, we will from here forward speak simply of determiners. Determiners are true functional expressions in that they do not actually have separable meaning but, to the extent that they do have meaning, they are like the modals in that their grammar is extremely simple but their meanings are very complicated. However we will make things simple for ourselves here by, first, giving the simple grammar of determiners and then giving not their meanings

but rather a combination of the set of three concepts one or more of which all determiners reflect, and the specific conditions of application for each determiner. The set of three concepts will help you to understand what a determiner is, generally speaking, while the conditions of application for each determiner will help you to use it properly, and to understand the proper use of it made by others. We can give the simple grammar of determiners by saying that they all modify nouns from the left, and to make this perfectly concrete, we give the following scheme:

_____ ….. _____ …..

  (D)   (No)

where, as the under labels indicate, the first slot is to be filled in by a determiner and the second slot is to be filled in by a noun. The dot sequence right after the (D) slot represents the possibility of an adjective modifier of the noun and the dot sequence after the (No) slot represents the possibility of a prepositional phrase modifier of the noun or a relative clause modifier of the noun or a sequence of a prepositional phrase modifier of the noun followed by a relative clause modifier of the noun. We will use the noun 'car' in the main illustration so let us bring out what is involved here by using it. If the noun is 'car' then the dot sequence after the (D) slot could be filled in by the adjective 'red' giving us

      red car

or the dot sequence after the (No) slot could be filled in by the prepositional phrase 'from Italy' giving us

      car from Italy

or that same dot sequence could be filled in by the relative clause 'that costs over $1,000,000' giving us

      car that costs over $1,000,000

or the same dot sequence could be filled in by the prepositional phrase and the relative clause in sequence giving us

      car from Italy the costs over $1,000,000

Finally here, the noun could carry all three modifiers giving us

      red car from Italy that costs over $1,000,000

But let us put all of this aside and go back to the plain noun case. We can say exactly what the grammar of determiners is by filling 'car' into the (No) slot of the schema

_____ ….. _____ …..

(D)   (No)

thus getting

_____ ….. __car__ …..

(D)   (No)

or taking the plural form, and getting

_____ ….. __cars__ …..

(D)   (No)

and then noting that every determiner in the whole sub-system of same will fill grammatically into the one (D) slot or the other, except for 'an'. Thus we can have

a car   this car   every car   some car   one car   my car   Jane's car

and

the cars   these cars   all cars   several cars   two cars   their cars   a man's cars

and not to leave out 'an' we can have

an apple

all of this variation is just a reflection of noun phrase structure, which we will study later. But now, 'car' is what is called a *count noun*. Another common count noun is 'house'. These words are count nouns because, so to speak, they are nouns that allow you to count – one car, two cars … and one house, two houses … . Count nouns contrast with what are called *mass nouns*, or *non-count nouns*. Good examples of mass nouns are 'air' and 'water'. We can't say one air, two airs … or one water, two waters … . Each count noun refers to a class of units whereas each mass noun refers to a mass, *all* air, *all* water. Now all determiners work with count nouns, as we have pretty much demonstrated, but there are a number of determiners that do not work with mass nouns. They are

a, an, these, those, every, each, few, several, many, and all the determiners in the sequence one, two …

Thus we cannot say

a water, these air, etc.

Let us now consider the three concepts that will allow us to understand what determiners are in a general sense. These concepts are:

- existence

- quantity

- identification

Each of these concepts has one or more associated concepts. The concept of possibility associates with the concept of existence. The concepts of number and proportion associate with the concept of quantity. And the concepts of uniqueness, particularity, definiteness and, as the opposite of this last concept, the concept of indefiniteness, all associate with the concept of identification. We will need to appeal to this larger set of concepts in order to bring out the general nature of the category of determiners and to develop the conditions of application for each of the various determiners. Now three pairs of sentences, each of which sets a contrast between two determiners, will show how determiners play upon the concepts in this set.

The first pair of sentences relates to a situation in which a subway train has stalled. The conductor of the train might say under these circumstances:

We are sorry for the inconvenience,

However, a more linguistically sophisticated conductor under the same circumstances might say:

We are sorry for any inconvenience.

The difference between the two sentences is of course that the first one uses the determiner 'the' while the second one uses the determiner 'any'. The conditions of application for 'the' are such that the first sentence attributes the existence of inconvenience to all of the passengers on the train, and thus apologizes to all of them. The conditions of application for 'any' however are such that the second

sentence does not necessarily attribute the existence of inconvenience to all of the passengers on the train. It in effect brings in an 'if' clause to associate with the apology so that it really delivers the statement:

If you are inconvenienced by the stalling of the train then we are sorry for that.

The second sentence thus fits both the case of the business group that will be late for a meeting because of the stall and the case of the young teenagers who are just joyriding the train out of their fascination with all aspects of the subway system. The first sentence can't do this. So we see that determiners do play on the concept of existence.

The second pair of sentences relates to our perception of economic opportunity in American society. The two sentences are:

Few Americans are millionaires.

Many Americans are millionaires.

The difference here is that the first sentence employs the determiner 'few' while the second sentence employs the determiner 'many'. The interesting thing here is that even though the one sentence strikes a more positive note while the other strikes a more negative note, they do not have to be seen as disagreeing with each other. The conditions of application of 'few' are such that we might think of the sentence employing it as saying that a small proportion of Americans are millionaires while the conditions of application of 'many' are such that we might think of the sentence employing it as saying that a large number of Americans are millionaires. There are now 312 million Americans. If, say, 3 million of them are millionaires then they represent a small proportion of the population but they are still large in number. So we see that determiners play on the concept of quantity, here obviously in the more specific terms of proportion and number.

Finally, we come to the third pair of sentences which have been fashioned to relate to exotic sports cars and the quality of honesty. A gorgeous, brand new red Ferrari passes a teacher waiting at a bus stop and he says

I want a red Ferrari.

The driver of the car takes it to its destination, parks it and goes about his business. Standing across the street from where the car is parked, a shady character, wearing dark shades says

I want that red Ferrari.

The difference of determiner this time is of course 'a' versus 'that' and clearly the user of the sentence containing 'a', the teacher, does not have in mind any particular red Ferrari. Any gorgeous, brand new one will do. By contrast however the user of the sentence containing 'that', the shady character in the dark shades, does have in mind a particular red Ferrari – the one he is looking at with the intention of stealing it! Clearly then determiners play upon the concept of particularity.

Let us turn our attention now to the very difficult business of developing the conditions of application for the determiners in the set presented above. To the extent that it is possible, the conditions will be developed with respect to each other. The determiners will then form something of a system in which some determiners will have a primary role in that other determiners will be understood in relation to them. Theoretically at least this will reduce the number of determiners that the student has to learn by direct reference to terms or other meaningful entities in their native language.

The determiners are again like the modals in that a good dictionary will specify all of the senses that attach to each of them and here again we appeal to the *Merriam-Webster Advanced Learner's English Dictionary*. The student should look each determiner up in the dictionary and become as familiar as possible with all of its senses, and of course try to identify the sense associated with each use of the determiner that they encounter. We will here follow the same strategy that was followed in the case of the modals, and that is to develop conditions of application related to the main sense of the term. Let us take the determiners group by group, starting with the group that I will call the 'total quantifiers', namely

all

every

each

any

no

We will take 'all' to be primary, and characterize the other four determiners in the group in terms of it. And what about 'all' itself? The student should use their English-native language dictionary to establish

its meaning for themselves but we can help by noting that there are 100 members of the United States Senate, and if a reporter says

> All senators were present for the critical vote.

then 100 senators were present for the critical vote. Let us call 'all' the *universal* determiner, and advise the student to establish the meaning of this term too, although it is very convenient here given the international context that is set by the study of foreign languages. Now if 'all' is the universal determiner then 'every' is the grammatically singular universal determiner, 'all' being plural of course. And it is an important feature of our use of language that there are occasions on which only the singular will do. Thus we are quite comfortable saying

> All men are equal.

and find it difficult to express the same thought in the singular. Consider

> Every man is equal.

which simply won't do, and

> Every man is equal to every other man.

which will do, but only very awkwardly. But if we want to contradict the famous line

> No man is an island.

we would naturally say

> Every man is an island.

recognizing the inadequacy of

> All men are islands.

But now if 'every' is the grammatically singular universal determiner then 'each' is the grammatically singular universal determiner with a focus on the individual case, the determiner that takes *all* of the relevant cases *one by one*. Consider the sentence

> The assigned text was James Joyce's difficult novel *Ulysses*, and the class tensed up as the teacher called on each student one by one.

And consider how 'each' and 'other' work together to describe certain kinds of situations efficiently. Thus in relation to another classroom project, it might be said that

> Each student passed their exam to another student, the one immediately to their right, or in the case if the student at the end of the row, the one at the beginning of the next row.

Contrast this sentence with the one just like it except that it has 'every' instead of 'each':

> Every student passed their exam to another student, the one immediately to their right, or in the case if the student at the end of the row, the one at the beginning of the next row.

The second sentence just does not do a very good job of making clear what the situation actually is.

Now let us take 'any'. It can be characterized as the conditional universal determiner. We saw above that 'any' in effect carries an 'if' with it. The sentence

> We are sorry for any inconvenience,

was deemed to be better by far than the sentence

> We are sorry for the inconvenience.

because the 'any' sentence really means

> If inconvenience exists for any passenger then we apologize to them.

Consider a simpler case, the famous sign wording

> All trespassers will be prosecuted.

This wording is not as accurate as is desirable. It should be changed to

> Any trespassers will be prosecuted.

The 'all' sentence almost presumes that there will be trespassers and immediately dictates prosecution for them while the 'any' sentence sets the condition

> (if) there are trespassers

and waits to see whether the condition is met, whether one or more persons trespass on the property, before it concerns itself with prosecution. So the 'if' associated with 'any' brings in a condition, and thus 'any' is the conditional universal determiner.

We can close out the total quantifier group of determiners by characterizing 'no' and the negative universal determiner. So while

> All men are mortal.

is positive in the sense that it *includes* all relevant individuals,

> No men are immortal.

is negative in the sense that it *excludes* all relevant individuals. If we say

> All senators are well-paid.

then we get 100 well-paid individuals but if we say

> No senators are billionaires.

then we get 0 billionaires. The determiner 'all' sweeps everything in: the determiner 'no' sweeps everything out.

Next we will attack the determiner group

> some
>
> few
>
> several
>
> many
>
> most

The determiner 'some' is basic here but we will not use it to set the conditions of application for the other determiners in the group on analogy to the determiner 'all' in the group above. The situation here is more complicated. There are at least three distinct uses of 'some' that are important to bring out here.

1. 'some' can be used to establish existence, as it does in the sentence

> Well, some lucky soul is free of money worries now!

uttered after the results of a mega-lottery have been announced. There is no attempt here to refer to anyone. Rather the speaker marvels at the fact that such a person as the one described has come into being. This use of 'some' can be related to a rule in logic that allows us to reason

> John is a three time Ironman triathlon champion.

> Therefore:

> Some individual is a three time Ironman triathlon champion.

The rule is called *existential generalization*. The presumably factual assertion made by the first sentence provides the basis for the existential assertion made by the second sentence, which could be rewritten as

> An individual who is a three time Ironman triathlon champion exists.

2. 'some' can be used to refer to one or more individuals indefinitely, as the department secretary does when she says to one of the professors

> Some student came by to see you this afternoon.

It might be possible for the secretary to identify the student to the professor but that is not what is deemed relevant under the circumstances. What is deemed relevant is simply the fact that the professor was called upon by a student.

3. 'some' can be used to indicate quantity. The point was made above that 'some' would not be used to develop the conditions of application for the other determiners in its group, and in fact the determiner 'most', along with the determiner 'all', will be used to here develop the conditions of application for 'some'. If there are 100 members of the United States Senate then it is appropriate to say

> Most senators have served for multiple terms.

only if it is not the case that all senators have served for more than term but it is the case that more than half of the senators, more than 50, have served for multiple terms. Now it is appropriate to use

'some' to indicate quantity if the quantity intended is more than one but less than most. Thus we can say

Some senators are newly elected.

if more than one is newly elected but fewer than 50 are newly elected.

Note that in developing the conditions of application for 'some', we have already developed the conditions of application for 'most'. The determiner 'most' is to be used to indicate a quantity that is more than half but less than all. And we can deal quickly with 'several'. It is the most specific determiner in its group, and native speakers tend to use it to indicate from 4 to 7, more or less.

The determiners 'few' and 'many' are much more difficult, but the notions related to the sentence pair presented above in the effort to show how the concept of quantity figures in the general characterization of determiners as a type of functional expression are helpful. We can use 'few' to indicate a small proportion and use 'many' to indicate a large number. Of course we depend here on the terms 'small' and 'large' but, while there is the possibility of developing some kinds of conditions of application by reference to things in the world – consider the presentation of color squares to develop the use of color terms in the *Merriam-Webster Advanced Learner's English Dictionary* – we must for the most part understand one part of the language by reference to another part.

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.

.

We will turn our attention now to the group

a

an

the

the members of which are called 'articles', and 'a' and 'an' are really the two forms of the indefinite article while 'the' is the definite article. This is perhaps the most interesting group in that, on the one hand, the analysis of these expressions, especially 'the', has a long and controversial history among

those who study language formally and, on the other hand, the non-use and misuse of the articles is one of the main problems in second language acquisition.

Let us start with 'the'. Its conditions of application are implicit in the following specification of three uses of it.

1. 'the' serves as the determiner of a noun phrase whose noun with or without adjective, prepositional phrase and/or relative clause modifiers identifies an individual of some kind for the speaker, or writer, and their audience. So if one student talking to another student makes reference to a third student by means of the noun phrase

> the new student from Costa Rica who is studying engineering

then the noun 'student', its adjective modifier 'new', its prepositional phrase modifier 'from Costa Rica' and its relative clause modifier 'who is studying engineering', assembled as they are, identify a certain student for both the speaker student and the student spoken to. In a slightly different case, one diner might command a fellow diner by saying

> Go get the small bottle of hot ketchup in the refrigerator.

knowing that the information given by the noun and noun modifier assembly

> small bottle of hot ketchup in the refrigerator

will allow the commanded diner to find the desired condiment.

2. 'the' serves as the determiner of a noun phrase that is used to refer to an individual of some kind that has been introduced into the discourse earlier on by a noun phrase that is the same, or similar, except that it has the determiner 'a' or 'an' rather than the determiner 'the'. Thus someone says

> I bought a bread knife and a cutting board: the knife costs $20, the board $15.

Here 'a bread knife' and 'a cutting board' introduce individuals which will be referred to subsequently by 'the bread knife' and 'the cutting board', or with greater economy, 'the knife' and 'the board', respectively.

3. 'the' serves as the determiner of a noun phrase that is used to indicate some individual that is a part of the context in which the discourse takes place. The simplest possible example here is the common English sentence

      Pass the salt.

where of course the noun phrase

      the salt

identifies a certain salt shaker because it is the only one on the dining table.

As indicated above, the determiners 'a' and 'an' are effectively one determiner, which we can then call the indefinite determiner, to go with 'the' as the definite determiner. It appears that there are two uses of the indefinite determiner.

1. Someone says

      I want a new car.

such that there is no particular car in the picture.

2. Someone says

      I bought a new car. I'll pick it up from the dealership tomorrow.

such that there is a particular car in the picture but there is no interest on the part of the speaker to identify the car for the person, or persons, spoken to, and it would be very difficult to do so anyway – the speaker could say

      It's a slate grey Chevy Malibu with a tan interior.

but there could be thousands of cars that fit this description. There seems to be a strong association between identifiability and acquaintance. The person spoken to would need to see the new car before the speaker could identify it for the person spoken to. Once the person spoken to has seen the car, the speaker can say

      I took *the* car back to the dealer for a checkup. There was a little rattle in the dashboard.

The student should note however that the number 2. case of the use of 'the' above is not an exception to the association cited here between identifiability and acquaintance. In the construction

I bought a bread knife and a cutting board: the knife costs $20, the board $15.

There is no pretention that either the knife or the board has been identified for the person spoken to. The knife and the board have something like a hypothetical standing in the conversation. The person spoken to takes them on faith given their acceptance of the sincerity of the speaker.

The understanding of the use of 'the' here makes it possible to deal quickly with the two possessive groups, the possessive adjectives

my

your

her

his

its

our

your

their

and the determiners in the open set

Jane's

Carter's

…

which will be called, for lack of a better term, 'possessive ending constructions', since each one is a construction whose parts are a name and a possessive ending. Now, we will treat

her husband

and

>Jane's husband

as

>the husband who belongs to her

and

>the husband who belongs to Jane

respectively. In this way they become noun phrases whose determiner is 'the' such that they are covered by what has already been said. And if the speaker says

>Her husband is a lawyer.

or

>Jane's husband is a lawyer.

then either the person spoken to knows the gentleman involved such that the relevant noun phrase identifies him for the person spoken to or the relevant sentence has been preceded by a sentence like

>Jane is married.

such that the gentleman is introduced into the conversation hypothetically.

   We are ready now to take on the demonstrative adjectives,

>this

>that

>these

>those

They are called demonstrative adjectives because they demonstrate, although this term does not here have its usual meaning of protesting in public but instead it means to point. These determiners are very interesting. They are of course used in conjunction with nouns, and they may be compared profitably

with noun phrases whose determiner is 'the'. In relation to use number 3. of such noun phrases, the sentence

Pass the salt.

was presented. Well, in order to get the relation, the analogy really, between noun phrases with 'the' and noun phrases with 'this', 'that', 'these', and 'those, let's imagine a fancier dinner party at which someone says

Pass the sea salt.

or a fancier dinner party still at which someone says

Pass the course ground sea salt from Morocco.

In these last two sentences, noun modifiers, the adjective 'sea', in the one case, the complex adjective sequence 'course ground sea' and the prepositional phrase 'from Morocco', in the other, are used to identify the thing given by the noun, namely some salt, *by description*. Now suppose that earlier in the proceedings, someone held up the dish with the coarse ground sea salt from Morocco and said

This salt is actually *good* for your health.

Here the *gesture* of holding up the dish is used to identify the thing given by the noun, to wit, the very same salt, *by demonstration*. We can bring out the analogy more clearly by using the following two formulas:

in the earlier case:

'the' + an identifying modifier or modifier complex + noun

in the present case:

'this' + identifying gesture + noun

So there is a strong relationship holding between noun phrases with the definite article and noun phrases with demonstrative adjectives. But, two further points need to be made. First, as is implicit in what is given above, the analogy does not hold if the noun phrase with 'the' has no modifiers, as is the case with respect to

> Pass the salt.

And, what is more important, the phenomena that count as gestures in the sense intended here cover a very wide range indeed: everything from calling attention to something on a PowerPoint screen by use of a laser pointer to the merest redirection of the eyes in a more intimate setting.

Finally we come to the determiners

> one/1

> two/2

> …

which I call 'number expressions', again for want of a better term. Each one of these determiners indicates the precise number of units of a type indicated by a noun that are involved in some situation. Thus compare:

> The bill was rejected. Only 37 senators voted in favor of it.

> The bill passed. Fully 95 senators voted in favor of it.

FUNCTIONAL EXPRESSIONS – PRONOUNS

_____

The pronouns of English exhibit a great deal of order. And they can be seen as forming two grand systems, one very tight in formation, the other a bit looser. The logic of these systems is very interesting, and the systems themselves are quite beautiful. However, as we will see, there are two ways of regarding the logic, the traditional way and the way that will be recommended here. The one system consists of the 32 so-called personal pronouns. It can be given schematically as follows:

Number	Person	Gender	Subjective	Objective	Reflexive	Possessive
singular	first		I	me	myself	mine
"	second		you	you	yourself	yours
"	third	masculine	he	him	himself	his
"	"	feminine	she	her	herself	hers
"	"	neuter	it	it	itself	its
plural	first		we	us	ourselves	ours
"	second		you	you	yourselves	yours
"	third		they	them	themselves	theirs

The one thing that is missing here, because it does not fit in conveniently graphically, is the indication that 'subjective', 'objective', 'reflexive' and 'possessive' come under the heading _Case_, just as 'singular' and plural come under the heading _Number_, 'first', 'second' and 'third' come under the heading _Person_ and 'masculine', 'feminine' and 'neuter' come under the heading _Gender_.

The distinction between singular and plural really needs no explanation. Singular pronouns refer to one while plural pronouns refer to two or more.

The distinction among the three 'persons' goes as follows:

First person singular – the person speaking

Second person singular – the person spoken to

Third person singular – the person or thing spoken of (or about)

First person plural – the persons speaking

Second person plural – the persons spoken to

Third person plural – the persons or/or things spoken of (or about)

The distinction between masculine and feminine also needs no explanation. The neuter is simply whatever there is that is neither masculine nor feminine. Only an animal can be masculine or feminine. So 'boat' is neuter. But things are different in the two other widely dispersed languages of the world, namely French and Spanish. In French and Spanish, everything is either masculine or feminine. In French, 'boat' is 'bateau' and it is … while, in Spanish, 'boat' is 'barco' and it is …

Case is also pretty straight forward. Subjective case pronouns serve as subjects of sentences while objective case pronouns serve as objects of sentences. Thus we can install 'she' and 'him' in the slots of the predicate

_____ called _____

In the manner

She called him.

But we cannot install 'her' and 'he' not in the manner

Her called he.

Because the first slot of the predicate is the subject slot and thus it can take the subjective pronoun 'she' but not the objective pronoun 'her', and the second slot of the predicate is an object slot and thus it can take the objective pronoun 'him' but not the subjective pronoun 'he'.

The case of reflexive pronouns is a little bit interesting in that it requires a bit of explaining. A reflexive pronoun can appear only in an object slot of a predicate, particularly the first object slot, and they do so when what is to be referred to from that slot is the same thing that is referred to from the subject slot. Thus I can say, referring to my barber

He cut me while shaving me.

and the pronoun set up is correct because the subjective pronoun 'he' appears in the slot before the verb 'cut', i.e. the subject slot, and the objective pronoun 'me' appears in the slot right after the verb 'cut', i.e. in the first object slot. But if I had decided to take the do-it-yourself route to save money and yet suffered the same misfortune, I could not say

I cut me while shaving.

even though the subjective pronoun 'I' which refers to me in the context, appears in the subject slot of the sentence and the objective pronoun 'me', which also refers to me in the context, appears in an object slot. What has to be said is

I cut *myself* while shaving.

because the rule, as indicated above, is that when the individual to be referred to from the object slot right after the verb is the same individual referred to from the subject slot, you can't use an objective pronoun in that object slot: you have to use the appropriate reflexive pronoun, which in this case is the first person singular reflexive pronoun 'myself', as the chart above will verify.

Possession is well understood by everyone, and thus the possessive case as well:

This is *mine*. Please keep your hands off of it! That's *yours* over there.

The other grand system of pronouns has 8 sub-systems, 6 of which are in pretty tight formation while the other 2 stand somewhat outside. The former are as follows:

some	thing
every	thing
any	thing

no	thing

some	where
every	where
any	where
no	where

some	place
every	Place
any	place

some	time
any	time

some	body
every	body
any	body
no	Body

some	one
every	one
any	one

We can see what the logic is here. Each sub-system employs the four *quantifiers* 'some', 'every', 'any' and 'no' and each of these quantifiers appears as the first of the two constituents of one of the pronouns involved, and then each sub-system has what might be called a base, either 'thing', 'where', 'place', 'time', 'one' or 'body', which appears as the second of the two constituents of all of the pronouns involved. But not all of the possible combinations have developed in the language. The 'missing' combinations are:

noplace

everytime

notime

no one

No effort will be made to account for any of these exclusions. The cost-benefit ratio is the justification for this. The student has simply to memorize the sub-systems. Their clear logic greatly facilitates this.

There is a special relationship that holds between the last two sub-systems. The pronouns in them mean the same thing but the pronouns in the sub-system with 'one' as base are more formal while the pronouns in the sub-system with 'body' as base are less formal. Thus it might be better to merge them as follows:

	More Formal	Less Formal
some	one	body
every	one	body
any	one	body
no	one	body

At this point it is apt to note that, especially under the presentation here, the pronouns in these sub-systems are like noun phrases. All of the quantifiers here are of course determiners and the bases are nouns, except for 'where' and 'one', and of course 'one' represents person and 'where' represents place. This will be important a bit later when we look at the big systems here from a new perspective.

The next to last sub-system is even more systematic than the others here, although as indicated above it stands apart from them. It is the sub-system of the demonstrative pronouns, which is best given as follows:

	Near	Far
Singular	this	that
Plural	these	those

We just saw that the 'quantifiers' of the pronouns in the above 6 sub-systems are all determiners and her we see that the same 4 words, the ones in the grid above, are both determiners and pronouns. And clearly words in the two collective groups function perfectly analogously. Consider:

Everyone enjoyed the party.

Every guest enjoyed the party.

This guacamole is great!

This [with a gesture towards the guacamole] is great!

The less obvious connection is with respect to the words 'her' and 'his', which are both both determiners and pronouns. Consider:

I saw her car. ['her' = determiner, specifically possessive adjective]

I saw her. ['her' = singular objective pronoun]

his is his car. ['his' = determiner, specifically possessive adjective]

This is his. ['his' = singular possessive pronoun]

Note the structural difference. The determiners 'her' and 'his' join with nouns to produce the terms 'her car' and 'his car' but the pronouns 'her' and 'his' are terms on their own. The point will be expanded upon shortly. Note also how the grammatical classifications are the same in the two determiner cases but different in the two pronoun cases – 'her' is *objective* case, 'his' *possessive* case. This is an interesting bit of morphology, or etymology, or both, that someone could no doubt explain.

The final sub-system is as follows:

Subjective	Objective	Reflexive	Possessive
one	one	oneself	one's

Just above, we tagged 'someone', etc. as more formal and 'somebody', etc. as less formal. The 4, or 3, pronouns in this sub-system are all ways of referring formally to persons in general, in the singular mode.

One must protect oneself while traveling.

One must protect one's valuables while traveling.

The fact that all of these pronouns are singular but refer generally is analogous to the fact that the determiner 'every' is, in relation to 'all', the grammatically singular universal, and similarly for 'each'. The final point here is that it's a bit suspect that we have to use 'one' twice (but recall from the section on copulas that 'had' is both past singular and past plural) and that 'one's' has a possessive *ending* – absolutely no other pronouns do. But the compensation for this is the elegance of having this group of pronouns fall precisely under the four part distinction with respect to case.

Now we can conclude the traditional account of pronouns by making three further points.

a) Every pronoun in modern English consists in a single word.

b) The distribution of pronouns among the various predicate term slots is clear – subjective case pronouns can appear only in subject slots, objective case pronouns can appear only in object slots, reflexive pronouns can appear only in the first object slot, under the conditions described above, and all other pronouns are free to appear in any slot, such that we can have all of

Everyone attended the party.

The party impressed everyone.

The host of the party received thank you notes from everyone.

c) Some pronouns play an important 'replacement' role, allowing us to say not

Mr. Obama is the president. Mr. Obama is a Democrat. They interviewed Mr. Obama on television yesterday.

but instead

Mr. Obama is the president. *He* is a Democrat. They interviewed *him* on television yesterday.

The pronouns that play this replacement role are the members of what I call the Pro. Kit, which is as follows:

he	him
she	her
it	it
they	them

although reflexive pronouns function in the same general way really. When the pronouns in the Pro. Kit play their replacement role, they must agree with the terms they replace in case, number and gender. Agreement with respect to number deserves special attention because it goes wrong so often. To understand this let us note that pronouns don't replace the first occurrence of the term, only its repetitions and that first occurrence of the term is called the *antecedent* of the pronoun. Thus in

Mr. Obama is the president. He is a Democrat.

The pronoun 'he' has 'Mr. Obama' as its antecedent. So, when the pronoun disagrees with the term it replaces in terms of number, it is said that there is a Pronoun/Antecedent Agreement Error, or a P/A for short. The most common case is that in which the antecedent is a noun phrase that contains a prepositional phrase modifying the 'head' noun and the pronoun is made to agree with a noun that is or is a part of the object of the preposition in the prepositional phrase instead of the head noun. Thus in the sentence

She designed the new line of items and will be responsible for promoting them.

The antecedent noun phrase is 'the new line of items', which has the noun 'line' as its head and the noun 'items' as the object of the preposition 'of' in the prepositional phrase 'of items'. The pronoun

involved is of course 'them' and unfortunately it agrees with 'items' instead of 'line', creating a pronoun/antecedent agreement error. The sentence should read

She designed the new line of items and will be responsible for promoting *it*.

The final move here is to suggest a somewhat different perspective on the pronouns of English, and thus a different organizational scheme for them. The first division is that between pronouns that refer to *discourse participants*, i.e. the parties to the conversation, and those that refer to entities in the world. The pronouns in the former group are

I	me	mine	myself
you	you	yours	yourself
we	us	ours	ourselves
you	you	yours	yourselves

The pronouns in the latter group are all of the remaining ones. They divide into those that demonstrate and those that describe. The pronouns in the former group are

this	that	these	those

The pronouns in the latter group are all of the remaining ones. They divide into those that describe 'directly' and those that describe 'indirectly'. The pronouns in the former group are the ones that are like noun phrases and thus eminently qualified to describe directly, namely

something	somewhere	someplace	sometime	somebody	someone
everything	everywhere	everyplace	anytime	everybody	everyone
anything	anywhere	anyplace		anybody	anyone
nothing	nowhere			nobody	

The pronouns in the latter group are the remaining ones. They divide into those that 'describe' specifically and variably via their antecedents and those that 'describe' generally and fixedly via their single antecedent. The pronouns in the former group are

he	him	his	himself
she	her	hers	herself
it	it	its	itself
they	them	theirs	themselves

The pronouns in the latter group are

one	one	one's	oneself

where it must be understood that the single 'antecedent' of these pronouns is the noun 'person', or the noun 'persons' with the individuals in its reference taken one by one so to speak.

The student will have to decide whether this single scheme for the pronouns or the more traditional dual scheme presented above is more helpful. Perhaps the student will benefit from studying the pronouns from *both* of these perspectives.

FUNCTIONAL EXPRESSIONS – CONJUNCTIONS

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We will cast our net wide when it comes to the conjunctions, preferring to include something that might not belong to excluding something necessary, knowing that the set can be pruned going forward. A conjunction is an expression of one to a few words that is used to join two or more terms or sentences. The result is a compound term or a compound sentence. How many conjunctions are there in English? Well, like all categories of functional expressions, the tally we are dealing with here quite small in relation to the million or so words English is reputed to have currently. In the system here there are 50 conjunctions that are divided into 8 sub-categories. 4 of the 50 conjunctions appear in 2 distinct categories. The presentation strategy here will be ultra simple, and thus perhaps a bit boring. The 8 categories will be rolled out and the conditions of application for each member of each category will be implied by the use of that member in a single construction.

Category 1: *Conjunctions of Simple Compounding* – ' and', 'also', 'further', 'furthermore', 'moreover', 'plus', 'all in all', 'in short', 'anyway' [9]

Jane rides well and she has her own horse.

Jack and Mary are going to the movies and I'm going also.

The defendant has a criminal record. Further, he had a clear motive for committing the crime.

The operational model for the office has to be revised. Furthermore, we're all going to have to learn to be more cordial to each other.

This condominium has high ceilings, hardwood floors and a new Viking kitchen. Moreover, is has a small terrace off the master bedroom.

You get the policy at a very low price. Plus you don't have to make the first payment for six months.

The security was a little lax but the food was good, the various presentations were effective for the most part and the attendees seemed to bond with each other. All in all, the conference was a success.

He got good grades, he seems to like college life, he hasn't complained about the cafeteria food the way we used to, and he's made some new friends. In short, things look pretty good now.

I just can't seem to keep up. I've got to do the laundry, I haven't filed my taxes and Grace keeps calling me about the divorce proceedings. Anyway, you have a nice day!

Category 2: *Logical Connectives for Sentences* – 'either…or', 'or', 'nor', 'if…then', 'if', 'if and only if', 'only if', 'only' [8]

Either you spend more time studying or you find a way to use the time you're already spending more efficiently.

I left my house keys in the car, or I left them at work.

She really doesn't want to go to the party. Nor do I.

If you work hard and treat people in the right way then you will succeed in life.

I'll sign up if you sign up

The economy will turn around if and only if confidence among both consumers and business people increases dramatically.

You can attain inner peace only if you're willing to exercise a lot of mental discipline at the outset.

Only well qualified buyers are eligible for this low rate. [= Well qualified buyers are eligible for this low rate and no one else is eligible for this low rate.]

Category 3: *Logical Connectives for Terms* – 'and', 'both … and', 'either … or', 'or', 'neither … nor', 'and/or' [6 - 4]

Newspapers and magazines are experiencing different fortunes in the digital age.

Both the Obama and Romney will try to appear tough on terrorism.

Either the PC or the Mac will eventually emerge as the universal standard.

I'm going to get a Dell or a Sony.

Neither rain, nor sleet, nor snow nor gloom of night can stay these curriers from their appointed rounds.

According to the *prix fixe* menu, we can have pie and/or ice cream for dessert – pie *a la mode*!

Category: 4 *Qualification Conjunctions* – 'although', 'though', 'even though' [3]

> The article makes a number of good points although you have to dig them out of the language.

> Though the economy is fragile, you can still barely move around in shopping areas.

> They spent a couple of weeks in Hawaii even though they are deeply in debt.

Category 5: A*rgumentative Conjunctions* – 'therefore', 'thus', 'hence', 'so', 'then', 'as', 'for', 'so that', 'such that' [9]

> All men are mortal. Socrates is a man. Therefore, Socrates is mortal.

> Only the butler had both motive and opportunity. Thus he must have murdered his master.

> One of the most important discoveries of modern medical science is the correlation between obesity and disease. Hence you must maintain a healthy weight if you want to be well.

> I couldn't find the doll she wants today so I'll have to try some other stores tomorrow.

> I hear you say you're going to run the marathon. Then you have to get the proper gear.

> They've put themselves a bit at risk as they haven't yet decided what type of life insurance to buy.

> You can't commit any act so wayward from your nature for to thine own self one must be true.

> They sold the summer house so that they could feel confident about handling the kids' college expenses.

> The doctor used a new micro-stitch technique such that the wound would actually heal in a matter of hours.

Category 6: *Explanatory Conjunctions* – 'because', 'since', 'after all', 'in that', 'given that' [5]

> The student got the top grad because she understood the necessity of meeting the conditions of the assignment, and she worked harder than any of the others at crafting the paper well.

> Since he had too much time on his hands, he decided to do some volunteer work.

> The sentence doesn't work in that some of the things necessary for the reader to understand it don't show up until later in the paragraph.

> Given that banks can borrow from the Fed at such low interest rates, many of them are finding it easy to make record profits.

Category 7: *Contrast Conjunctions* – 'but', 'however', 'nevertheless', 'nonetheless', 'still', 'yet', 'rather', 'instead', 'whereas', ' anyway'[10 - 1]

He proposed but she said no.

My new laptop is too heavy. However, I really like the way it looks and it's really fast.

Life poses many challenges. We must persevere nevertheless.

Grammar is not the kind of thing that gets students excited. Nonetheless they can get into it if it's presented in the form of a computer game of the right type.

She wasn't able to win his heart. Still she had sweet memories of their experiences together that would last a lifetime.

My Fiat was really a toy car. Yet its responsiveness and handling made it a joy to drive.

He didn't choose the smaller sapphire which was without flaws. Rather, he chose the larger one that, because of its size, looked so much more impressive.

She ordered a black coffee with two sugars. Instead, she got a light coffee with what seemed to be a ton of sugar.

She loves foreign art films, especially the romantic ones, whereas he likes only Hollywood style action flicks.

The thing was way overpriced. They bought it anyway, having become addicted to its charms right there in the shop.

Category 8: *Amplification Conjunctions* – 'for example', 'for instance', 'in particular', 'in other words', 'that is' [5]

The more complicated an expression type, the more difficulty the student has mastering it. For example, infinitive phrases and gerund phrases are complicated term types and the student often uses preposition and a gerund phrase where they should use an infinitive phrase, or vice versa.

When one must expend a good deal of effort putting together a general strategy for expressing their thought, oftentimes one neglects the details involved. For instance, students often fail to put plural endings on nouns they clear intend to have refer to more than one.

She had a hard time distinguishing words that look and/or sound alike. In particular she almost always wrote 'then' where she should have written 'than'.

Oftentimes, the ESL student will produce a sentence whose meaning is clear but whose construction is odd. In other words, the student got the meaning out but by appeal to a sentence model from their native language.

Taking the right courses with the best teachers, and getting all of the materials required is good, up to a point. That is, without a very high level of motivation, no real progress will be made, no matter what resources are available.

We have taken the grand tour of conjunction types here, and perhaps the travel has been tedious. Further, the student can no doubt see from the example sentences how subtle the conditions of application of many of the conjunctions in fact are. But, the flip side of this is that having the types specified and classified as they are should help the student to develop their general understanding of the conjunctions of English as a part of speech, and each example sentence provides a model of the use of a particular conjunction that, no matter the subtlety involved, should help the student to make at least a fledgling effort of their own to put that conjunction to use.

FUNCTIONAL EXPRESSIONS – PREPOSITIONS

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On the accounting here, there are 69 prepositions in English. 53 of them are single word, 16 of them multi-word. 3 of them are probably archaic and 3 of them are complete or partial borrowings from other languages. They are as follows in alphabetical order:

about	beside	onto	without
above	between	outside	along with
across	betwixt	over	as of
after	beyond	per	as per
against	by	sans	as though
along	cum	since	as to
alongside	despite	than	because of
amid	during	through	due to
amidst	except	thru	except for
amongst	for	to	as a means to
among	from	under	as a result of
around	in	unlike	in consequence of
as	inside	unto	in lieu of
at	instead	upon	in spite of
before	like	via	instead of

behind	of	with	in terms of
below	on	within	on the basis of
beneath			

The system of English employed in this text allows us to say that, at the appropriate level of generality, there are exactly four functions of prepositions:

1. prepositions serve as the main component of one of the four types of predicate base

 She [is *in*] Texas attending a conference.

2. prepositions serve as predicate extenders

      I bought a necklace *for* my mother.

3. prepositions serve as one of the two components of a prepositional phrase

      I bought a necklace [*with* four rubies] for my mother.

4. the preposition 'to' is a component of every infinitive phrase

      I want [*to* learn Spanish].

However this is not of much help to the student because the big problem is figuring out which of the 69 preposition to use on functions 1., 2. and 3., and especially 2. and 3. To help with this, we can winnow things down, in two phases. First, I will give a classification of a good number of the single word prepositions, although this classification will be quite crude as compared to the one above for conjunctions. And, second, I will give my 'Prep Box', which features the most important prepositions in English, the fabulous fourteen. Here is the classification:

1. Space (relative position in space) – 'above', 'across', 'against', 'along', 'alongside', 'among', 'around', 'at', 'behind', 'below', 'beneath', 'beside', 'between', 'beyond', 'in', 'inside', 'on', 'onto', 'over', 'under', 'upon', 'within'

2. Time - 'after', 'before', 'during', 'since'

3. Motion (travel) – 'from', 'through', 'to', 'via'

4. Relation - 'about' [subject], 'as' [role], 'despite' [defeat of opposition], 'except' [not], 'instead' [replacement], 'like' [resemblance], 'unlike' [lack of resemblance], 'with' [connection, attachment], 'without' [disconnection, detachment]

5. Miscellaneous – 'by' [means], 'for' [service], 'of' [possession], 'than' [comparison], 'unto' [service]

And here is the prep Box:

about	among	by	for	in	on	to
after	at	during	from	of	than	with

Let us now try to give conditions of application for the prepositions in the box. This is perhaps the best place to note that while the term 'conditions of application' suggests something complicated, what is intended by it in each case is the simplest thing possible, the simplest idea that will allow you to use the word involved with some degree of confidence. So here goes:

1. 'about' [subject]

Example:

   This is a book about the middle ages.

2. 'after' [time]

Example:

   There was a party after the concert.

3. 'among' [in the mix]

Example:

   Among the crowd there was a seven year old boy who would twenty years later be the leader of a much more powerful protest movement.

4. 'at' [position on a surface: place]

Example:

I'm at work now.

5. 'by' [means: way: method: manner]

You prepare to buy a house by saving your money.

6. during [time]

Example:

She texted her friends all during the meal.

7. 'for' [service]

Examples:

I went to the store for my mother.

This is the cover plate for the light switch in the den.

8. 'from' [motion: travel: being present as a result of motion or travel]

Examples:

He is coming from Mali.

This is a nice leather bag from Morocco.

9. 'in' [containment]

Example:

There is a sandwich in the refrigerator.

10. 'of' [possession] it is very important to note that unlike many other prepositions, 'of' has very limited use as the main component of a predicate base, witness

Mary [is of] foreign descent.

and it cannot be used *at all* as a predicate extender, i.e. like 'for' in the sentence given above, repeated here

I went to the store for my mother.

Examples:

The dean [of the medical school] will arrive this afternoon.

Life is just a bowl [of cherries].

Note that the dean 'belongs to' the medical school and the cherries 'belong to' the bowl.

11. 'on' [*there's no way to say it!!!*]

Examples:

The book is on the desk.

I'm on the train.

(figurative)

I'm on the phone.

I'm on a diet.

12. 'than' [comparison] note that this one is easy because the way in which it can be used is very restricted and the example that follow pretty much tell the whole story

Examples:

America is wealthier than China.

China is larger than America.

Romney is less conservative than Bachman.

Obama is more liberal than Clinton.

13. 'to' [motion: travel]

Examples:

They went to the movies.

The quarter rolled on its edge all the way to the wall.

14. 'with' [attachment: together]

Examples:

She bought an SUV with all-wheel drive.

John rode with her through the countryside.

As we close this section on prepositions, and with it the chapter on the functional expressions, it should be noted that the Prep Box is not just a source of prepositions for which conditions of application are provided. Rather it represents the set of prepositions that are the most used and the most difficult to choose from among so that it indicates to the student what they should focus on and thus helps them to move towards proficiency more rapidly. This having been said however it must be acknowledged that the conditions of application provided for the fabulous fourteen prepositions in the Prep Box will probably be more helpful to the beginning student than to the intermediate or advanced one.

5.

SUBSTANTIVE EXPRESSIONS - NOUNS

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As we move from the functional expressions to the substantive expressions, i.e. the big 4 of nouns, verbs, adjectives and adverbs, we move from categories that contain 5 to 69 expressions to categories that contain thousands, even tens of thousands of expressions. And we move as well from a concern with how a type of expression works to a concern with identifying expressions as to their type. That is to say the ways in which nouns, verbs, adjectives and adverbs function are simple and well known, and the student's task is to learn how to identify them, how to spot them, for the purpose of understanding the structures of sentences occurring in the writing of others, so that these sentences can serve as models of good writing, and for the purpose of determining the structures of the sentences occurring in their own writing in order to facilitate the critical process of editing. Students have to be able to spot the nouns in their writing, for example, so that they can make sure that they are accompanied by the right determiner where one is called for and make sure that they have the right ending where one is called for. And they have to be able to spot the verbs in their writing so that they can make sure that they have the right form given the characterization of the verb phrase in terms of number, tense, aspect, voice, mood and modality. We will see that our work on the substantive expressions will go quite quickly as compared to the work on the functional expressions. Let us begin with nouns.

A noun is a word that is used to refer to a person, an animal a place or a thing. The thing can be concrete, like an object, an action, an event or a state, or it can be abstract, like a quality, a relation, a type or a concept. It is traditional to divide nouns into the common, like person, and the proper, like Jones, but in the system upon which this text is based, proper nouns are names and thus all nouns *per se* are common. There are several particular things that characterize nouns. They divide into what are

called count nouns and what are called either non-count or mass nouns. A count noun is one like 'car' or 'house' that refers to a class of units such that it is possible to count with respect to it. Thus we can count 'one, car, two cars, …' and 'one house, two houses, …' . A mass noun is one like 'air' or 'water' that refers to a single mass such that it is not possible to count with respect to them. You cannot say for example that there are three 'airs' in the room, or that you had five 'waters' in your tub this morning.

Both count nouns and mass nouns can take possessive endings. Thus we can have all of

The car's color is beautiful.

The houses' kitchens are all Viking equipped.

The water's temperature is what will pose the challenge.

The air's movement in the container must be controlled.

However, given the distinction between count and mass explained above, only count nouns can have plural endings. Thus we can have

The cars are expensive.

but not

*The airs are cold.

Some plurals are irregular, i.e. not formed by simply adding an 's', or an 'es', to the singular form. Thus the plural of 'man' is 'men' and the plural of 'child' is 'children'. The latter sets up an interesting case with respect to possessive endings. All possessive endings require both an 's' and an apostrophe but where the possessive ending is singular, an apostrophe is added first and then an 's' is added. By contrast, where the possessive ending is plural, the 's' is already there to make the noun plural and then an apostrophe is added after the 's' to form the possessive. Compare:

my mother's house

my parents' house

But now if to add a possessive ending to 'children' we followed this procedure, we would get

childrens'

but this would make it appear that the 's' is making the noun plural and yet this is certainly not the case because 'children' is already plural. So, to avoid the redundancy that this would produce, prescriptive grammarians must at some point have decided to give the possessive of 'children' as

children's

despite the fact that the possessive ending is then exactly what we have when the noun is singular.

But the main business here is the business of spotting nouns in your writing so that you can make sure that they are properly attended to, that they have determiners and plural endings and possessive endings where they are required. There are a number of spotting strategies:

- nouns are often marked by special endings such as '-tion' in 'attention', '-sion' as in 'tension', '-ment' as in 'judgment', and many, many others

- nouns are words that have or can take determiners, and note here that we have studied determiners

- nouns are words that are or can be modified by adjectives, prepositional phrases and relative clauses

- nouns are words that can be replaced by pronouns

- and of course nouns are words that fit the definition of noun, words that can be used to refer to certain kinds of things in the world.

Perhaps the main reason for having a strategy for spotting nouns has to do with a basic rule of count nouns that I humorously call No Naked Nouns. Every count noun must have a determiner or a plural ending or both. This you cannot say

I like car.

Instead, you must say

I like this car.

in which case the noun is 'dressed' with the determiner 'this', or you must say

I like cars.

in which case the noun is dressed with the plural ending '-s', or you can say

I like these cars.

in which case the noun is all dressed up in having both the determiner 'these' and the plural ending '-s'. Now ESL students routinely violate the No Naked Nouns rule and as a result I have developed what I call a SMEP, a specific, mechanical editing procedure, which requires the student to go through their composition word by word using the above strategies to spot all of the nouns, each of which is then underlined with a red pen or marked with a highlighter. The count nouns are separated from the mass ones and each one of them is checked to make sure that it has either a determiner or a plural ending or both. This can make a dramatic difference in the presentability of the paper.

SUBSTANTIVE EXPRESSIONS - ADJECTIVES

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Adjectives are words that refer to qualities, or properties, or characteristics, of the kinds of things that nouns refer to, so that when they modify nouns they attribute those qualities to the things that the nouns refer to. The behavior of adjectives is tightly constrained. They modify nouns from the left or they appear as the main component of one of the four types of predicate base. Thus, grammatically, we get

The green apple tastes best.

where of course the adjective 'green' modifies the noun 'apple' from the left, or

They [must be very happy] with his new computer.

where the adjective 'happy' is the main component of the predicate base 'must be very happy'

and that's pretty much all there is to it. I have come across only two cases in which an adjective seems to modify a noun from the right. One of them is the case of 'accounts payable' where 'payable' seems to be an adjective modifying the noun 'accounts'. The other case I can't remember. When I came across it, it seemed so certain that I would remember it forever given how special it was, but alas it may be lost to me forever – and, by the way, it's *not* 'accounts receivable'! But even with this we don't have to concede an exception. We just treat 'accounts payable' as a special term, whose etymology we might study.

Materially, however, things are much more interesting. Beyond the straight cases like 'green' modifying 'apple' above, we have at least four special cases as follows:

1. it was said that the adjective refers to a quality that it attributes to the thing referred to by the noun it modifies. Well if this is the case then what do we do with

fake fur

It doesn't make sense to say that 'being fake' is a quality of fur.

2. On the same rule of adjectives, we have to recognize something of a problem with

> alleged thief

> an alleged thief may or may not be a thief.

3. there is no size relationship between what is given by

> big flea

and what is given by

> big elephant

and yet there is just the one adjective for the two cases.

4.   there are adjectives that are really verbs and what happens where they are used is that the action given by the verb is applied to the object given by the noun, and where that action is completed, the verb carries an '-ed' ending and where that action is continuing, the verb carries an '-ing' ending. Thus we can have

> A butter*ed* roll costs fifty cents.

where the action, completed action, given by the verb 'to butter' is applied to the object given by the noun 'roll', and

> The special toy for the Kiddie Meal is available at participat*ing* restaurants.

where the action, continuing action, given by the verb 'to participate' is applied to the object given by the noun 'restaurant'.

5. When verbs modify nouns those verbs are subject to adverbial modification, and the adverbs that perform this modification are themselves subject to adverbial modification. Thus we can have

> At the heart of the device is a controlled mechanism.

where the noun 'mechanism' is modified by the verb 'to control', but we can also have

> At the heart of the device is a tightly controlled mechanism.

where the verb *cum* adjective is itself modified by the adverb 'tightly', and finally we can have

> At the heart of the device is a very tightly controlled mechanism.

where the adverb 'tightly' is itself modified by the adverb 'very'.

Cases 1. through 3. above pose problems for those who analyze natural language formally but none of the five cases poses a problem for us because we understand perfectly well in each case what is going on practically.

SUBSTANTIVE EXPRESSIONS - VERBS

_____

A verb is a word that indicates some type of occurrence, quite often an action, or, in a very small number of cases, the relationship of possession. Thus we can have

Jane scored the basket that won the game.

John accepted what the coach told him.

Jane now has four trophies.

Verbs are distinguished from all other parts of speech in that they have multiple parts. Nouns can be said to have two parts, the singular and the plural, but these are not full-bloodied parts of the kind that verbs have, and no other part of speech has even the pretension of having parts. Verbs range in the number of parts they have from 3 to 6, and interestingly enough, it is the two basic verbs of English, 'to be' and 'to have', on analogy to 'etre' and 'avoir' in French, and 'ser'/'estar' and 'tener' in Spanish, that account for the extremes in this range. The verbs 'to be' and 'to have' have 6 parts and 3 parts, respectively, as follows:

be   have

am   has

is   had

are

was

were

But as the student might recall, these words are not 'verbs' here. Rather, they are copulas and, putting them aside we can say that, although there might be an exception or two out there – the space of English is vast – all true verbs have either 4 parts or 5 parts. Thus for example the verbs 'to work' and 'to give' have 4 parts and 5 parts, respectively. These parts, with labels indicating their status can be given in chart form as follows:

Present - Plural	work
Present - Singular	works
Past	worked
Present Participle	working

Present – Plural	give
Present – Singular	gives
Past	gave
Present Participle	giving
Past Participle	given

A very important distinction with respect to verbs is that between the regular and the irregular. Regular verbs are those that follow the pattern set by the verb 'to work' above. Their first part has no ending, their second part has the ending '-s', their third part has the ending '-ed' and their fourth part has the ending '-ing'. All regular verbs have 4 parts. If a verb varies from this pattern in any way then it is irregular. Thus note that the third part of the verb 'to give' does not have an '-ed' ending, and it has 5 parts rather than 4, so that it is irregular.

If we consider the verb 'to show' and give its chart as follows:

Present – Plural	show
Present – Singular	shows
Past	showed
Present Participle	showing
Past Participle	shown

and note that it is irregular because it has 5 parts then we might be tempted to think that all irregular verbs have 5 parts but this generalization is contradicted by the verb 'to run' whose parts are as follows:

Present - Plural	run
Present - Singular	runs
Past	ran
Present Participle	running

This verb is irregular because its past part 'ran' does not carry the ending '-ed' but still the verb has only 4 parts.

Now just as we needed a strategy for spotting nouns in order to control certain noun related error types, so we need a strategy for spotting verbs to control certain verb related error types. The first thing to consider is whether verb endings can be of help. Well the ending '-s' cannot because nouns have it also, and '-ed' can't help either because irregular verbs don't have it. However all verbs without exception have an '-ing' form, or part, and this fact will serve as the anchor of our verb spotting strategy. If a word has an '-ing' form then it is a candidate for classification as a verb. But we will need much more that this, as the following three sentences make clear:

> I work at Pace University.

> I love my work.

> This is my work pen.

Clearly the word 'work' has an '-ing' form but this does not mean that it appears as a verb in all three of the sentences above. It does appear as a verb in the first sentence. But in the second sentence it appears as a noun, as is evident from its having the determiner 'my'. And in the third sentence it appears as an adjective, as is evident for its modification of the noun 'pen'. How then do we distinguish among the cases? We want say that where a word that has an '-ing' form appears as a verb you have to be able to manipulate it and its associated elements as though you were going to change the tense of the sentence, without producing a grammatical mess. Thus the first sentence is in the present tense but it is possible to change 'work' to 'worked' and have a grammatical sentence in the past tense

I worked at Pace university.

and it is also possible to add the modal 'will' to 'work' and have a grammatical sentence in the future tense. But no such manipulation is possible with respect to either the second sentence or the third. It would produce a mess to change 'work' to 'worked' in the second sentence

I love my worked.

And things would be even worse if the modal 'will' were added to 'work' in the third sentence

This is my will work pen.

And note that in the search for verbs we will not be interested in the 'frozen' verbs of infinitive and gerund phrases, like the verb 'to start' in

Jane wants [to start a business].

or the verb 'to go' in

[Going on vacation] is fun.

These verbs have to be handled properly too but they are so simple since in the one case the verb always takes the present plural, i.e. the infinitive form, and in the other case the present participle form such that the student does not often have trouble with them. Contrast this with the verb component of a predicate base

The company [will surely have chosen] its computer vendor by the end of the fiscal quarter.

where the student has to choose from among 'choose', chooses', 'chose', 'choosing' and 'chosen' and get all of its satellites right in order to properly reflect number, tense, aspect, mood and modality. But among these characteristics of predicate bases, it is number that provides the greatest motivation for the strategy of spotting verbs because when the sentence is in the present tense the ESL student has a great deal of difficulty getting the verb to agree with its subject in terms of number, i.e. in terms of singular and plural. To take a particularly troublesome case, what about

The schedule of topics on the agenda in the hands of the conferees [suggest/suggests] that there is an excessive concern with the past.

After the student struggles to come up with a sentence expressing this idea, how are they to find the resources necessary to select the proper form of the verb? Thus there also has to be a SMEP for Subject-Verb Agreement. The student must go through their text word by word, underlining in red or highlighting in their favorite color (or *least* favorite color, given the potential tediousness of all of this) all occurrences of verbs. Then the frozen ones have to be put aside, leaving only the 'live' ones that reside in predicate bases, and with respect of each of these live verbs, a determination of tense has to be made. Finally, where the determination is that the tense is present, the student must search in word by word mode again, but this time only among the words from the beginning of the sentence up to the point at which the verb occurs in order to find the key subject word, making sure that if it is singular and thus has no 's'(is plural and thus has an 's') then the verb is also singular such that it has an 's' (plural such that it does not have an 's'). In other words, the student has to spot the verb 'suggest' or 'suggests', whichever is present, identify 'schedule', not 'topics' or 'agenda' or 'hands', as the subject and, noting that it is singular, select the singular 'suggests'!

We saw above a SMEP related to the use of nouns. When there is a problem of a determiner missing in relation to the noun, the error type is Word Omission and when there is a problem of a plural ending missing in relation to the noun, the error type is Word Ending. And we saw here the verb related SMEP for Subject-Verb Agreement. These are just three of the error types in the *Big 10* system of the ten most commonly occurring error types, all of which have associated strategies of identification and correction if not indeed SMEPs. (See Appendix A)

SUBSTANTIVE EXPRESSIONS - ADVERBS

_____

   In the big 4, just as adjectives are the modifiers of nouns, so adverbs are the modifiers of verbs, and this is an elegant feature of English. However, adverbs have a wider range of application than adjectives in that they also modify adjectives and other adverbs. The adverb shows when, how or to what extent in relation to the term it modifies. Thus we have

> They decided to leave early.

where the adverb 'early' shows when in relation to the verb 'leave' and

> She played the sonata beautifully.

where the adverb 'beautifully' shows how in relation to the verb 'played' and

> He is cautiously optimistic.

where the adverb 'cautiously' shows how in relation to the adjective 'optimistic' and finally

> She supported the measure very reluctantly.

where the adverb 'very' shows to what extent in relation to the adverb 'reluctantly' - and the adverb 'reluctantly' shows how in relation to the verb 'supported'. If adverbs have a wider range of application than adjectives they also have greater freedom to move about. Adjectives modify nouns from the left but adverbs modify verbs from the left and from the right, inside the predicate base, and from the right a term or more away from the predicate base. Thus we can have all of

> Jane [completely disagreed] with the decision.

> Jane [disagreed completely] with the decision.

> Jane [disagreed] with the decision completely.

where 'completely' is the adverb, although this range of movement is not possible in all cases and where it is, as above, there is typically some difference among the positions in terms of aptness vs. awkwardness of fit. Adverbs can also appear at the very beginning of the sentence, as in

Reluctantly, john [left] the company.

But there are two cases in this regard because, in the sentence above, the adverb 'reluctantly' modifies the verb 'left' and could appear inside the predicate base as in

John [reluctantly left] the company.

and the adverb reflects the sentiment of John whereas in the sentence

Unfortunately, John left the company.

the adverb 'unfortunately' seems to modify the whole sentence 'John left the company.' and could not appear inside the predicate base, as we see in

*John unfortunately left the company.

which is unacceptable unless it appears as

John, unfortunately, left the company.

which shows that the adverb cannot appear inside the predicate base, and that adverb reflects the sentiment not of John but of the speaker. So the two cases are quite different.

But there is a great deal of subtlety and complexity even in the case in which the adverb modifies the verb because as we saw above we can have

John reluctantly left the company.

and

John left the company reluctantly.

We cannot have

*John left reluctantly the company.

Finally, note that adverbs are of course also components of predicate bases whose main component is not a verb but an adjective, a preposition or a copula, such that we can have all of

Jane [is clearly happy] about her promotion.

John [is probably in]Spain.

Jane [will eventually be] the chief officer in her division of the company.

It is easy to spot adverbs because, as we have seen, the '-ly' ending is a clear marker, and the vast majority of adverbs have that marker. Unfortunately however not all adverbs do. But, the *Merriam-Webster's Advanced Learner's English Dictionary* comes to our rescue here by providing the following list of the most common adverbs that do not in in '-ly':

again	ever	never	soon	very
also	here	not	then	well
always	how	now	there	when
as	just	often	today	where
even	more	sometimes	too	why

This list is clearly a very nice gift because the combination of it and '-ly' makes us super adverb spotters. And yet we must look a gift horse in the mouth because several of the items on the list cannot be seen as adverbs on the grammar of this text. On the grammar of this text, 'also' is a conjunction, 'when', 'where' and 'why' are W/TH words, and most importantly, 'here', 'there' and 'today' are odd creatures but not modifiers of any kind because they always, or most often, appear *effectively* as terms taking slots in predicates to help in making sentences. Thus for example:

We are here.

You are there.

They will leave today.

are effectively

We are at this place.

You are at that place.

They will leave on this day.

where 'this place', 'that place' and 'this day' are terms. The words of 'here', 'there' and 'today' are very similar to nouns in referring to places and times, and very like pronouns in having variable reference. They are not at all like modifiers at all.

6.

TERMS I

_____

In this chapter, I will discuss what might be considered to be the simpler of the two groupings of term types, viz. the essentially **_nominal_** grouping that includes names, pronouns and noun phrases, as opposed to the essentially **_verbal_**, or sentential, grouping that includes infinitive phrases, gerund phrases and W/TH phrases, which will be considered in the next chapter.

Names are the most basic of the six term types. For the most part, the student has only to memorize them. While it is no doubt true that some very high percentage of names have etymologies that yield for them a distant association with meaning, names like 'Carpenter', 'Plummer' and 'Smith' being obvious cases in point, practically, as opposed to philosophically, most names can be viewed as arbitrarily chosen expressions that serve as tags of reference for persons places and things. It must be recognized, however, that this characterization fits names like 'John Doe' better than it does names like 'The United States of America' and 'The Chamber of Commerce'. Names like these last two are really noun phrases that were turned into names at the point at which fixed reference became convenient, and thus these names have a closer association with meaning. The main concern is that the student has to be alerted to the need to use the definite article in the cases of this type, and to avoid using it in all cases of the other, more common type. Thus, for example, it is a mistake to fail to use the article and say or write, 'United States of America', but it is also a mistake to use it and say or write, 'the America'.

Pronouns were studied extensively in the chapter on functional expressions and thus only a brief recap is needed here. They comprise four quite disparate groups. First, there are the 32 words that form the main system of pronouns. They are the subjective, the objective, the possessive and the reflexive pronouns. The 8 pronouns in each of these groups distinguish number and gender but mainly they

indicate person, that is to say, they indicate what might be called the three elements of the discourse situation, viz. the discourse participants consisting in the person or persons speaking (the first person), the discourse participants consisting the person or persons spoken to (the second person), and, adapting a term from logic, the universe of the discourse (the third person). Thus, for example, among the subjective pronouns 'I', 'you', 'he', 'she', 'it', 'we', 'you', 'they', 'I' and 'we' are first person and represent the person and persons speaking, respectively, 'you' (singular) and 'you' (plural) are second person and represent the person and persons spoken to, respectively, and 'he', 'she', 'it' and 'they' are third person and represent the universe of the discourse, i.e. the persons, places and/or things that comprise the field of reference of the discourse. Second there are the pronouns that have a 'determiner-noun' like structure, including 'something', 'anytime', 'everyplace' and 'nobody'. Third, there are the demonstrative pronouns 'this', 'that', 'these' and 'those'. And, fourth, there are the pronouns 'one', 'one's' and 'oneself' of formal usage.

The structure for noun phrases in English is as follows:

(D.) + (Adj.) + No. + (Pre. + O.) + (R.P. + I.S.)

where 'D.' = determiner, 'Adj.' = adjective, 'No.' = noun, 'Pre.' = preposition, 'O.' = object, 'R.P.' = relative pronoun, and 'I.S.' = incomplete sentence: the sub-structure 'Pre. + O.' constitutes a prepositional phrase (= P.P.) and the sub-structure 'R.P. + I.S.' constitutes a relative clause (= R.C.): parentheses indicate that an element is optional and of course a '+' between two elements indicates that the one on the right follows the one on the left. Thus in the noun phrase

the huge pot of gold that she found

'the' is a determiner, 'huge' is an adjective, 'pot' is the noun, 'of' is a preposition and 'gold' is its object such that 'of gold' is a prepositional phrase, 'that' is a relative pronoun and 'she found' is an incomplete sentence such that 'that she found' is a relative clause. The adjective, the prepositional phrase and the relative clause modify the noun and the determiner operates on the sub-structure consisting of the noun and these three modifiers.

Now the situation we find ourselves in here reflects the approach to the presentation of English taken in this text. We have already studied determiners, adjectives and nouns directly. The structure and role of prepositional phrases came out in our direct study of prepositions and the structure and role of relative clauses came out in our direct study of relative pronouns. So all we have to do here is appreciate

how everything goes together. And yet we do need to see that, because of its optional elements, a noun phrase can take a number of particular forms. If we restrict out attention to the sub-structure on which the determiner operates, there are in fact 8 particular forms as follows:

students [No.]

good students [Adj. + No.]

students at Pace [No. + P.P.]

students who love literature [No. + R.C.]

good students at Pace [Adj. + No. + P.P.]

good students who love literature [Adj. + No. + R.C.]

students at Pace who love literature [No. + P.P. + R.C.]

good students at Pace who love literature [Adj. + No. + P.P. + R.C.]

It is possible to have a series of modifiers all of whose members are of the same type, adjective, prepositional phrase or relative clause, but practically speaking this possibility is realized only in the case of adjectives. It is easy to have

large round green stone

although as we saw in the section on adjectives, where the adjective is really a verb, it is possible for it to be complex, as is the adjective in

a [very skillfully crafted] ring

I think of noun phrases as the work horse of terms, but it would be interesting to conduct a study of the relative rates of occurrence among the 6 term types in the text of the various media.

7.

TERMS II

_____

This second chapter on terms addresses the three term types infinitive phrase, gerund phrase and W/TH phrase. In contrast to the three essentially nominal term types name, pronoun and noun phrase discussed in the preceding chapter, the three term types here can be classified as essentially verbal in that both infinitive phrases like 'to listen to music' and gerund phrases like 'listening to music' begin with verbs, taking into account that an infinitive phrase begins with the infinitive form of the verb, which itself begins with the preposition 'to' , and W/TH phrases like 'what they want' consists of a W/TH word, either 'who', 'what', 'when', 'where', 'why', 'how' or 'that', followed by an 'incomplete sentence', 'they want' in the case of the example here, and this incomplete sentence is always incomplete in virtue of missing a term, a subject term or an object term, such that it always includes a predicate base, and thus a verb, whether it is an ordinary verb like 'live' in 'where they live', or a copula like 'is' in 'who John is' or 'are' in 'what they are for'. Alternatively, however, the three term types here might be classified as sentential in that infinitive phrases and gerund phrases can be characterized loosely as sentences absent their subjects, and of course we have just seen that every W/TH phrase has an incomplete sentence as one of its two components. Given a certain notion of a sentence, it is not very difficult to specify the structure of an infinitive phrase or a gerund phrase, along the lines just suggested. The notion needed is that developed in the overview chapter of a sentence as a term and predicate construction. Working with this notion we can say that infinitive phrases and gerund phrases can be characterized as structures derived by deleting the subjects of term and predicate sentences, and then making certain modifications to their predicate bases. Thus from the sentence

Jane designed a control device for hot water heaters that can be produced inexpensively.

which clearly has the term and predicate form, we can derive the infinitive phrase

to design a control device for hot water heaters that can be produced inexpensively

and the gerund phrase

designing a control device for hot water heaters that can be produced inexpensively

The case of W/TH phrases is similar. W/TH phrases can be characterized as structures that have two parts, the first being a W/TH word and the second a sentence in which the subject term or an object term has been deleted. Thus using the sentence above can produce the W/TH phrases

what Jane designed

and

who designed a control device for hot water heaters that can be produced inexpensively

It is very important to develop clear notions of what an infinitive phrase is and what a gerund phrase is because there is a type of mistake that appears quite regularly in ESL writing which seems to result from confusing the two phrase types in some way. The mistake consists specifically in producing an infinitive phrase where a preposition plus gerund phrase structure is called for, or vice versa. Thus the student might produce the sentence

I am anxious of starting my research paper.

where they should have produced

I am anxious to start my research paper.

So the preposition plus gerund phrase structure

of + starting my research paper

is confused with the infinitive phrase

to start my research paper

It is not clear whether the word by word similarity between preposition followed by the gerund phrase, on the one hand, and the infinitive phrase, on the other, is at least partly responsible for this mistake type, but it is obvious that the student must develop a precise sense what an infinitive phrase is and what a gerund phrase is if a teacher or a tutor is to be able to explain the mistake type to them in an effective way.

8.

PREDICATES I

_____

Every predicate has a predicate base and there are four types of these:

The Action Type

Predicate bases which conform to the following pattern, and thus have a **_verb_** as their main element:

(M.) + (Adv.) + (Cop.) + (Adv.) + <u>V.</u> + (Adv.)

For example,

must be carefully crafting

The Quality Type

Predicate bases which conform to the following pattern, and thus have an **_adjective_** as their main element:

(M.) + (Adv.) + <u>Cop.</u> + (Adv.) + <u>Adj.</u> + (Adv.)

For example,

might soon be wealthy

The Relation Type

Predicate bases which conform to the following pattern and, thus have a **_preposition_** as their main element:

(M.) + (Adv.) + <u>Cop.</u> + (Adv.) + <u>Pre.</u>

For example,

could actually be in

The Identity Type

Predicate bases which conform to the following pattern and, thus have a **copula** as their main element:

(M.) + (Adv.) + <u>Cop.</u> + (Adv.)

For example,

should eventually be

where:

- each word unit, M., Adv., etc. is called an **element**

- the plus sign '+' indicates that the element at its left precedes the one at its right, alternatively, that the element at is right follows the one at its left

- parentheses indicate that an element is optional

- an underline indicates that an element is required

- a sequence of elements connected by plus signs is called a **pattern**

Note that logically it is not necessary to have both parentheses and underlines. If there are parentheses indicating that elements are optional then all elements not occurring in parentheses are required. And if there are underlines indicating that elements are required then all elements occurring without underlines are optional. Where a given meaning is indicated twice in one expression or system, that expression or system is said to be redundant to that extent, and redundancy is in general to be avoided. But in some areas, including advertising and education, redundancy is to be valued because it reinforces the reception of content.

Where the predicate base is of the action type, it is necessary to consider the number of terms required by that predicate base in view of the verb that is its main constituent. An action type predicate base whose verb is

to swim

only requires one term, as the sentence

Bob swims.

makes clear, but the an action type predicate base whose verb is

to authorize

requires two terms, as the sentence

> Mary authorized the transfer.

makes clear, and an action type predicate base whose verb is

> to give

requires three terms, as the sentences

> Bob gave Mary a present.

> Bob gave a present to Mary.

make clear.

Predicate bases of the quality type and of the identity type do not have this variability with respect to the number of terms required. Putting aside the case of comparison sentences, which will be considered separately later, a predicate base of the quality type always requires just one term, as can be seen in the sentence

> Jane is famous.

and a predicate base of the equality type always requires exactly two terms, as can be seen in the sentence

> Jack is the president.

With predicate bases of the relation type, there is just a slight amount of variability. The vast majority of predicate bases of this type require exactly two terms, as the sentences

> Mary is in Texas.

> John is at work.

show. But, relation type predicate bases which have the preposition

> between

as their main element require exactly three terms, as is shown by the sentence

> New York is between Washington and Boston.

Now, a ***predicate*** consists of:

(1) a predicate base

(2) a number of ***position blanks***, or ***slots***, equal to the number of terms required by that predicate base, and,

(3) in the case of some action and relation type predicate bases requiring three terms, a preposition or the conjunction 'and'.

One position blank precedes the predicate base, and is called the **subject phrase position blank**. Any other position blanks follow the predicate base, serially where there is more than one, that is to say, where there are two. Each such position blank is called an **object phrase position blank**. There is a preposition only in the case where there are two object phrase position blanks, and then the preposition is positioned between them. The conjunction 'and' occurs in the same way where the predicate base is one of the relation type whose key constituent is the preposition

between

Thus all of the following are predicates:

_____ sings.

_____ authorized _____ .

_____ gave _____ to _____ .

_____ bought _____   _____ .

_____ is tall.

_____ is in _____ .

_____ is between _____ and _____ .

_____ is _____ .

All of the predicates here have bases that are 'bare', i.e. have only the required elements, but of course all of the optional predicate base elements come into play also. Thus

_____ may have reluctantly authorized _____ .

is a predicate as well.

   The final point to be made about predicate structure is that a predicate can be 'extended' to take on an additional object phrase position blank through the action of a preposition. Thus the predicate

_____ is in _____ .

can be extended to take on another object phrase position blank through the action of the preposition 'for' as follows:

_____ is in _____ for _____ .

and this predicate can, in turn, be extended to take on still another object phrase position blank through the action of the preposition 'according to' as follows:

_____ is in _____ for _____ according to _____ .

An example of a sentence employing this predicate is:

Jane is in Texas for a conference according to her secretary.

When a preposition performs in this way, it can be called a **_predicate extender_**.

EXERCISES

_____

1. Identify the predicates in the following sentences.

2. Use the following scrambled terms and predicates to form three sentences about sports.

3. Diagram the following predicate bases using the four predicate base patterns.

4. Making use of the five prepositions and the five terms provided, extend each of the following five sentences by adding an object term or an additional object term.

9.

PREDICATES II

_____

The structures of predicates have already been considered. The purpose of this chapter is to show what predicates indicate, i.e. what they contribute to the characterization of the state of affairs denoted by the sentence that they are a part of. Now, what a predicate indicates in the main is a function of the nature of its predicate base:

If the base of the predicate is of the action type then the predicate indicates that what the terms of the sentence refer to, respectively, participate in some action -

Ex: Jane <u>plays</u> tennis.

If the base of the predicate is of the quality type then the predicate indicates that what the subject term refers to has a certain quality –

Ex: John <u>is intelligent</u>.

If the base of the predicate is of the relation type then the predicate indicates that what the terms of the sentence refer to, respectively, stand in a certain relation -

Ex: Jane <u>is on</u> the executive board.

And, if the base of the predicate is of the identity type then the predicate indicates that what its subject term refers to and what its first, or only, object term refers to are identical -

Ex: John <u>is</u> the office manager.

Beyond this main indication, however, all predicates have certain 'characteristics', in virtue of which they indicate several more abstract things. The characteristics of predicates are: number, tense, voice, aspect, mood and modality. These characteristics will be described in turn, and then the structure of relations that holds among them will be specified. It will be convenient to refer more to predicate bases than to whole predicates because in fact all of the characteristics of a predicate are functions of its base.

Number

This is the simplest of the six characteristics. Every predicate base has a number, i.e. it is either singular or plural, depending on whether its subject term is singular or plural. The subject term and the predicate base of the sentence must agree in number. Both must be singular or both must be plural. Thus consider:

The student <u>is</u> going on vacation.

The students <u>are</u> going on vacation.

However, where the predicate base has a modal as one of its elements, the number of the predicate base is not actually marked.

The student must <u>apply</u> for a visa.

The students must <u>apply</u> for a visa.

Tense

Students complain about the complexity of tense in English but this is unfortunate because it represents nothing more than their having been taught improperly. The tense system of English is much simpler than for example that of either French or Spanish. There are six basic tenses of English, and what is involved with them can be brought out by considering just the third person singular and the third person plural, and employing absolutely minimal sentences, as follows:

<u>The Past</u>

He worked. / They worked.

<u>The Present</u>

He works. / They work.

<u>The Future</u>

He will work. / They will work.

<u>The Past Perfect</u>

She had worked. / They had worked.

<u>The Present Perfect</u>

She has worked. / They have worked.

<u>The Future Perfect</u>

She will have worked. / They will have worked.

A key tool in instructing students about tense and other characteristics of predicates will be that of a 'marker'. Now there are seven simple markers that indicate all of the features of tense represented above. The easiest way to show this is to repeat the scheme above with the markers underlined, noting that all of the markers appear more than once.

The Past

He work<u>ed</u>. / They work<u>ed</u>.

The Present

He work<u>s</u>. / They work _.

The Future

He <u>will</u> work. / They <u>will</u> work.

The Past Perfect

She <u>had</u> worked. / They <u>had</u> worked.

The Present Perfect

She <u>has</u> worked. / They <u>have</u> worked.

The Future Perfect

She <u>will</u> <u>have</u> worked. / They <u>will</u> <u>have</u> worked.

There is a bit more complexity in that context must be taken account of. For example, '-ed' indicates the past only in the absence of 'had', 'has' and 'have', and 'will' indicates the future perfect only in the presence of 'have'. And, while no additional markers come into play, the scheme does expand when the first and second persons are included. Thus consider the full representation of just the Past, the Present, and the Future:

The Past	The Present	The Future
I worked	I work.	I will work.
You worked.	You work.	You will work.
He, She, It worked.	He, She, It works.	He, She, It will work.
We worked.	We work.	We will work.
You worked.	You work.	You will work.
They worked.	They work.	They will work.

Now, the markers mainly help students to determine the tenses of sentences they receive. They must learn the whole scheme if they themselves are to be able to produce sentences in all of the tenses proficiently. All of this having said, however, students can learn the tense system of English easily if the teacher presents it in the manner indicated here.

Voice

There are two voices, the active and the passive. A sentence is in the active voice if the referent of its subject term 'performs' the action indicated by its predicate base while it is in the passive voice if the referent of its subject term 'receives' the action indicated by its predicate base. The predicate base must thus be of the action type. Consider the sentences:

Jane teaches John Latin.

John is taught Latin by Jane.

The first sentence is in the active voice because Jane is the referent of the subject term and she performs the action of teaching while the second sentence is in the passive voice because John is the referent of the subject term and he receives the action of teaching. Conversion from the active to the passive requires (1) the inversion of the subject term and the first object term, (2) a change in the form of the main verb, (3) the introduction of a copula and (4) the introduction of the preposition 'by'.

Aspect

There are also two aspects of predicate bases, the discrete, which can be represented by a point on a time line, and the progressive, which can be represented by a span along a time line. Consider the sentences:

Jane runs.

Jane is running.

The first has the discrete aspect while the second has the progressive aspect. Clearly then, the verb must be of the '-ing', or present participle, form and must be accompanied by a copula if the aspect is to be progressive while the verb must *not* be of the '-ing', or the present participle, form and must *not* be accompanied by a copula if the aspect is to be discrete. Thus the predicate base must be of the action type for either aspect.

Mood

There are two moods of predicate bases as well, the indicative and the subjunctive. The difference is that, in the indicative mood, an interest in deception aside, the speaker or writer tries simply to say what is the case while, in the subjunctive mood, the speaker or the writer entertains what they know not to be the case in order to try to say something that is the case. The following two sentences show how this distinction is really an easy one to understand. John says, first:

I am 5 feet, 8 inches tall.

and, then:

If I were 7 feet tall, I would play in the NBA.

The first sentence is in the indicative mood. John merely tries to say what is the case, and presumably succeeds. But, the second case is in the subjunctive mood. John entertains what he knows not to be the case, viz. that he is 7 feet tall, in order to try to say, pretty much by implication, that he would like to play in the NBA. The typical sentence in the subjunctive mood shares with the subjunctive mood sentence here both conditional form and the use of 'were' where 'was' would otherwise be appropriate.

Modality

Each of the following 12 modals

could	may	can	do
should	might	shall	does
would	must	will	did

has, as we saw in the sections on modals above, a simple practical characterization, and the simple effect of the inclusion of a modal element in a predicate base was specified there. Thus the modal 'can' is associated with ability while the modal 'could' is associated with ability on condition, again as was seen above, and when a modal is included in a predicate base, the verbal element of that predicate base, or the one of the two verbal elements of that predicate base which is leftmost, either a copula or a verb, must take the infinitive form. Thus in all of:

can <u>win</u>   could <u>be</u> winning   can <u>be</u> loyal   could <u>be</u> in   can <u>be</u>

the verbal element or the leftmost verbal element is in the infinitive form, despite the full variety of predicate base types represented.

Now, all of the six characteristics of predicate bases have been studied thoroughly so it is time to consider the structure of relations holding among them. There are many possible ways to do this, but the ideal way is to devise and employ a scheme that is simple, orderly and intuitive. I recommend a scheme that incorporates just the three characteristics number, tense and aspect, but also shows how the sentences in the scheme, which will be active, indicative, and [-] modal, can be converted to sentences that are passive, subjunctive and [+] modal, respectively. A scheme incorporating all six of the characteristics would be unwieldy. The scheme I recommend is as follows:

	The Discrete	The Progressive
The Past	He worked. They worked.	He was working./ They were working.
The Present	He works./ They work.	He is working./ They are working.
The Future	He will work./ They will work.	He will be working./ They will be working.
The Past Perfect	She had worked./ They had worked.	She had been working./ They had been working.
The Present Perfect	She has worked./ They have worked.	She has been working./ They have been working.
The Future Perfect	She will have worked./ They will have worked.	She will have been working./ They will have been working.

Examples of conversion to the passive voice, the subjunctive mood and [+] modal are

(passive)

He works the trainees hard.

The trainees are worked hard by him.

She is working the trainees hard.

The trainees are being worked hard by her.

(subjunctive)

He works the trainees hard.

If he were to work the trainees hard, they would be fit.

She is working the trainees hard.

If she were working the trainees hard, they would be fit.

([+])

He works the trainees hard.

He must work the trainees hard.

She is working the trainees hard.

She must be working the trainees hard.

In all of these cases, of course, we have expanded the primitive sentence from the scheme above in order to show what the conversion involves. But note that it is by no means true that all combinations

are possible. In the cases above, we start from the present but if, for example, we start from the past perfect

>She had been working the trainees hard.

and try to convert the sentence from the active to the passive, we get something like

>The trainees had been being worked hard by her.

which is dubious at best. And if we start from the future

>He will work the trainees hard.

and try to convert it from [-] modal to [+] modal, we get something like

>He must will work the trainees hard.

which of course is not even dubious grammatically, although it might be understood as 'It is necessary that he will work the trainees hard.'. To determine which of the very large number of possible combinations is actual is something that might be attempted as a very interesting project auxiliary to the production of this text. The thing would be to provide a good explanation of each case in which the possible combination is not actual, and eventually to set out the general principles governing all of the cases. But, this aside, the simple descriptions of the characteristics of predicate bases provided here, in conjunction with the consideration of cases which are realistic because they are drawn from published sources, will greatly assist the ESL student in mastering this part of English, and might even convince them that it is not such a difficult part of the language.

10.

PUTTING IT ALL TOGETHER: HOW A SENTENCE IS BUILT

_____

We find ourselves in a position here that is perfectly analogous to the one we found ourselves in with respect to noun phrases. There we said that because of the studies of determiners, adjectives, nouns, prepositions and relative pronouns, all the elements of the noun phrase form

(D) + (Adj) + No (Pre + O) + (RP + IS)

and the ways in which they relate to each other were already well understood, and the only things left to do were to appreciate all of this, and to break out the various specific configurations that the form and the element types license. Well here we already understand the 6 + 4 = 10 of

Name

Pronoun

Noun Phrase

Infinitive Phrase

Gerund Phrase

W/TH Phrase

+

Action Type Predicate Base

Quality Type Predicate Base

Relation Type Predicate Base

Identity Type Predicate Base

+

the form, which has perhaps been merely implicit, although instantiated many times, which is as follows:

[subject term]+[predicate base]+[(pre.)]+[object term 1]+[(pre.)]+[object term 2] …

where the parentheses indicate that the preposition connectors (pre.) are optional, and the only things left to do are to appreciate all of this, and to break out the various specific configurations that the form and the term and predicate base types license. This is a combinatorial affair at the first instance. Thus since there are 6 term types and 4 predicate base types, there are 6 x 4 = 24 possible combinations vis-à-vis the first two components of a term and predicate sentence. The next component is the preposition connector and here we either have the optional connector or we don't, so we get 2 x 24 = 48. The next component is object phrase # 1, which has the same 6 options as the predicate, so we get (break out the calculator!) 48 x 6 = 288. The next component is an optional connector, which again we have or don't have, so we get 2 x 288 = 576. The next component is object phrase #2, which repeats the 6 term options, so we get 576 x 6 = 3,456. The next component is an optional connector, which gives us 2 x 3,456 = 6,912. And the next component is object phrase # 3, which has the 6 options, so we get 6,912 x 6 = 41, 472 as the number of possible sentence patterns going out to 3 object positions, which is enough to cover the vast majority of sentences in English. It would be a big undertaking but all of these patterns could be specified and the thing would then be for a team of native speakers, linguists and philosophers of language and editors, ideally, to try to produce a grammatical sentence of English for each pattern. Just one would do. Where a grammatical sentence would be produced, it would be known that the pattern is 'valid' and where a grammatical sentence would not have been produced, either the pattern would be declared invalid or the 'jury' would declare itself still to be out. But beyond this very mechanical affair the effort would be to uncover the principles that explain why some patterns are valid while others are invalid, that is the effort would be to provide a definition of grammatical validity in term and predicate grammar.

In this chapter, we also want to show how all of the parts and aspects of the grammar that we have studied come together to form a coherent whole, in practical, rather than combinatorial, terms. What will be employed to achieve this objective is a technique of sentence diagramming that is based on the system developed here. The technique is applied to four member sentence sets which are configured in

such a way that they cover all of the truly basic structural aspects of declarative sentences in English. In particular, each four member sentence set covers:

- all four types of predicate base

- all six types of term

- the first four sentence lengths: subject term only, one object term, two object terms and three object terms

- all three of the noun phrase modifier types

- the four modal-adverb configurations possible with respect to predicate bases

- the extension of the sentence beyond the predicate base to an object term or the extension of the sentence from one object term to another object term, both with the use of a preposition and without the use of a preposition.

The diagramming can be done on paper or on the computer. In either case, each of the four sentences has a page, and a segmented line goes across the top of the page. The segments of the line are labeled in turn from left to right, 'S.T.', 'P.B.', '(C.)', 'O.T.^{1}', '(C.)', 'O.T.^{2}', '(C.)' and 'O.T.^{3}' for 'Subject Term', 'Predicate Base', 'Connector', 'Object Term^1', 'Connector', 'Object Term^2', 'Connector' and 'Object Term^3'. All connectors are prepositions, and the parentheses that enclose them indicate that they are optional. The sentence is written across the page some space below the sentence line. On a separate guide sheet page, the options for each segment are listed. Thus for the S.T. segment the options 'Na.', 'Pro.' "IP', 'GP', 'W/TH P.' and 'N.P. = (D.) + (Adj.) + No. + (Pre. + O.) + (R.P. + I.S.')' are listed. In order to diagram the sentence, the student must follow the general algorithm:

- Pick

- Write In

- Match

which means that, at each segment of the sentence line, the student must pick from the appropriate list. Thus, at the very beginning of the diagramming, the student must pick one of the six options listed for S.T.. Then, the student must write in the element or pattern picked just under the segment of the sentence line labeled S.T.. And then the student must match wording from the sentence to that element or pattern. The student then moves on to the next segment of the sentence line and executes there the same three steps of the algorithm. However, it is probably necessary to illustrate what is involved here in order for it to be clear (see the attached document entitled 'Sentence Diagramming'). Nonetheless, drawing sentences from newspapers, magazines, and books, from the radio, the television and the Internet, and even from ordinary speech, and trying to determine what can be diagrammed and how versus what cannot be diagrammed and why, taking into account that in this latter case either the reason why is that the sentence is of one of the special types of sentence in the 'Larger Context' chapter

that appears next, or there exist an opportunity to discover and explain something new about English, all of this is the most effective means I know of for revealing the structure of English to the ESL student.

11.

THE LARGER CONTEXT: SENTENCE FUNCTION, SCOPE AND FORM

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The grammar we have studied so far is the grammar of simple, declarative sentences in standard form. We must now consider three sub-classifications of sentences in English that will allow the grammar to be much more comprehensive, even though we will have to consider these sub-classifications ever so briefly.

Basic Sentence Functions: Declarative, Interrogative, Imperative, Exclamatory

All of the sentences considered thus far are declarative. In the simplest possible terms, they state that a certain situation exists. Thus we say

John is washing the dishes.

But sentences may also be interrogative, imperative or exclamatory. An interrogative sentence does not state that a certain situation exists. Rather, it asks whether a certain situation exists. Thus we say

Is John washing the dishes?

An imperative sentence neither states that a certain situation exists nor asks whether a certain situation exists. Rather it commands that certain situation come into existence. Thus we say

Wash the dishes.

therby commanding, i.e. ordering, someone, let us say John, to wash the dishes. The speaker wants the situation in which John is washing the dishes to come into existence. Finally, an exclamatory sentence is like a declarative sentence in that it states that a certain situation exists, but it goes beyond this in

expressing the speaker's emotional reaction, strong emotional reaction, to the existence of the situation. Thus we say

John washed the dishes!

where it was by no means expected that John would do so. What makes the sentence exclamatory is that the speaker expresses their *shock* at the fact that *John* washed the dishes.

The structural characterization of the four basic sentence functions is very much a mixed bag. All of the rest of this text is a structural characterization of the declarative function. And given the relationship between the declarative and the exclamatory just cited, the structural characterization of the former serves perfectly as the structural characterization of the latter. Further we will be able to dispense ever so quickly with the imperative because of its relationship of strong similarity to infinitive phrases. But, the structural characterization of the interrogative is very challenging indeed. Let us turn to it now.

Interrogative sentences are the ones we use to ask questions. A question arises when someone needs information. The questions we ask in English seem to be of two basic types. First there is the type of question that arises when someone has a *complete hypothesis* about a certain situation and tries to confirm that the hypothesis is correct, meaning that the hypothesized situation exists, or that the hypothesis is incorrect, meaning that the hypothesized situation does not exists. So someone asks

Is Jane in the office today?

Here the questioner hypothesizes that Jane is in the office on the day indicated contextually by the word 'today' which means that they think that it is possible, or at least slightly probable, that she is in the office on that day. Questions like this have a definite and rather simple grammar. To see this grammar we need to call up the sentence that expresses the hypothesis, i.e. the sentence that would be true if the hypothesis were correct. This sentence is strongly implied by the question sentence. The relevant sentence in the present case is

Jane is in the office today.

Notice that the question is formed by pulling out the copula 'is' and then moving it to the front of the sentence, and of course changing the period to a question mark. Consider now the question

Should Jane take out whole life insurance?

The associated hypothesis sentence is

> Jane should take out whole life insurance.

And the question is formed by pulling out the modal 'should' and moving it to the front of the sentence. But now if the hypothesis sentence has both a copula and a modal then it is the modal that is pulled and repositioned. Thus the question sentence

> Should Johnny be in school?

is formed from the hypothesis sentence

> Johnny should be in school.

If however, the hypothesis sentence has an action type predicate base which contains neither a copula nor a modal then one of the modals

> do   does   did

will be placed at the beginning of the hypothesis sentence, and thus the hypothesis sentence

> Janie ran today.

provides the basis for the question sentence

> Did Jane run today?

The modal must agree with the predicate base of the sentence in number and tense and since the predicate base of the hypothesis sentence is 'ran' and thus in the past tense, the past tense modal 'did' was used. To confirm this arrangement we consider

> Jane runs every day.

as the basis for

> Does Jane run every day?

and

> Jane and John run every day.

as the basis for

Do John and Jane run every day?

The second type of question in English is one that arises when someone has a *partial hypothesis* about a certain situation and tries to confirm that the hypothesis is correct, meaning that the hypothesized situation exists, or that the hypothesis is incorrect, meaning that the hypothesized situation does not exists. The hypothesis is partial because the questioner knows all off the components of the situation to be in place, that is to exist, except for one. Now here too the notion of a hypothesis sentence is useful and it can be said that the component not known to exist is, with respect to that hypothesis sentence, either (1) the referent of one of the terms, or (2) the quantity of the referent of one of the terms, or (3) the duration or frequency of the referent of one of the terms or the referent of the predicate. Further, questions of this second type are formed with the help of the relative pronouns, except for 'that', i.e.

who

whom

whose

which

and the W/TH words, except for 'that', i.e.

who

what

when

where

why

how – long, often, many, much

and of course the missing component will fall under the concept associated with the relative pronoun or the W/TH word. To try to make all of this clear, let us use several examples. Thus if the question is

> Who ate the pizza?

then the hypothesis sentence is effectively

> Someone ate the pizza.

and the missing component is the referent of the subject term. And if the question is

> Whom did the committee pick?

then the hypothesis sentence is

> The committee picked someone.

and the missing component is the referent of the object term. And if the question is

> Whose car is parked in the driveway?

then the hypothesis sentence is

> Someone's car is parked in the driveway.

and the missing component is not actually the referent of the subject term 'someone's car' but, appropriately enough given 'whose', the owner of the referent of the subject tem. And if the question is

> Where is the treasure hidden?

then the hypothesis sentence is

> The treasure is hidden somewhere.

And the missing component is the referent of the object term.

The cases of questions formed with 'which', 'why' and 'how' are quite different from those of the relative pronouns and W/TH words covered above. The hypothesis sentence for a 'which' question must contain a noun phrase term which has an indefinite determiner, either 'a' or 'an', and thus refers to a set of things, and the 'which' must be followed by that term minus its determiner. The copulas and the modals 'do', 'does', 'did' and 'will' operate as above. Thus we have the pairs

Which flower did she pick?

She picked a flower.

Which boy earned the top grade?

A boy earned the top grade.

A question based on 'why' seeks also seeks a component of the situation referred to by the hypothesis sentence, but now the category of components must be expanded to include entities that are not referred to by components of hypothesis sentences. Specifically reasons for what are asserted by the hypothesis sentences must be regarded as components. Thus

Why did Johnny cut class?

seeks the reason for the situation given by the hypothesis sentence

Johnny cut class.

I think that 'how' questions have the most interesting machinery, although, as we have seen, the machinery of 'which' questions is pretty cool too. We will consider here just four 'associate' words for 'how', namely 'many', 'much', 'long' and 'often'. This is plenty in relation to the purpose of showing how 'how' works. The first two associate terms are used in cases where it is not the referent of a term in the hypothesis sentence but the number or quantity of the referent of a term that is missing from the situation vis-à-vis the knowledge of the questioner (in this respect 'how' is analogous to 'whose'). The associate word 'many' is used where the relevant term is a noun phrase based on a count noun and the associate word 'much' is used where the relevant term is a noun phrase based on a mass noun. The 'how' is followed first by the associate word and then the noun phrase minus its determiner (in this respect 'how' is analogous to 'which'). The copulas and the modals 'do', 'does', 'did' and 'will' operate as above. Thus we have the pairs

How many students attended the lecture?

[20 students attended the lecture.]

How many pairs of shoes did she buy?

[She bought seven pairs of shoes.]

How much flour did the distributor deliver to the bakery?

[The distributor delivered 600 pounds of flour to the bakery.]

Note that, in this last case, '600 pounds of' has to be taken as the (complex) determiner whereas on a straight analysis, '600' would be the determiner, 'pounds' would be the noun and 'of flour would be a prepositional phrase modifying the noun).

The associate terms 'long' and 'often' are used in cases where it is not the referent of a term in the hypothesis sentence but the duration or frequency, respectively, of the referent of the action type predicate base that is missing from the situation vis-à-vis the knowledge of the questioner. Thus we have the pairs

How long has Jane lived in New York?

[Jane has lived in New York for two years.]

How often does Jane swim in the university pool?

[Jane swims in the university pool every day.]

But note that we can also have

How long has Jane lived in New York?

[Jane lives in New York.]

in which case the machinery of the present perfect has to be imported – and similarly for the 'how often' pair above. And note further the lack of analogy among the three pairs

How long did Jane live in New York?

[Jane lived in New York.]

How long has Jane lived in New York?

[Jane lives in New York.]

How long will Jane live in New York?

[Jane will live in New York.]

In the question related to the past tense hypothesis sentence, we have to import the modal 'did', in the question related to the present tense hypothesis sentence, we have to import the present perfect copula 'has', as we just saw, and in the question related to the future tense hypothesis sentence, the modal 'will' is already present and just has to be copied. But the problem here, if there is one, has nothing to do with the interrogative aspect of English. Rather it has to do with the tense aspect (no pun intended but pun accepted) of English. Two points will make the point. First, the present tense of English has always seemed a bit odd to me. If we want to have John eat lunch in the present, we can't say

John eats lunch.

There is virtually no use for this sentence in English (there is the marginal use related to the fact that, given the pressure of the work schedule and the need to maintain a healthy weight, everyone has to choose to eat lunch or not). What we have to say is either

John is eating lunch.

or

John has eaten lunch.

And, second, the future tense of English is different from the past and the present in that it is carried not by an inflection of the verb but by a separate word, the word 'will' of course. So let us say that, with respect to the three pairs above, the past tense pair fits the interrogative model developed here perfectly, and the present is off related to the point just made about it, and the future is off related to the point just made about it.

This concludes our discussion of questions in English. It is not comprehensive. There are questions that are simpler than the ones addressed here. For example, we can take a declarative sentence and make it into a question by means of inflection:

Jane is in town?

And there are questions that are more complicated than the ones addressed here. For example there are what are called 'tag questions', as when both John and Jane have lost their jobs, and little Janie has to ask

There won't be any presents this year, will there?

where the 'will there' part is the tag. Interestingly enough, from the perspective established above, the hypothesis sentence here is actually a part of the question. But, despite this lack of comprehensiveness, what has been said provides a conceptual basis for all types of questions in English, and as well the mechanics associated with the most important types.

By the way, you may question my judgment in using the last example above but, after it just came to me, given the economy I suppose, I could not resist it because it touches my heart – and just you try now to forget, ever, what a tag question is!

Well, as was indicated a good while ago, imperative sentences can be dispensed with quickly. If you take an infinitive phrase whose verb refers to an action that can be performed by an agent, a person or a dog typically, and drop the 'to', change the first letter of the new first word from lower case to upper case and affix a period at the end then you have an imperative sentence. Thus the infinitive phrase

to sit down and be quiet

becomes the imperative sentence

Sit down and be quiet.

Basic Sentence Scopes: Simple, Complex, Compound

All of the sentences considered thus far are simple. What makes a sentence simple is that it has just one predicate and term set assembly. Thus for example, the sentence

Jane called everyone about the party.

is the assembly of the predicate

_____ called _____ about _____

and the term set

       Jane   everyone   the party

Now in order of scope, the lead variable here, complex sentences follow simple ones immediately (we'll do a little math on this a bit later) but for convenience of exposition, I will deal next with compound sentences. The characterization of compound sentences will be built up in stages, for reasons that should become apparent, and here we will say that a compound sentence is made up of two simple sentences and a sentence conjunction. Thus for example

       Jane plays tennis and John plays golf.

is a compound sentence consisting of the two simple sentences

       Jane plays tennis.

       John plays golf.

and the sentence conjunction 'and'. And in having two simple sentences as components, a compound sentence has two predicate and term set assemblies. We will characterize compound sentences two more times as we go forward. The idea is that not only simple sentences but also complex and compound sentences can serve as sentence components of compound sentences and yet we are in the process of characterizing these two sentence types right now. So again we find ourselves caught in the middle of what might be called the linguistic circle, the need to depend on one part of the language that hasn't necessarily ben developed itself in order to develop another part of the language.

   Now a complex sentence stands between a simple one and a compound one. Like a compound sentence it has two predicate and term set assemblies but like a simple sentence it has only one *complete* predicate and term set assembly. We will consider here two distinct types of complex sentence. First there is the type that adds a structure very like a gerund phrase to a complete sentence (for now we will intend by 'complete sentence' just a simple sentence – we're in the linguistic circle again!) thereby establishing a cause and effect relationship. Thus for example we say

       Having finished her homework, Janie jumped on her Play Station 3 to play *Call of Duty: MW III*.

Here we have the complete, simple sentence

       Janie jumped on her Play Station 3 to play *Call of Duty: MW III*.

and the gerund phrase like structure

> having finished her homework

The complete sentence has the predicate

> _____ jumped on _____   _____

the subject term

> Jamie

and the two object terms

> her Play Station 3

> to play *Call of Duty: MW III*

while the gerund phrase like structure has the predicate

> _____ having finished _____

and the object term

> her homework

it does not have a stated subject term but its implied subject term is the subject term of the complete sentence, i.e. the subject term

> Jamie

What thus happens is that the gerund phrase like structure 'piggy backs' on the complete sentence by sharing its subject, so *effectively* it is a complete sentence itself. Now the relationship between the two complete sentences we actually wind up with is that what one of them states is the cause of what the other one states, making what this other one states an effect. Specifically, Janie's having finished her homework is the cause of her playing *Call of Duty: MW III*, although the concept of cause and effect has to be taken loosely here and in many if not most instances of constructions of the kind under consideration here. Finally when two sentences relate to each other in cause and effect manner, they can be seen as connected by a conjunction, perhaps most typically the conjunction 'so'. Thus the original complex sentence

Having finished her homework, Janie jumped on her Play Station 3 to play *Call of Duty: MW III*.

has become, with a couple of touch ups,

Janie had finished her homework, so she jumped on her Play Station 3 to play *Call of Duty: MW III*.

which is a compound sentence.

The other type of complex sentence we will consider here also draws on a grammatical structure we have already developed. Just above the structure was the gerund phrase. Here it is the relative clause. As we developed the notion earlier, a relative clause is a component of a noun phrase that modifies the noun of that noun phrase. The noun phrase itself appears as term in a sentence. Here the relative clause will apply to a whole term of a sentence in order to provide extra information about the person, place or thing that term refers to, or it will apply to a whole sentence in order to provide more information about the situation that the sentence refers to. But in neither case will the relative clause be a part of the structure of the sentence *per se*. Rather it will appear after the term it applies to or after the whole sentence it applies to, and be set off by a pair of commas or a single comma to show its independent status, i.e. its not actually being a part of the structure of the sentence. Thus if we have

John gave Jane a beautiful ring, which costs $5,000, for her birthday.

the relative clause

which costs $5,000

applies to the term

a beautiful ring

in order to provide more information about what it refers to, namely the ring, but that relative clause is not really a part of the structure of the sentence and thus it is set off by a pair of commas. But if we have

John gave Jane a beautiful ring for her birthday, which pleased her very much.

the relative clause

which pleased her very much

applies to the whole sentence

John gave Jane a beautiful ring for her birthday.

in order to provide more information about the situation that sentence refers to, but that relative clause is not really a part of the structure of the sentence and thus it is set off by a comma. Now, the complex sentence above converted to a compound sentence, and the complex sentences here could too but it is much more natural to convert them to 2-sentence sequences. The first one becomes

John gave Jane a beautiful ring for her birthday. It costs $5,000.

and the second one becomes

John gave Jane a beautiful ring for her birthday. This pleased her very much.

Note that, as is implied by all that has been said here, the 'It' of the first 2-sentence sequence refers back to the term

a beautiful ring

while the 'This' of the second 2-sentence sequence refers back to the whole preceding sentence

John gave Jane a beautiful ring for her birthday.

These examples provide the opportunity to point out a very common mistake in writing among not only ESL students but among native speakers of English as well. The error consists in using 'It' instead of 'This' in a construction like the second one above, i.e. attempting to refer back to what is expressed by a whole sentence using 'It' despite the fact that only 'This' can serve that purpose.

Now we are in a position to complete our characterization of compound sentences. We are perhaps about as much now outside the linguistic circle as is possible. So a compound sentence consists of two sentences joined by a sentence conjunction, and each of the two sentences can be either a simple sentence, a complex sentence or itself a compound sentence. Finally, if the sentence conjunction is 'and' then there is no restriction to two component sentences for the compound sentence. We can have

I bought an apple, I bought grapes and I bought bananas.

I bought an apple, I bought grapes, I bought bananas and I bought plums.

. . .

Basic Sentence Forms: Standard, Nonstandard

All of the sentences that we have dealt with thus far are in *standard form* and all that we have said about them will serve to motivate the use of this term. Many sentences however are in *non-standard form* which is to say that they are not in standard form. But we will be more forthcoming than this because we will specify four particular sentence forms that are non-standard and this will serve to motivate the use of this term. Thus all of the preceding plus what will be offered here should be enough to make the standard/non-standard distinction reasonably clear.

The first of the four non-standard forms it the existential sentence, a sentence whose first or only three components are the word 'There', an identity type predicate base and a noun phrase, i.e. a sentence whose form is given at least partially by

'There' + an identity type predicate base + a noun phrase

The classic example is

There is a god.

Views differ as to how such sentences are to be interpreted but perhaps the best way to help the student to understand them is to say that they convert to standard form in three steps:

1) drop the 'There'

2) drop the identity type predicate base

3) place an action type predicate base whose verb it 'to exist' and whose characteristics, especially number, tense and modality, are the same as those of the dropped identity type predicate base immediately after the noun phrase.

But all of this boils down to something very simple. The sentence above can be understood to mean the same thing as the sentence

A god exists.

Similarly, the sentence

There must be some fruit in the refrigerator.

can be understood to mean the same thing as the sentence

Some fruit must exist in the refrigerator.

No claim is being made here that a sentence like this accords with English usage, just that it is equivalent to the existential sentence, and in standard form.

The second of the four non-standard forms is what might be called a proportion sentence. A good example is

The harder you study, the higher your grade.

An attempt to analyze this sentence in the term and predicate manner established above wouldn't even get off the ground. It brings quantity into English and as we will see again when we come to comparison, this warps standard form. Now the standard form equivalent of this sentence is something like

The level of your study effort is proportional to the level of the grade you earn.

Again there is no claim here that this sentence would pass unnoticed in actual speech but understanding what proportionality is and teasing out the meaning of the sentence will definitely help the student to understand proportion sentences,

Next we come to comparison sentences. Comparison in English is a very complicate business and it should not be thought that what will be offered here is a comprehensive account. But first we must say that there is qualitative comparison and there is quantitative comparison. The preeminent device for qualitative comparison is the sentence conjunction 'whereas'. Thus we can have the comparison

New York is a northern state whereas Georgia is a southern state.

The set up here is very simple. The complexity comes in when we turn to quantitative comparison. But even here we can impose some order. The critical elements are two distinctions and one preposition, the 'comparison preposition 'than'. The one distinction is that between a comparative adjective, on the one hand, and a regular adjective used with 'more' or 'less', on the other. The former is illustrated by

John is older than Jane.

while the latter is illustrated by

Jane is more cautious than John.

Note that given the reference to adjectives, regular and comparative, these sentences have quality type predicate bases, and those bases, and the sentences of which they are a part are in standard form. But things change when the predicate base is of the action type and we have comparison. Consider

Janie weighs more than Johnnie.

This is short for

Janie weighs more than Johnnie does.

Here we go non-standard big time.

The word 'does' here is not the emphasis modal we have in Janie's defense of John

He *does* clean his room!

Nor is it the main component of an action type predicate base as in

Janie does a good job of keeping her school work in order.

or in the maid shocker

I do windows!

Rather, the 'does' of the comparison sentence above is something like a 'verbal pronoun', or 'pronoun of action', in that it reflects the main verb 'weighs' such that the sentence really reads

Janie weighs more than John weighs.

This double verb set-up is what rocks standard form, clearly taking us over to the non-standard. But the set-up is also very revealing and brings us to the main point here, viz. that there is a certain logic in comparison, a logic that sets a three part structure. We can see what is involved here clearly by converting the sentence above to

1) Janie weighs *X*.

2) Johnny weighs *Y*.

3) *X* is greater than *Y*.

In a comparison sentence one part of the sentence indicates an indefinite quantity, another part indicates another indefinite quantity, and still another part makes one of the quantities larger than the other. Note however that it is not possible to set a one to one relationship between mutually exclusive and jointly exhaustive subsets of the words constituting the comparison sentence and the three 'parts' called for here. The three parts have to be seen as implied, although it is possible that some deeper analysis of the comparison sentence might allow for something like the correspondence described. And of course it does not go without notice that the $1 - 2 - 3$ schematic above contains a comparison sentence, namely the sentence

> *X* is greater than *Y*.

But the idea is that this one, very basic and in fact essential comparison sentence serves, along with its two associated sentences to reduce all quantitative comparison sentences of the type that we have seen thus far. But there is one more type to be considered. With respect to all of the types above, the comparison element, the 'more/less' or the '-er' of the comparative adjective, applied to the predicate base, and thus to the *predicate* itself, but in the types to follow the comparison element applies to a *term*. Thus we have

> More young students registered for my class than for yours.

Here the predicate base is simply the action type

> registered

and it does not contain the comparative element. Rather the expression

> more young students

which is at least superficially a term contains the comparative element 'more'. Despite this important syntactic difference however the same type of three part analysis can be made. Under such analysis the sentence becomes

> 1) *X* number of young students registered for my class.

> 2) *Y* number of young students registered for your class.

> 3) *X* is greater than *Y*.

Now of course the point is that all of the sentences in the 3-part analysis are in standard form, but what is really important is the fact that the three distinctions made in the discussion of comparison, viz.

1 - qualitative vs. quantitative

2 - 'more' – 'less' + regular adjective vs. comparative adjective ('-er')

3 - comparison element applies to the predicate vs. comparison element applies to a term

along with the 3-part analysis should help the student to master the complex feature of English which is comparison.

The fourth and final non-standard sentence form is one that is really compound rather than simple so that we will see some variety in scope in the non-standard genre. The form is set by the expression

… not only … but also …

which is effectively a complex conjunction. Just two examples will show what is involved here:

In this industry, you need not only training but also experience.

and

They not only won the race but also set a new world record.

or

Not only did they win the race but also they set a new world record.

In the first sentence the conjoined expressions are the terms

training   experience

and the standard form compound that the sentence converts to is

You need training in this industry and you need experience in this industry.

The ungainliness of this sentence helps us to see how in each case in this section the non-standard form is efficient and stylish, and no doubt the desire for efficiency and stylishness in the language plays a role in the etymology of all of the non-standard forms here, and perhaps of such forms in general.

In the alternatives for the second sentence, the conjoined expressions are effectively sentences. In the first alternative these sentences are

they win the race   they set a new world record

which, with the past tense of the word 'did' applied to the first sentence, become

they won the race   they set a new world record

and the standard form sentence that the larger sentence converts to is simply

They won the race and they set a new world record.

The four non-standard forms studied here constitute only a sample of those that exist in the language but they are definitely among the most important ones and the student is well advised to work towards mastering them. And of course four cases are plenty for the purpose of illustrating the standard vs. non-standard distinction.

A final note here is that the exercises for this chapter include a very important one whose directive is to take a long article in the *New York Times* and try to diagram each sentence there using the diagrammatic technique developed in chapter 10. This will provide a very exciting opportunity for the student since for each sentence they encounter that is

- not declarative (i.e. is interrogative, imperative or exclamatory) or

- not simple (i.e. is complex or compound) or

- not standard (i.e. is non-standard)

they will have to use the resources here *or generate their own resources* in order to convert that sentence to one or more sentences each of which is declarative, simple and standard such that it can be diagrammed by means of the indicated technique. I can think of no better way than this for the student to learn the structure of English.

.

12.

CONCLUSION

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    Congratulations on completing your course in English, and this textbook. I sincerely hope that you will continue to study the language. Think of yourself as having just started a great voyage of exploration, the exploration of a universe that is as fascinating as any physical universe that scientists might turn their attention to, because it is the deep, complex universe of human experience, a socio-linguistic universe of impressive order and great beauty. Of course, you must consider taking more advanced courses. This is perhaps the best single way of going forward, better perhaps even better than living long term in an English speaking country because it is too easy to let your effort trail off once you have reached a functional level of proficiency that allows you to negotiate the mass of practical affairs that, no matter how it is particularized by the local culture, is still the common burden of the members of societies across the globe.

    But whether you take further courses or not, you must make permanent in your life certain activities that you can have control over. You must indeed take the standard/common advice and follow the high quality print and electronic media – non-fiction books, news magazines and newspapers in English; radio, television and the Internet in English. In the analytical spirit of the course, pursuing the print media is more important than pursuing the electronic media. And newspapers are the best of the print media. Books are static, and the good newspapers have broader coverage and exhibit a wider variety of writing styles that the compact and rather formulaic news magazines. If you are in America then read *The New York Times*, *The Washington Post*, T*he Los Angeles Times*, *The Chicago Tribune* or *The Atlanta Journal and Constitution*, whichever one is most conveniently available. Of course, if you live in one of the great associated cities then your situation is ideal. But you must read the newspaper you choose in the analytical mode established in the course. You should first read an article for interest, but then you must go back through as much of it as you can, paragraph by paragraph, sentence by sentence, searching for words that are new to you or whose meaning you are still not quite sure of, and sentences

whose grammatical structures don't parse for you right away. Look up those words in your best dictionary, and break out this textbook and try to make the sentences with the seemingly unwieldy structures fit one or another of the patterns catalogued here. And when you have finished these tasks, take the final step and formulate, for each English sentence you have singled out, the sentence in your native language that comes closest to expressing the same meaning as it does so that you can identify the system of analogies that encompasses the two sentences: which terms or other features of the native sentence match which terms of the English sentence, what is the predicate or other feature of the native sentence that matches the predicate of the English sentence, and which features of the native language sentence match the characteristics of the predicate of the English sentence, its tense, its voice, its mood, etc.? Determining what the analogies are in this way not only deepens your knowledge of English by connecting it to your native language in a systematic way but also caters to your intellectual interest in language, an interest that, ideally, was served by the course you have just finished, but was by no means created by it.

But beyond all of this you need to have feedback on your production of English if you are truly to advance. If you are not going to take another course then you should consider hiring a tutor, even if the individual chosen is just a bright high school student who will be happy being paid what they would otherwise make by babysitting. Failing even this, identify English speaking friends, neighbors or colleagues who will be willing not just to talk to you, and perhaps read something that you have written, but also to tell you where your sentences are mistaken. In either case, you should have a small voice recorder with you so that you can try to record your production and the feedback you receive. Studying the recordings should help you a great deal. And if things develop for the best then you will develop what might be called 'linguistic self-consciousness', i.e. the disposition to monitor 'in your head' the composition of the sentences that you produce, as well as those that you receive. With this mechanism in place, continued progress should be automatic.

Finally, however, you must have fun with English. Just socializing with your English speaking acquaintances and your fellow students of the language is such a pleasure, in part, the pleasure of exercising and displaying your mastery. And when you go back home, try to make the same kind of social arrangement, and look to see if there are any societies of language and culture devoted to English that you might join. Having mastery of a second language, and especially a very important one like English, is a very exciting thing. And, yes, you have to work hard to achieve this mastery, but there is the appearance nonetheless that it's somehow 'free', because the language is *there for the taking*, if you're willing to put in the hard work.

To The Student

This text is designed for students at all three levels of study, beginning, intermediate and advanced. How can this be? Well, the idea is to offer something for the students at each level, and to make sure that what is offered at the one level will not interfere with the study of the students at the other level. Now the text is of benefit to the beginning level student because it is *specific*. The text basically outlines English in terms of word lists and grammatical forms. The beginning level students should concentrate on these, taking care to learn them well. The other material will also be help beginning level student because while some of it is written in challenging language, not all of it is. And of course you will have the teacher to help you. Finally the exercises represent a great opportunity to learn for all students. And yet the text is also of benefit to the intermediate level student because it is *systematic*. Most texts are really bits and pieces of English which do perhaps add up to something unitary, something whole but if so then only by implication. The student is left to put the pieces together for themselves to a very large extent. An intermediate level student, as such, knows a great deal about English but this text will allow them to put their knowledge in order, and thus to be able to look more deeply into the structure of English, and thus move much closer to the advanced level. Finally the text is of benefit to the advanced student because it is *serious*. What I mean by this is that the text reflects the thinking of those who analyze English, and natural language generally in a formal way. Its aim is not merely to make the student functional in the use of English but to help them to have a principled understanding of the language. The advanced student is interested in English not just as a means of communication but also as a theoretical subject, and the text shares this orientation with them.

To The Teacher

This text was written with you clearly in mind. I have taught myself for many years and I understand very well that the main thing that motivates you to teach is the pleasure and the satisfaction you get from doing so. I can't imagine any form of work that can be as enjoyable an is teaching, for the right kind of person, namely someone who loves ideas and language, and the process of analysis, and who o course engages very positively with other people and is committed to helping them to grow and develop, to come as close as possible to realizing their full potential. So as I wrote the text I thought about what might prove entertaining to a person of the type I have described, who is a teacher. I knew first that the material of the text would have to reflect serious thinking about the nature of English. I knew further that the language would have to have a certain richness and complexity, a certain texture if you will. And I knew that there would have to be some humor and even a bit of silliness here and there, in order to set the relaxed mood that I think most of us most enjoy working in. But now if I have written the text to you to a large extent, which says something about its 'level', then what about the student? Won't they be left out, at least the ones below the advanced level? Well, this brings us to another key feature of the text. I wrote at a certain level to create a situation in which, to a large extent, you have to be the interface between the student and the text. You have to be able to explain what morphology is to them. You have to break down for them some of the more complex sentences, and explain some of the more sophisticated ideas. And you have to explain to them what 'looking a gift horse in the mouth' means. I know that I would relish every chance to help them to understand this or that, to have them dependent upon you in a way that empowers you to delight them by relieving their puzzlement, ideally with spirit and style.

I bought a bread knife and a cutting board, the knife costs $20, the board $15.

[sometimes/oftentimes you have to go to/for the deeper logic of the situation]

The whole thing about non-standard sentences is that out of some set of circumstances they became established in the language as the way to say what they say and thus any other way of saying same will seem odd.

THE CATEGORIES OF BASIC EXPRESSIONS IN ENGLISH

THE CATEGORIES OF BASIC EXPRESIONS IN ENGLISH

1. Na. = Name

2. R.P. = Relative Pronoun

3. W/TH W. = W/TH Word

4. M. = Modal

5. Cop. = Copula

7. Pro. = Pronoun

8. Con. = Conjunction

9. Pre. = Preposition

10. V. = Verb

11. Adv. = Adverb

12. No. = Noun

13. Adj. = Adjective

14. I. = Interjection

15. Pa. = Particle

1. R.P.	3. W/TH W.	4. M.	5. Cop.
who	who	could	be
whom	what	should	am
whose	when	would	is
which	where	may	are
that	why	might	was
	how	must	were
	that	can	have
		shall	has
		will	had
		do	have been
		does	has been
		did	had been
			am being
			is being
			are being
			was being
			were being

6. D.

		7. Pro.	
a	my	I	mine
an	your	you	yours
the	her	he	his
this	his	she	hers
that	its	it	its
these	our	we	ours
those	your	you	yours
all	their	they	theirs
each	Carter's	me	myself
every	the old president's	you	yourself
any		him	himself
no		her	herself
some		it	itself
few		us	ourselves
several		you	yourselves
many		them	themselves
most			
one/1			
two/2			
…			

7. Pro. Cont'd	8. Con.		
this	also	or	in that
that	although	plus	only if
these	and	rather	that is
those	anyway	since	so that
something	as	so	such that
anything	because	still	both … and
everything	but	then	either … or
nothing	for	therefore	if … then
somewhere	further	though	neither … nor
nowhere	furthermore	thus	
someplace	given	whereas	
anyplace	hence	yet	
everyplace	however	after all	
sometime	if	all in all	
anytime	instead	and/or	
anyone	moreover	even though	
somebody	nevertheless	for example	
anyone	nonetheless	if and only if	
anybody	nor	in other words	
everyone	only	in short	
everybody			
one			
oneself			

9. Pre.

about	beyond	since	as a result of
above	by	than	in consequence of
across	cum	through	in lieu of
after	despite	thru	in spite of
against	during	to	instead of
along	except	under	in terms of
alongside	for	unlike	on the basis of
amid	from	unto	
amidst	in	upon	
amongst	inside	via	
among	instead	with	
around	like	within	
as	of	without	
at	on	along with	
before	onto	as of	
behind	outside	as per	
below	over	as though	
beneath	per	as to	
beside	sans	because of	
between		due to	
betwixt		except for	
		as a means to	

10. V.

A *verb* is a word that indicates action or possession and has the parts 'present', 'past' and 'present participle'

Action	Possession
work	have
think	own
	possess

_____

11. Adv.

An *adverb* is a word that indicates when or how in relation to verbs.

Adverb	Verb	Adverb
	play	skillfully
soon	eat	

12. No.

A *noun* is a word that indicates a person, an animal, a place or a thing.

<u>Noun</u>

girl

tiger

city

book

justice

_____

13. Adj.

An *adjective* is a word that indicates what type (or kind) or which one(s) in relation to a noun.

<u>Adjective</u>	<u>Noun</u>
sweet	wine
California	franchise

GUIDE SHEET SPREAD FOR SENTENCE DIAGRAMMING

I_____ST_____I_____PB_____I_C_I_____OT[1]

General Algorithm   Predicate Base Pick Algorithm

Pick   V. = A.T. Cop. + V. = A.T.   Cop. + Adv. + V. = A.T.   I.T.

Write In   Cop. + Adj. = Q.T.   Cop. + Adv. + Adj. = Q.T.

Match*   Cop. + Pre. = R.T.   Cop. + Adv. + Pre. = R.T.

                                       (Two Word Tests)   (Three Word Tests)

_____I_C_I_____OT^2_____I_C_I_____OT^3_____I

S.T./O.T.   P.B.

Na.   A.T. = (M) + (Adv) + (Cop) + (Adv) + V +
(Adv)

Pro.   could really be going

I.P.* (to run for Congress)   Q.T. = (M) + (Adv) + Cop + (Adv) + Adj +
(Adv)

G.P.* (running for Congress)   will soon be wealthy

W/TH P.* (what they want)   R.T. = (M) + (Adv) + Cop + (Adv) + Pre

N.P. = (D.) + (Adv.) + No. + (Pre. + O.) + (R.P. + I.S.)   might actually be in

    the huge pot of gold that she found   I.T. = (M) + (Adv) + (Cop) + (Adv)

                                        will eventually be

The Philosophy of Language

and

Second Language Acquisition Research & Pedagogy

Introduction

The study of language has advanced dramatically since the fusion of interests among logicians, philosophers of language and linguists that happened in the 60s and the 70s [f-note]. And, the development now taking place in formal semantics is both broadly based and fast paced. Analysts take on features of natural language and, drawn in by their complexity, they produce theories that illuminate the phenomena involved but at the same time reveal more that needs explanation, and invite the formulation of alternative views as well. The analyses of some features a given natural language or of some feature types with respect to natural language in general become accepted, if not in the whole field then at least in one or more of its subfields, but the achievement of anything approaching a comprehensive and final theory, or set of more specialized theories, still seems to be a distant goal. This, however, is in no way discouraging. What we are in the midst of is very exciting, and there is opportunity for those who love language, and are willing to put in the hard work that is necessary to participate in the rich and evolving discourse.

The linguistics referred to above is theoretical linguistics, of the kind spawned by Noam Chomsky's seminal 1957 monograph, *Syntactic Structures*. From the very beginning, the effort was to ferret out complex syntactic structures of English, and natural language generally of course, and to chart the patterns across these structures in order to form a single elegant theory. But, before Chomsky trained the focus of the discipline on the very abstract and the highly theoretical, it encompassed areas of work of a decidedly practical nature too, including bilingualism, computer-mediated communication, stylistics, forensic linguistics and second language acquisition. The professionals working in these areas wanted to maintain their focus on the practical, while those of a more theoretical bent became reluctant to be associated with anything explicitly practical. Thus, the field of applied linguistics came into being. Now I believe that, in a kind of genealogy of language study, a fusion of the kind that occurred between philosophy and theoretical linguistics, leading to the development of formal semantics, can occur between formal semantics and applied linguistics, especially as regards its sub-field of second language acquisition, which is in fact strongly theoretical, although the theory involved is informal.

The fusion would be mutually beneficial, I believe, in a multitude of ways that cannot presently be foreseen. But, I am even now able to see the possibility of a direct, singular exchange of values. In the one direction, SLA research can be of value to formal semantics because the nature and the source of the sentences that appear in an SLA research are such that they can be regarded as 'real' in that they are typically instances of actual speech produced by individuals in their ordinary communicative endeavor

whereas the sentences that appear in an article in formal semantics are in effect contrived for the purpose of illustrating the syntactic and/or semantic aspect of language that the theory presented in the article addresses. So, to the extent that formal semanticists become consumers of the data generated in SLA studies, and the associated informal theory as well, they have both more opportunity and more responsibility with respect to the advancement of the theories they propose. But now, precisely because the theory of SLA studies is informal in nature, formal semanticists could be of service to SLA researchers in that they may be able to provide a certain amount of formalization of the phenomena discovered in SLA studies, and this should allow the SLA researchers to develop deeper insight into the essential nature of those very phenomena. However, I think that we should be more ambitious and broaden the benefit by stipulating, or at least recommending, that the formal theory be constructed in as simple and intuitive a way as possible, and that the articles presenting the theory be written in such a way that they are maximally perspicuous. If these conditions are met then the audience for the fusion work can include SLA pedagogists, i.e. SLA teachers and SLA teacher-researches, and serious university level SLA students as well. The same unit of theoretical work can thus have double or triple the benefit.

But all of this is quite general . What is needed is something specific, a view, an approach or a project, that bridges the gap between formal semantics and SLA research. I propose a project in the form of an English textbook which draws its inspiration from the philosophy of language but is designed for ESL, i.e. English as a second language, students. Such a textbook is the second, and main, part of this dissertation. It is distinctive among textbooks of its general type in that it presents English not as a collection of parts and aspects, selected and arranged according to some pedagogy, or some set of pedagogical ideas, but as a single system whose basic structure is both simple and intuitive. As we will see, this comes down to the view that a simple sentence of English consists of one predicate and one or more terms, and that there are four precisely specifiable predicate types and six precisely specifiable term types. On this view, English may then be said to have a 'term and predicate' grammar [f-note]. Further, the text was written to be maximally perspicuous, and thus it strives to accord with the stipulation set above for work falling in the intersection of formal semantics and SLA research. Since the text was developed as a part of a dissertation in the philosophy of language, field testing it by convincing some number of ESL teachers to use it in their courses and then provide feedback in the form of evaluations of effectiveness as produced both by themselves and by their students was not an option, but I am confident that the merit of the text as a primary tool of instruction in ESL will be apparent to all who peruse it.

This introductory chapter ranges broadly but its aim is to cover all that is necessary to provide a rationale for presenting an ESL textbook as the major part of a dissertation in the philosophy of language. It begins with a brief accounting of the development of formal semantics as a fusion between the interests of the philosophy of language and logic, on the one hand, and theoretical linguistics, on the other. The accounting focuses on three figures who played critical roles in this development, viz. Noam Chomsky, Richard Montague and Donald Davidson. But then, the chapter turns to the emergence of applied linguistics as an enterprise that is decidedly distinct from that of theoretical linguistics. This provides a basis for the main move of the chapter, which is the presentation of a proposal to effect a fusion between formal syntactic theory and the applied linguistics sub-field of second language

acquisition, or SLA. The fact that the two disciplines have a common object of study but differ in at least three basic ways is used to set up the claim that the analysts in either discipline can benefit from the study of work in the other discipline. The underlying idea is that a merger of formal semantics and SLA research would be analogous to the merger of philosophy and linguistics that led to the creation of formal semantics. Given all of this, it becomes important to introduce SLA research to the philosophy of language community, and this is accomplished by considering two of its basic issues and five of its central theories. It is hoped that the accounting of the development of formal semantics presented earlier will serve at least to some extent to introduce that field to the community of SLA researchers. However, the largest part of the chapter consists in two cases in which a particular feature of English is considered both by a formal semanticist and by an SLA researcher. In the one case, the feature is that of determiners and two articles that study this feature, one in formal semantics by Edward Keenan and one in SLA research by Monika Ekiert, are summarized and then analyzed. In the other case, the feature is that of the modals of English, and articles in formal semantics and SLA research which address this feature, by Murvet Enc and Andrea Tyler, respectively, are also summarized and analyzed. As a part of the analysis in both cases, I present ideas as to how the features involved might be treated. But, the purpose of this is not to establish theory in either field, or in the proposed fusion of the two, but rather to 'model' the simple and intuitive kind of theory that I believe would have to be produced if the two fields are to engage in the common dialogue that would make possible the realization of the mutual benefits projected above. After this, the chapter takes a turn towards the practical. A characterization of the SLA learner is provided, and this characterization provides a platform for the claim that an ESL textbook that draws its inspiration from the philosophy of language but is at the same time a highly effective device for instruction in English would serve to foster the formal semantics-SLA research cross-fertilization proposed, and thereby help to engender its projected benefits. Following this, there is a section of the chapter in which the view of English on which the textbook is based is discussed. The view is described in some detail, and both the way in which it developed and the use I have been able to put it to are recounted. The final section of the chapter is a very important one in that it specifies the seven conditions that must be met if instruction in English is to be effective in the production of proficiency for students who are first speakers of other languages.

§ 2 The Historical Background: Chomsky, Montague and Davidson in the Emergence of Formal Semantics

When he published *Syntactic Structures* in 1957, Chomsky effected a revolution in the discipline of linguistics. The new goal of the discipline was to become (1) the construction of a theory of linguistic structure that is both general and formal, and (2) the investigation of the foundations of that theory. Given this, the then current theories were found to be inadequate. Chomsky cites two such theories, or models – the communication theoretic model and the immediate constituent model. Although I think that it has to regarded as just one example of the inadequacy of these theories, he says that neither of them can explain the active-passive relation. The new model which will be able to explain the relation is the 'transformational' model. Speaking generally again, Chomsky says that the objective of the linguist is to construct grammars, where the grammar of a particular language is a device that generates the grammatical sequences of the expressions of that language. For the determination of which sequences are actually grammatical, Chomsky appeals to the intuitive knowledge of the native speaker. A sequence

is grammatical if the native speaker judges it to be so. But, for any given language, there are many grammars that will generate the grammatical sequences of its basic expressions and so a criterion of adequacy is needed. And the criterion is that the grammar deemed adequate for any one language be constructed by the same method as the grammar deemed adequate for any other language.

> We then have a very strong test of adequacy for a linguistic theory that attempts to give a general explanation for the notion "grammatical sentence" in terms of "observed sentence," and for the set of grammars constructed in accordance with such a theory. It is furthermore a reasonable requirement, since we are interested not only in particular languages, but also in the general nature of Language. (14)

Bialystok and Hakuta contrast Chomsky's approach with that of what they call the 'inductivists' and sum up the matter nicely as follows:

> Whereas the old-guard structural linguists were content with accounting for observed utterances, and patterns of speech (a purely inductive and cumulative operation) and scanning for differences and similarities between languages, Chomsky argued that linguistics should be concerned with deeper, abstract, universal properties of language. This meant that linguists needed to discover the underlying grammar that would account for the infinite set of potentially grammatical sentences in the repertoire of native speakers of a language. (26)

In 1970, Richard Montague published an article entitled 'English as a Formal Language'. Its first paragraph is important for its historical significance as well as for its theoretical content. It is as follows:

> I reject the contention that an important theoretical difference exists between formal and natural languages. On the other hand, I do not regard as successful the formal treatments of natural languages attempted by certain contemporary linguists. Like Donald Davidson I regard the construction of a theory of truth – or rather, of the more general notion of truth under an arbitrary interpretation – as the basic goal of serious syntax and semantics; and the developments emanating from the Massachusetts Institute of technology offer little promise towards that end. (188)

I think it fair to say that there are four figures in the history of the study of language who appear in one way or another in this brief passage. In the background, there is Alfred Tarski, to whom the notion that the basic goal of a serious syntax and semantics is the construction of a theory of truth must be attributed. There is the explicitly given figure Donald Davidson, a philosopher who, like Montague, was deeply invested in the study of natural language, and whom we will see in the next paragraph. There is of course the author, Montague himself. But, the fourth figure is Chomsky. He is the central figure among 'certain contemporary linguists', and the developments emanating from the Massachusetts Institute of Technology are ones he either produced or inspired. Now the content of the passage is a criticism by Montague of the approach to the formal study of natural language taken by Chomsky. Montague's point is that Chomsky's attempt to develop a syntactic theory of English without consideration of the semantic aspect of language, of the relation between language and the world that allows sentences to be either true or false, is simply misguided. As we will see, this criticism, and the

response to it on the part of the community of linguists, had very important implications for the history of the formal study of natural language. But, while Montague's criticism is valid, there are at least two parts of Chomsky's work of the time that have to be taken into account before the criticism is accorded final acceptance. Thus in *Syntactic Structures*, at the very end of the introduction, Chomsky refers to the implication of his theory for 'semantic studies'. In 1966, he published 'Topics in the Theory of Generative Grammar' and, in 1971, 'Deep Structure, Surface Structure, and Semantic Interpretation', both of which affirm the necessity and importance of semantics in the formal study of natural language. And, reacting to the former article, Davidson positions philosophers and linguists as 'co-workers' in the formal study of natural language. But all of this may fail to address Montague's point because to acknowledge the necessity and the importance of semantics is not the same thing as acknowledging that semantic considerations must be made *in* the formulation of syntax, and in fact chapter 2. of *Syntactic Structures* is entitled 'The Independence of Grammar', and Chomsky (1975) defends 'the autonomy of syntax'. Be all of this as it may, Montague's trilogy of essays, 'English as a Formal Language', quoted from above, 'Universal Grammar' and, most especially, 'The Proper Treatment of Quantification in Ordinary Language', fostered a revolution of their own. According to Shalom Lappin, "Montague's work established the foundations for research in semantics for the next two decades." (1), and Barbara Hall Partee, the leading authority on what came to be called 'Montague Grammar', says

> Formal semantics has roots in several disciplines, most importantly logic, philosophy, and linguistics. The most important figure in its history was Richard Montague, a logician and philosopher whose seminal works in this area date from the late 1960s and the beginning of the 1970s; its subsequent development has been a story of fruitful interdisciplinary collaboration among linguists, philosophers, logicians, and others, and by now formal semantics can be pursued entirely within linguistics as well as in various interdisciplinary settings. (11)

Davidson is also a seminal figure in the development of formal semantics. We can relate him to Montague in that he saw that a formal theory could be provided for a natural language, and that the central feature of that theory would have to be the provision of a definition of truth for the language. But we can also relate him to Chomsky because, very early on, he saw that when philosophers took on this task, they would enter a collaborative relationship with linguists. We might take as his manifesto the first part of the second paragraph of his 'Semantics for Natural Languages':

> I suggest that a theory of truth for a language does, in a minimal but important respect, do what we want, that is, give the meanings of all independently meaningful expressions on the basis of an analysis of their structure. And on the other hand, a semantic theory of natural language cannot be considered adequate unless it provides an account of the concept of truth for that language along the lines proposed by Tarski for formalized languages. (55)

We see here a commitment to the principle of compositionality, and a commitment to the Tarskian procedure of fielding a theory of a language that accords with Convention T in that has as consequences all sentences of the form

s is true if and only if *p*

where '*s*' is to be replaced by a standardized description of a sentence of the language and '*p*' is to be replaced by the sentence itself. So we get

"Snow is white" is true if and only if snow is white.

And Davidson goes on to say that, since the words 'is true if and only if' are invariant, we can replace them, if we please, with 'means that' so that we get

"Snow is white" means that snow is white.

It is important to note, however, that it is not the biconditional itself but rather the proof of it that "… must demonstrate, step by step, how the truth value of a sentence depends upon a recursively given structure (61)." It is also important to note that Davidson acknowledges that what he is providing in all of this is not a particular theory but rather a criterion of theories, and he did not go much further in terms of specific semantics except for isolated cases of philosophical int4rest, like action sentences and events.

But now, taking himself to have shown that a formal theory of natural language is possible, Davidson goes on to ask why such a thing is desirable. His answer is that providing a satisfactory theory of truth for natural language will position philosophers and linguists to work together on a variety of problems, such that there will be a convergence of the respective methods and interests of the two disciplines. There is a question, however, as to whether a kind of foundational realignment of the two disciplines would be a prerequisite of such convergence. In this connection, Davidson raises the question of the extent to which the philosophical concept of logical form can be identified with the linguistic concept of deep structure but, setting this aside, he goes on to enumerate the problems that might be taken on collaboratively. They include ambiguity, reference, modality, propositional attitudes, mass terms, adverbial modification, attributive adjectives, imperatives and interrogatives. He also brings up the case of providing a theory for a foreign language, and invokes Quine's thesis of the indeterminacy of radical translation. This problem might be related at least distantly to Slobin's linguistic relativity thesis, which is discussed briefly below.

We have seen how Chomsky, Montague and Davidson made critical individual contributions to the development of formal semantics, but we must also consider the broader historical context. Linguistics, on the one hand, and the philosophy of language and logic, on the other, were quite distinct enterprises through the 1950s. This can be understood in specific historical terms (see Partee for a brief but excellent account of this) but is can also be understood in general terms having to do with intellectual interest. Philosophers were primarily interested in truth. Now in the proper sense of the term, the only thing that can be true is a sentence, and of course a sentence is an item of language, but if it is truth that is your focus then the range of linguistic phenomena that you deal with can be quite narrow, even if you're working with natural language. Consider all of the discussion generated by, and about, Russell and Strawson in relation to the sentence 'The king of France is bald.'. And think about the sentences analyzed in logic textbooks to display their logical meaning. Even the most challenging ones in predicate logic, like 'All that glitters is not gold.' are relatively simple linguistically. We might even go back to Aristotle and take the four standard form categorical proposition types A, E, I, and O as essentially

representative. Where the primary interest is in truth, and other related semantic phenomena like entailment, the sentences entertained are just props for the semantic theories produced. What the theorist wants is the simplest possible structure so that the semantic trait they are highlighting can be represented with minimal interference from the linguistic vehicle that delivers it. But things are completely different if your interest is language, especially of course natural language. Then you are virtually overwhelmed with complexity and thus the theories you produce strain to capture this complexity. It does not matter whether you are a structuralist like Saussure who is involved in what is essentially a classificatory project, or a transformationalist like Chomsky who is concerned with relations between, and among, linguistic structures such that deeper, more general and more abstract structures have to be sought. You embrace the complexity because it is that complexity that makes the thing you are interested in, language itself, what it in fact is. But, things changed dramatically when in the 1960s philosophers decided that they could apply their formal apparatus to natural language, not bits of it as in logic textbooks and philosophical treatises, but big fragments of it, and eventually, it would be hoped, all of it. Then the linguists had to take notice. And, as linguists began to accept the necessity of treating the semantic aspect of natural language, philosophers and logicians became more aware of its complexity and subtlety, and a process of cross-fertilization developed: the two disciplinary lines of research converged forming the common enterprise of formal semantics, which has proven to be highly productive.

§ 3 The Other Side of the Ledger: the Emergence of Applied linguistics as a Discipline in its Own Right

We have considered the roles of logic, philosophy of language and linguistics proper in the development of formal semantics, but the story to be told here requires that we bring in applied linguistics as well. In this account I rely on Berns and Matsuda (2006) – see the bibliographic references there. The discipline of applied linguistics emerged as linguists who wanted to continue to work on practical problems related to language reacted to the theoretical turn the discipline took under Chomsky's influence. In the early part of the 20th century, applied linguistics was closely associated with structuralism, which was simultaneously attempting to disassociate itself from philology, whose humanistic approach to the study of language, literature and culture put it out of accord with the new ideal of scientific linguistics. But, in the 1940s, what became distinctive about applied linguistics was its relation to language teaching, teaching English in schools, teaching foreign languages beyond English and teaching ESL, i.e. English as a second language. In American schools, English was taught prescriptively on a model related to British literary English, and Latin grammar. Fred Newton Scott, founding president of the National Council of Teachers, and two of his students in the Department of Rhetoric at the University of Michigan, Sterling Andrus Leonard and, more notably, Charles C. Fries tried to institute reform towards actual usage but there was too much resistance from rank and file English teachers. Regarding foreign language instruction, Leonard Bloomfield developed a method of teaching anthropologists in preparation for their fieldwork. The method was picked up by the Army Specialized Training Program. Bloomfield was influenced by 'the Reformists', Henry Sweet, Paul Passy and, most notably, Otto Jespersen, who distinguished theoretical and practical language, the former focusing on history and etymology, the latter on language learning.

At a 1939 conference cosponsored by the U.S. State department and the Rockefeller Foundation, Charles Fries and I.A. Richards offered competing methods of teaching English to Latin American students. Fries's method, like Bloomfield's, drew its inspiration from the Reformists but Richard's method was based on Basic (British American Scientific International Commercial) English, which employed a limited vocabulary. Fries's method was chosen. An outgrowth of the discussion involved was the establishment of the first English Language Institute (ELI) at the University of Michigan. Its influence in the U.S. and around the world has been considerable. In 1948, the first journal whose title contains the term 'applied linguistics', *Language and Learning: A Quarterly Journal of Applied Linguistics*, was established. At about that time, applied linguistics began to dissociate itself from linguistics proper as the latter became less and less willing to be associated with problems of a practical nature. Applied linguistics then became effectively a separate discourse community. But, the concern with the practical continued to grow and, in the 1950s, *Modern Language Journal* regularly explored the relationship between applied linguistics and language teaching. In 1957, the Ford Foundation sponsored the Conference on Linguistics and the Teaching of English as a Foreign Language. This led in 1959 to the establishment of the Center for Applied Linguistics (CAL), which has served as a vehicle for the spread of applied linguistics throughout the world. And, just a few years later, in 1964, the International Association of Applied Linguistics (AILA) was founded and, by 1969, it had 18 affiliate organizations in Europe and North America.

As applied linguistics began to make its way independently of linguistics proper, it looked to other disciplines, like anthropology and psychology, for technique and theory and, in 1967, *Language Learning* was established as an applied linguistics based interdisciplinary journal. There was also expansion within the field as it went beyond language teaching to add to its areas of interest first language acquisition, bilingualism, translation, sociolinguistics, psycholinguistics, writing systems and language policy. In 1966, Teachers of English to Speakers of Other Languages, or TESOL, was founded, and that same year saw the beginning of the publication of *TESOL Quarterly*. The field has continued to grow internationally as well as in breath of focus. Since 1975, associations have formed in Ireland, Korea, Greece, Hong Kong, Japan and Brazil.

In the European Union, there is a need to have a *lingua franca* for all of the member states while at the same time avoiding the devaluation of the 'smaller' languages. The problem is made more complex as there is labor migration from points both within and without the union. Canadians and Americans who are members of the North American affiliate of AILA are mainly interested in second language acquisition, second/foreign language pedagogy and discourse analysis while the members of the Russian affiliate are mainly interested in contrastive linguistics, error analysis, lexicography and lexicology. In China, applied linguists have been engaged in standardizing, teaching and computerizing the Chinese language, and the description and teaching of minority languages, but teaching foreign languages, and especially English, is paid a good deal of attention and is supported by the government. Further, the Chinese Ministry of Education has been instituting change in language teaching practice from a focus on intensive reading and the study of grammar rules to the communicative use of language in speech and in writing. In Malaysia, applied linguists study the consequences of the challenge to Malay posed by the need for the use of English. Finally, in Korea, the effectiveness of methods of teaching English at all

levels is studied as motivated by parents' recognition of the connection between proficiency in English and the prospects for employment and financial security. "These differences in emphasis reveal as much about linguistic traditions as they do about the language problems that are identified as meriting consideration by applied linguistics."

§ 4 <u>A Second Merger?: The Possibility of a Mutually Beneficial Exchange between the Philosophy of Language and SLA Research</u>

It would seem that a convergence of the lines of interest of the philosophy of language and SLA research creating a set of circumstances in which each discipline can benefit from the work of the other is a distinct possibility, especially given the analogous development involving theoretical linguistics that has already taken place. Again we have a case in which two different disciplines have the same object of study, provided that we construe that object, natural language, in sufficiently broad terms. The dynamic of the mutual benefit would be set by the ways in which the two disciplines differ along dimensions that are common to the two of them. Thus, the philosophy of language is theoretical while SLA research is practical, although this characterization of SLA research has to be qualified sharply by the point made in Ellis (1997) to the effect that the individuals who work in this area are now almost exclusively members of university departments whose main interest is in publishing peer reviewed articles in scholarly journals, the concern with the learning of second languages by real people in real situations of need having been dropped like some non-functional appendage in the evolutionary process a long time ago. But now, the point is that when the theoretical and the practical rub us against each other, some new understanding is bound to be in the offing. A second difference can be set up by saying that, with respect to natural language, the concern of the philosophy of language is 'how it works' whereas the concern of SLA research is 'how we get it'. Finally, to the extent that the philosophy of language involved is cognitive in its orientation, i.e. to the extent that it takes the form of cognitive semantics, a critical distinction made by Jackendoff comes into play:

> The study of "externalized language" or *E-language* treats language as an external artifact used by human beings, and seeks to characterize its properties as part of the external world with which humans interact. By contrast, the study of "internalized language" or *I-language* treats language as a body of knowledge within the minds/brains of speakers, and seeks to characterize its properties within the context of a more general theory of psychology. (539)

Both the philosophy of language and the discipline of SLA address both E-language and I-language such that the E/I distinction is orthogonal to the distinction between the two of them. But, since philosophers of language attempt to confirm their theories through a process of introspection in which hypothetical uses of sentences are judged to be acceptable or unacceptable on the basis of grammatical intuition while SLA researchers attempt to confirm their theories by conducting studies in which real, if staged, uses of sentences are judged to be acceptable or unacceptable on the basis of the standard grammar of the language involved, there is an important difference between the two disciplines in that E-language thus plays a very large role in the methodology of SLA while it plays a very small role in the methodology of the philosophy of language.

Clearly, *I-language* is the object of study of the philosophy of language *cum* cognitive semantics and any review of SLA studies will motivate the claim that it has *E-language* as its object of study. Such studies make reference to mind/brain processes and indeed to psychology itself but there is no indication that the aim of SLA scholarship is to make a contribution to the general theory of psychology.

   The fact that the two disciplines differ in all of these ways, and yet are similar in being efforts to characterize human beings as language using animals, suggests that the extent of the mutual benefit projected above could be considerable.

§ 5 The Emergence of Second Language Acquisition (SLA) as an Important Sub-Field of Applied Linguistics

   Applied linguistics is allied with several disciplines. It also has a broad array of sub-fields but we will be concerned here only with the sub-field of second language acquisition, or SLA. It emerged when the applied linguists who were interested in second language acquisition shifted from conducting global studies of the effectiveness of methods of instruction to particular studies of the ways in which students learn. In the 1960s there were mainly two methods of teaching second languages. The one method is the grammar-translation method. The students are presented with a text and, under the guidance of the teacher, they identify and study the vocabulary and the grammar of that text, as a means of learning the language of the text. The objective is to enable the students to read the language, not to speak it. The other method is the audio-lingual method. In the simplest possible terms, the teacher speaks a sentence and the students repeat it, with or without variation. Now the two methods were compared for effectiveness in two studies, Scherer and Wertheimer (1964) and Smith (1970). However, the results of the two studies were inconclusive. Somewhat later, a new approach was taken. The object of study was no longer the methods but rather the learners. Duskova (1969) studied the errors learners made and Ravem (1968) studied individuals learning a second language not in the classroom but in the world so to speak. Teachers took to this type of study more than they did to the other type because, in being focused on errors and individuals, the studies of the new type operated in a conceptual space that the teachers were familiar with. Further, studies of the new type were conclusive, and what they showed is that not only do students of a second language learn the language, but also they learn it in a systematic way. Out of this success, SLA came into existence and since has become a major scholarly and practical enterprise.

   A good way to characterize SLA is to consider some of the main issues that it addresses, and some of the leading theories that researchers in the area have produced. I believe that, without doubt, the two most important issues in the field are the issue related to the question of what the relationship between explicit knowledge and implicit knowledge is in second language acquisition, and the issue related to the question of whether there is a fixed order of acquisition of the features of a second language. Let us consider these issues in turn.

   The issue of the relationship between explicit knowledge and implicit knowledge is an important one because it is widely accepted that implicit knowledge is the true basis of our general use of language and yet this knowledge comes to us 'naturally', through processes that we are not conscious of. Explicit

knowledge, by contrast, is developed typically by instruction, or independent study, and as such resides in the domain of the conscious. Thus, the position one takes on the *interface hypothesis*, i.e. on the question of the relationship between implicit knowledge and explicit knowledge, determines whether one thinks of formal language instruction in grammar, and perhaps other aspects of language, as effective or ineffective, and if effective then to what extent. Instruction produces explicit knowledge and thus only if explicit knowledge, by one means or another, *becomes* implicit knowledge can instruction be seen to have value. But before we try to say what the relationship between the two forms of knowledge in fact is, it seems appropriate to say something about what the two forms actually are, what their natures are. I don't find the literature to be particularly clear on this question. Ellis (1997) builds an impressive case for formal second language instruction which depends heavily on the distinction between the explicit and the implicit but, when it comes to defining these terms, he appeals to Bialystok (1981), according to whom explicit knowledge is:

- 'analyzed': because it does not have to be used in order to exist

- 'abstract': because it represents a generalization about the way in which we use language

- 'explanatory': because its logical basis is independent of its use

But, our intuitive notion of the nature of explicit knowledge is clearer than what these motivated terms convey. And nothing is offered in Ellis in the way of a definition of implicit knowledge. However, we do have intuitive notions of both implicit knowledge and explicit knowledge, and they will probably serve well enough in the present context. Now the claim about the relationship between the two forms of knowledge has varied over time. In the 60s and the 70s the prevailing methods of second language instruction, like the audio-lingual method, presupposed that explicit knowledge would become implicit knowledge, i.e., that formal instruction would be effective. But, Krashen (1982) argued that the fact that a formally instructed student can know more about the target language than native speakers of that language and yet be virtually unable to speak it revealed the disconnection between the implicit and the explicit. Under this inspiration, SLA pedagogy turned to 'natural' and 'communicative' approaches that basically sought to expose the student to the target language with the idea that acquisition would result just from this. Studies of the implementation of these approaches, however, revealed definite problems. Students trained according to these approaches failed to achieve either acceptable levels of accuracy or acceptable end states. In the meantime, other studies showed that, where features of the target language were attended to properly in instruction, those features were mastered. But, this did not mean that the field went from Krashen's no-interface position to a strong-interface position because formal instruction in the grammar of the target language was set in a naturalistic, communicative environment. And this compromise thus represented the adoption of a weak-interface position, which is still the dominant position today. Further, research, in SLA and even in neuroscience, confirms the position. Subconscious processes are perfectly capable of handling language tasks that are routine for the language user but, when the user is presented with something that is truly novel, like a second language, then the resources of conscious processes must be called upon. The implication that we can play an active role in the development of proficiency in a second language, that we can help ourselves directly and by means of the general learning systems that we count on broadly with respect to the kinds of self-

development that we must realize in order to pursue so many of our goals, has to be regarded as very welcome.

Another issue of great importance in SLA research and pedagogy is that having to do with the question of whether there is a fixed order of acquisition of the features of a natural language. There is the claim, for example, that the (partial) order for English is as follows:

- progressive *–ing*

- plural *–s*

- third person *–s*

- past tense *–ed*

- articles *a*, *an*, *the*

And, there is a proposed (partial) order for sentence word order in German as follows:

- adverb preposing

- movement of finite auxiliaries and verb particles to the end of the sentence

- inversion

- movement of the finite verb to the end of a subordinate clause

The native language of the learner makes no difference. The order of acquisition of the target language, English or German here, is the same for the first speaker of Polish as it is for the first speaker of Cantonese. Further, the profile of the learner does not matter either. The strong, highly motivated student must follow the sequence as surely as the weak, unmotivated one.

Now, the idea essentially associated with these sequences is that no instruction is required for the learner to acquire the features involved. Only exposure to the language is required. This does not mean, however, that instruction is of no value. Both Krashen and Ellis suggest what this value might be as they address what might be seen as a conflict between the claim here that instruction is not necessary for acquisition and the positive findings of some SLA research regarding the influence of instruction.

> The Input Hypothesis [which we will examine shortly] helps to settle … [an] apparent contradiction in the research literature. Some studies indicate that formal instruction helps second-language acquisition, while others seem to indicate that informal environments are superior or just as good. I reviewed this research in Krashen 1982a, and concluded that it is consistent with the hypothesis that language classes help when they are the primary source of comprehensible input. This is especially true for beginners, who often find 'real world' input too complex to understand. (Krashen 1985: 13)

> The theory helps to explain … [a puzzle] in L2 acquisition studies. The … [puzzle] is the paradox of formal instruction; formal instruction results in faster and more successful language learning … and yet learners often fail to learn what they have been taught. This can be explained by positing that formal instruction contributes primarily to explicit knowledge. In other words, it will often have a delayed rather than an immediate effect. (Ellis 1997: 131)

Thus instruction is of value in that it provides comprehensible input for some learners and enhances the acquisition process for all learners. Further, there is also broad agreement in the SLA literature that some features of natural language do not appear in the order of acquisition and they can be acquired effectively through instruction at any time. Pienemann supplies some helpful terminology in this connection. He calls features that appear in the natural order 'developmental' and features that do not 'variational' (1984: ???).

The order of acquisition issue is perhaps a lopsided one since everyone in the field seems to accept the notion that such an order exist, although Ellis does at one point appear to express some reservation: "Learners do not acquire the L2 grammar as a set of 'accumulated entities' … but rather work on a number of features simultaneously, gradually sorting out the form-meaning relationships which they encode and on the way constructing a series of interim grammars (61)." But, despite this general acceptance, no one claims to know what the actual orders of acquisition are, the examples above notwithstanding. And, this poses a big problem for implementation. An associated implementation problem is the determination of each learner's place in the order at the time of instruction. Presumably the instruction should begin at the proper point for each learner, but how is this to be achieved in a class, a typical class, in which the students are at different levels of proficiency? (Pienemann and his associates have developed software, sophisticated software, that may be able to determine the student's level of proficiency but Ellis thinks that its use is likely impractical.)

But, if we do accept that there is a fixed order of acquisition then the question is, why is this so? It seems very strange. One possibility is that the order might be related to Universal Grammar as due to Chomsky, in its current principles and parameters manifestation. Perhaps the parameters can be seen as types that the features of the various languages are tokens of in such a way that each feature in a given language is of the same type as some feature of every other language, and it is really the types that are the elements in the fixed order. But this is just a speculative reaction, although, as it turns out, Zobl and Liceras present a very similar idea using the terms 'generative grammar' and 'category' as opposed to the terms 'Universal Grammar' and 'type' used here. Pienemann and his associates (1988), however, have worked out a theory of their own, which they call the Teachability Hypothesis. The central concept is that of a processing operation. The learner first masters non-linguistic operations, then operations that require the identification of the beginnings and ends of strings, then operations that require shifting the components of strings around within them, and finally operations that address multiple strings. Now, since these operation types are hierarchically arranged, the learner cannot perform the operations at a given level until they have mastered the operations at the preceding level. Thus all we need to do to have an explanation of the order of acquisition is to correlate features with operation levels.

The final point to be made here is that, while the order of acquisition applies to implicit knowledge, which provides the basis for all spontaneous use of language, both written and spoken, Ellis suggests that it may not apply to explicit knowledge, and I am very much in sympathy with this point because, as regards writing as opposed to speech, given (1) the clarity of the nature of most features of English, (2) the power of teachers to explain, and (3) the ability of most ESL students in American universities, it is difficult for me to imagine a case in which the student has been trained in a specific, mechanical editing procedure (what I call a SMEP) designed to control a certain feature of English, and yet that student is somehow unable to control that feature. And does there not have to be, at some point, transfer from writing to speech?

We turn our attention now from issues to theories. There are at least five important theories, or hypotheses as they are called, in SLA research that play upon the two issues just discussed in various ways. If we operate with an 'input-processing-output' model, where input is listening to speech or reading a text, processing is thinking of some kind and output is speaking or writing then, looking at second language acquisition naively, we are likely to believe that advances in proficiency come mainly from processing. The learner is presented with a grammatical structure of the L2, a grammatical rule perhaps, and they ingest that structure, or rule, by means of the various learning mechanisms and strategies available to them, and then they can both understand language which has the relevant structure (input) and produce language which has the relevant structure (output). But, as we will see, only one of the five hypotheses focuses on mental processing directly. The other four focus on what is superficially at least peripheral to processing. The five hypotheses are: the input hypothesis, the interaction hypothesis, the pushed output hypothesis, the delayed-effect hypothesis, and the thinking-for-speaking hypothesis.

Let us now consider these hypotheses in turn. The names of the hypotheses, and the sequence in which I have put these names, suggest more order among the hypotheses themselves than there actually is. While we will see that, overall, a good deal of reference is made to the two issues presented above, each hypothesis represents primarily the thinking of one figure regarding the vast and highly complex phenomenon of second language acquisition, from one basic perspective or another, and reflecting a unique set of particular interests. Further, it was not possible for me to try to homogenize the contents of the hypotheses and thus each hypothesis has to be understood on its own terms. However, I think that the presentations of the hypotheses to be offered are relatively straightforward and clear, and that, in conjunction, with the presentations above of the two basic issues, they provide for someone outside the field a pretty good sense of what it is about.

The Input Hypothesis

Krashen has what he calls a theory of second language acquisition but there is some awkwardness involved in presenting it since (1) as indicated above, the five main SLA theories are all called hypotheses in the literature, (2) Krashen's theory has five main components each of which is called an hypothesis, and (3) one of the five hypotheses, the input hypothesis, was elected as the most important hypothesis, and it represents, and in some ways effectively becomes the theory as a whole. There is considerable

terminological infelicity in all of this, but once the clarification has been made, the presentation of Krashen's theory proceeds straightforwardly. The five hypotheses are as follows.

The Acquisition-Learning Hypothesis – there are two ways in which we learn a second language and these are (1) acquisition, which is a sub-conscious process that is very much like the subconscious process related to first language acquisition, and (2) learning, which is a conscious process that yields only 'knowing about' the second language.

The Natural Order Hypothesis – we acquire the features a second language in a fixed order which cannot be affected by instruction: the order is not determined by the simplicity or complexity of the features.

The Monitor Hypothesis – this hypothesis depends upon the acquisition-learning one: it says that our production in the second language is based primarily upon the sub-conscious knowledge that comes through acquisition but the conscious knowledge that comes through learning allows us to monitor, or edit, our production: however, two conditions must be met if monitoring is to be effective: first, the learner must be consciously concerned about the correctness of their production and, second, the leaner must know the rules that that allow them to recognize and then correct their errors: Krashen says that these two conditions are difficult to meet.

The Input Hypothesis – this hypothesis depends on the natural order one: we acquire a second language only by receiving 'comprehensible input' but a given feature is acquired only when the learner is at the point in the natural order of acquisition at which the feature is located: when we are at point i in the natural order, we advance by receiving comprehensible input that contains the feature at point i + 1: "We are able to understand language containing unacquired grammar [the feature at i + 1] with the help of context, which includes extra-linguistic information, our knowledge of the world, and previously acquired linguistic competence (2)." There seem to be two corollaries of this hypothesis, neither of which accords very well with the common sense view of the matters involved. The first corollary is that instruction is not needed for acquisition to occur. As we just saw, when the learner is at point i, some combination of previously acquired competence, consideration of context, and general knowledge of the world helps them to figure out some input language, i.e. something they have heard or read, which is at point i + 1, thus making that language comprehensible, and Krashen's overall main point is that comprehensible input is both necessary and sufficient for acquisition to occur. Thus there is no role for instruction to play. But most of us, as students and/or teachers, believe that instruction can play a role in acquisition, and in most cases does in fact play a role. The second corollary is that all individuals acquire the second language in the same way, viz. by means of input. But if we operate with the input-processing-output model of language use presented in the preceding paragraph then we might expect that individuals vary in terms of the extent to which their acquisition is due to the various phases of the model, input, processing and output, taken separately. So some might learn more from input, i.e. from listening and reading, but others might learn more from output, i.e. from speaking and writing, while still others might learn more from processing, i.e. from thinking about the second language, about how its parts work and how they are related to each other. We believe in individual variation with respect to modes of learning among forms of study in general, and would not expect the case of second language acquisition to be an exception.

The Affective Filter Hypothesis – comprehensible input is a necessary but not a sufficient condition of acquisition: it is also necessary that the learner's 'affective filter' be 'down': the affective filter is "… a mental block that prevents acquirers from fully utilizing the comprehensible input they receive for language acquisition (3)." When the filter is 'up', because the learner is unmotivated, lacks self-confidence, or is anxious or defensive, the reception of comprehensible input will not result in acquisition: the filter is at its lowest point when the learner finds the input so engaging that they lose their awareness of operating in the second language.

Krashen presents ten categories of evidence for the input hypothesis. I will discuss ever so briefly here just parts of two of the categories that relate to instruction, since ESL instruction is my main interest. In the discussion of the category The Effect of Instruction, Krashen says

> Language classes are less helpful when (1) the students are already advanced enough to understand some input from the outside world, and (2) this input is available to them. This explanation predicts, for example, why advanced ESL courses for international students in North American universities are not effective. … The students are competent enough in English to get their comprehensible input elsewhere, i.e. certain subject matter classes and in social situations. (13, 14)

And in the discussion of the category The Reading Hypothesis, Krashen says earlier on

> A number of studies show a relationship between reading and writing. Good writers, it has been found, have done more reading for their own interest and pleasure than poor writers, and programs that get students 'hooked on books' help develop writing skills. … I have hypothesized … that writing competence comes only from large amounts of self-motivated reading for pleasure and/or interest. It is reading that gives the writer the 'feel' for the look and texture of good writing. (18,19)

and then later

> The complexity of the written language, as well as the fact that so little of it has been described, makes it unlikely that it can be taught deliberately. We are only now beginning to discover the often subtle grammatical and discourse differences between speaking and writing, and between good writing and poor writing. Instruction can give the student only the most obvious aspects of written language. This is confirmed by the failure of several studies to show any clear relationship between the study of grammar and the ability to write … (19)

Now ESL instruction in writing at the university level is a big part of my teaching, and of course part two of this dissertation is an ESL textbook so, needless to say, I have a radically different view of these matters than Krashen does. I will respond separately to each of his three points. (1) I teach English at Pace University and The English Language Institute, which is adjunct to the university, offers a full range of ESL courses. The students in the institute are assessed as to their level of proficiency in English when they are accepted, and they have to move through a series of proficiency levels before they graduate. I know several of the language teachers in the institute well and, without exception, they require the

students in their courses to meet the applicable standard before they move on. Further, the institute is a feeder school for the university and, while I have no statistics to offer, I know that institute students routinely enter the university and go on earn degrees from it. Given all of this it has to be said that the ESL courses offered by the institute are successful. (2) Reading good literature in the target language is certainly helpful to the second language learner with respect to writing, but students cannot develop grammatical proficiency by this means. The books, magazines and newspapers they read present them with rhetorical forms and sentence patterns that can serve as effective models of writing but, when the students attempt to express their ideas in an essay, they have to have command of the mechanics of the second language if what they say is to be relatively error free, and yet the transfer of mechanics from what is read to what is written is weak at best. The models provided by reading are 'macro' whereas the mechanics required by writing are 'micro'. (3) The theoretical explanation of natural language is of course far from complete. The challenge there is to discover principles, as simple and intuitive as possible, that apply across the whole of the language, thus becoming general constraints. Good examples are the Ross Constraints. But, explaining a feature or an error in an ESL student's essay is a very different matter. Students do not just throw words together. Even the weakest, laziest student writes with sense, no matter how little in evidence this may be. Given this, the range of phenomena associated with a student's sentence is very narrow indeed as compared to the range of phenomena associated with a language as a whole – the theoretical linguist has to 'cook the whole language from scratch' whereas the ESL tutor has only to 'throw together some prepared sentence components'. Further, the linguist's explanation has to apply generally whereas the tutor's explanation has to apply only specifically. Finally, the linguist's explanation has to meet a standard of theoretical adequacy whereas the tutor's explanation has to meet only a standard of practical adequacy in serving as a guide for the student's future writing. So, I am not able to square Krashen's three points with my now long term experience with ESL students.

The Interaction Hypothesis

Ellis says that, on The Interaction Hypothesis, grammatical features are acquired when they become salient in the discourse at points where communication breaks down such that the discourse participants have to negotiate for meaning via 'interactional modifications' in the form of requests for clarification and confirmation. (49) Ellis attributes the hypothesis to Long, and in Long (1983) we learn what is really involved here. It is very interesting that Long couches his hypothesis in the Input Hypothesis of Krashen and indeed he does not even seem to take his hypothesis as an entity separate from Krashen's. In fact, Long goes so far as to begin his article with a presentation of the evidence for the input hypothesis. He starts with the five kinds of evidence Krashen himself gives in Krashen (1985). I did not review these kinds in the discussion of the article above because they are more relevant here. They are as follows:

1. *Caretaker Speech* – those who care for young children modify their speech in order to ensure communication but at best they only approximate the child's actual level of proficiency so that they produce language below, at, and, most relevantly of course, above the child's level: the above level language contains structures that the child does not have mastery of but, because the caretaker's

speech focuses on the 'here and now', the child is able to understand the structure and thus acquisition takes place.

2. *Speech by Native Speaker/Foreigner Talk* – the case here is really the same as that of caretaker speech: the native speaker has to try to ensure that they communicate with the non-native speaker.

3. *The Silent Period* – some children remain silent for a period of time as they learn what they need to be able to speak by listening: Long does not really indicate whether there is any tendency to remain silent in adults, but he notes that adults are often pushed to produce speech from the very beginning in courses they take and this can cause them to resort to transfer from the L1.

4. *Research on Teaching Effectiveness* – research shows that teaching models that do not include sufficient comprehensible input are invariably ineffective whereas models that do include such input are effective.

5. *Immersion Programs* – programs that emphasize comprehension over production, and content over formal accuracy outperform foreign, second and modern language programs to such an extent that the comparison groups for immersion students are typically monolingual native speakers.

Long adds two units of evidence himself, namely that immersion students do not gain from exposure to L2 outside of school and that studies show that, where there is no comprehensible input, there is no acquisition. He then concludes that there is a *prima facie* case for the importance of the role of comprehensible input in language acquisition generally, and in second language acquisition in particular. Long's own contribution is the analysis of the mechanism of comprehensible input. Ellis's formulation of the interaction hypothesis given above is taken from Long and so to avoid repetition here I will say that Long sees the mechanism of comprehensible input as stemming from the relationship of mutual responsibility that the native speaker and the non-native speaker enter as they in effect agree to converse. Both of them are responsible for making communication happen so that, when one of them does not understand the other, the other must make moves of some kind, on their own initiative or at the request of the one, and yet the non-native speaker is able to learn from the moves that the native speaker makes in order to make themselves clear to the non-native speaker. The moves the native speaker makes in effect *explain* the expression or structure they have used that the non-native speaker does not know, this lack of knowledge being the cause of the failure to understand. And, the explanation of the expression or structure by the native speaker allows the non-native speaker to acquire it.

At a certain point, Long turns his attention to education. Of course he recommends that the SLA course provide the student with comprehensible input, and he recommends that the provision be high in frequency. Perhaps the most important particular he mentions is that the best way to set up the mechanism for comprehensible input is to use two way arrangements, exchanges between two parties that require the one party to depend on the other party for information in the completion of a task.

The Pushed Output Hypothesis

The Pushed Output Hypothesis, naturally enough, emphasizes the importance of output in second language acquisition. According to this theory, "… when learners are required to produce pushed output (i.e. sustained output that pushes at the limits of the learner's current state of development) they are forced into revising interlanguage hypotheses and also have to attend to the syntactical properties of the L2 (Ellis 49)." And Swain has argued that "…although comprehensible input … may be essential to the acquisition of a second language, it is not enough to insure that the outcome will be nativelike performance (236)." He goes on to say that

> … while comprehensible input and the concomitant emphasis on interaction in which meaning is negotiated … is essential, its impact on grammatical development has been overstated. The role of interactional exchanges in second language acquisition may have as much to do with 'comprehensible output' as it has to do with comprehensible input. (236)

Swain and colleagues conducted a study of children whose first language is English and who were studying French in an immersion program. The children heard little French outside of their school and thus had only the French spoken by their native-speaker teachers, the French spoken by their fellow students and the French materials with which they were taught as input. The conclusion of the study was that comprehensible output

> … extends the linguistic repertoire of the learner as he or she attempts to create precisely and appropriately the meaning desired. Comprehensible output … is a necessary mechanism of acquisition independent of the role of comprehensible input. Its role is, at minimum, to provide opportunities for contextualized, meaningful use, to test out hypotheses about the target language, and to move the learner from a purely semantic analysis of the language to a syntactic analysis of it. (252)

This is an extremely interesting view. I would like to understand better the specific way in which the L2 learner generates hypotheses about the L2 and then tests them. The operations involved in this must be very complex, and there is the very important question of whether the learner conducts them consciously or sub-consciously.

The Delayed-Effect Hypothesis

Ellis characterizes the Delayed-Effect Hypothesis as one according to which the natural acquisition order hypothesis is accepted, but the claim is made that a linguistic feature can be taught profitably to a learner before they reach the point in the order at which that feature appears because the understanding of the feature which the instruction develops will help them to acquire the feature when they do in fact encounter it in the natural acquisition order. Lightbrown is a leading proponent of the delayed-effect hypothesis but in Lightbrown (1985), her consideration of it is only a part of a complex assessment of the role of instruction in second language acquisition. In the article, Lightbrown reacts to the views of Pienemann, especially as presented in Pienemann (1985). The natural order of acquisition idea has, as one might expect, had a powerful impact on the views of SLA researchers and teachers regarding the value of instruction. Two extreme reactions can be distinguished. One is that all instruction must be reformed so that it follows the natural order. The other is that instruction in

language *per se* should be replaced by content instruction, i.e. instruction in regular subject matter areas like history, science and mathematics, thus allowing language development to take place on its own. Pienmann recommends that we reject these extreme proposals and go instead right down the middle. He argues that there are actually two types of linguistic features, one of which is 'universal' in that it can be learned only when the student reaches the point in the natural order at which that feature is located, the other of which is 'variable' in that it can be learned at any time. It should be noted that literature on the natural order I have read provides only a few examples of universal features - see page ___ above - and the one example of a variable feature I have seen is the copula. A proper curriculum will then accommodate both types of features, and of course incorporate the standard pedagogical principles of careful introduction, practice and review. Lightbrown endorses this approach but issues a caveat to the effect that a curriculum like Pienemann's should not be represented as something that all practitioners should adopt wholesale, lest they be disappointed yet again at the failure of a 'scientific breakthrough' in SLA pedagogy. Lightbrown goes on to make a number of critical points about the natural order of acquisition hypothesis, but then she introduces, ever so subtly, the delayed-effect hypothesis as follows:

> … formal, controlled practice makes it possible for learners later to recognize (and thus *understand*) these elements [features of language] in the L2 they encounter. That is, even if we accept that developmental sequences of acquisition generally override the sequences imposed by formal instruction in terms of what the learner actually incorporates and in what sequence, formal instruction may provide "hooks", points of access for the learner. That is, a certain amount of information *about* the language together with contextual cues – may make it possible for the learner to understand the L2 samples he is exposed to, making the input comprehensible, thus available for language acquisition processing. (108)

The operative term here is 'later'. Students can be taught the formal grammar of a feature as a contribution to their explicit knowledge of it, their knowledge *about* it, before they reach the point in the natural acquisition order at which it appears as a way of facilitating their actual acquisition of it, i.e. the development of their implicit knowledge of it, when they reach the point in the natural acquisition order at which it appears. There are two ideas that can be closely associated with the delayed-effect hypothesis. One is the idea of a 'spiral syllabus' as discussed by Ellis (1997), with reference to Howatt (1974). On this kind of syllabus, the instruction cycles through the features of language to be taught so that the learner sees each feature more than once. Ellis is critical. He says

> The key question … is whether it is possible to guide the process by which explicit knowledge becomes implicit knowledge by means of a cyclical re-presentation of grammatical items. According to the theory of L2 acquisition discussed in Chapter 4 … [ ] this is only possible if the presentation of an item coincides with the learner's readiness to acquire it. A spiral syllabus may increase the likelihood of this occurring, but is still a hit-or-miss affair. (139)

But, this seems to me to be just a question of logistics having to do with the duration of the state of readiness and the speed at which the cycle of instruction moves, i.e. how quickly each feature comes round again. And does readiness come up and then go back down, or does it come up and stay up? My concern would have to do with the response of the students to the repetition involved. However, my

pedagogical motto is 'repetition is the key to learning', and the feature could be taught in relation to new, and interesting, content material each time it comes around. The second idea that can be closely associated with the delayed-effect hypothesis is one that Lightbrown presents just after the passage quoted above. She says that "… formal instruction may be useful by alerting learners to the regularities of patterning in the language … (108)" as a means of developing their 'metalinguistic awareness'. This is rather vague but I take it to refer to the instruction of more advanced students in the more complex structures of the language – the subjunctive mood, the formation of appositives, the future perfect tense with irregular verbs, sentence compounding via present participles. I find it difficult to imagine students acquiring features like these without instruction. Further, the best ESL students, invariably, have an intellectual interest in English, and the result of the satisfaction of this interest is what might be called metalinguistic awareness. Lightbrown's final main point is a citation of what she takes to be the basic difference between Pienemann's view and her own:

> While I see the application of our current knowledge principally in terms of being able to tell teachers, testers, and programme planners what to *expect* learners to do in certain situations, Pienemann is ready to make some more explicit recommendations about what practitioners should *do*. For all the reasons discussed above, I fear that this could lead to frustration and then to a too-early rejection of the valuable contribution language acquisition research can make to L2 teaching. (109)

It is important to note here the distinction between (1) standard SLA research studies, in which a feature of language is isolated in one way or another such that what is learned about its acquisition or use is fairly specific and definite and (2) classroom research studies, in which a large system of variables is tolerable because the objective is for the most part just to have the instruction be more effective and thus it is not so important to be able to tie the increase in effectiveness to any one variable or one small set of variables. Clearly the discussion above is more related to classroom research studies.

The Thinking-for-Speaking Hypothesis

The theory of linguistic relativity is generally associated with Whorf. His view can be traced back to Sapir and Boas but its form was very radical and it thus had consequences that were difficult to accept. Further, the view "… fell into disfavor in the 1960s with the predominant view in linguistics of language as separate from cognition, and the emphasis in cognitive psychology on the universality of human conceptual structures … (Cadierno 1)." But, Dan Slobin, professor emeritus in psychology and linguistics at the University of California at Berkeley, has produced what is called the 'thinking-for speaking hypothesis', according to which L2 learners are forced as they speak, as they struggle to express in the L2 the meaning they intend in the little time that conversational exchange allows, to think in terms of the model of reality that is built into that L2. As Slobin says, this involves "…picking those characteristics of objects and events that (a) fit some conceptualization of the event, and (b) are readily encodable in the language … (76)." The ramifications of this cover a very broad range. Let us consider two cases reported in the literature that involve English and Spanish. When Flight 1549 went down over the Hudson recently, the event was of course reported around the world. But, a comparison of the reports

in English and Spanish revealed that the two languages have basically different forms of representation. A report in *The New York Times* (January 16) included the wording

> it floated, twisting and drifting south in strong currents

while a report in *El Pais* (January 15) described the action of the plane quite differently with the wording

> remained floating on the water

and the *Times* described the action of the passengers with the wording

> terrified passengers began swarming out the emergency exits and into the brutally cold air and onto the submerged wings of the bobbing jetliner

whereas *El Pais* described their action with the wording

> several people with life jackets on the wings of the plane, waiting to be rescued by boats that have surrounded the plane

The use of verbs is very different in the two reports, and the English report is much more in the active mode, the Spanish one much more in the static mode. (Han and Cadierno xi,xii) Formal studies demonstrate this phenomenon with precision. In a study of the expression of motion in the L1, Cadierno distinguishes 'S-languages', which include all Indo-European languages other than the Romance languages and Chinese, and 'V-languages', which include the Romance, Semitic and Polynesian languages. And, she distinguishes as well the concepts of Motion, Manner and Path, on the one hand, and the linguistic structures *root verb* and *satellite*, on the other. Drawing from the work of Talmy, she presents two sentences, one in English, the other in Spanish as follows:

> The bottle floated into the cave.

> La botella entro a la cueva flotando. (The bottle entered the cave floating.)

Here, in the S-language, English, Motion and Manner are coded in the root verb 'floated' while Path is coded in the satellite prepositional phrase 'into the cave'. In sharp contrast, in the V-language, Spanish, Motion and Path are coded in the root verb 'entro' ('enter') while Manner is coded in the gerund satellite 'flotando'('floating'). Reflecting Slobin, Han and Cadierno make the very important general point:

> … different languages predispose their speakers to view and talk about events differently. An obvious question, then, for us and indeed, for the entire second language acquisition (SLA) field, has been this double-barreled question: to what extent does a prior language (L1) affect the acquisition and use of a second language, and more profoundly, to what extent does the conceptual system that comes with the L1 affect the development of another compatible with the L2? (xii)

I think that it goes without saying that the question of the relation between language and the world raised by the thinking-for-speaking hypothesis is one that not only philosophers of language but philosophers generally would have to find very interesting, and SLA researchers might benefit from study of the philosophical theory that bears on the question.

Having reviewed some of the main issues and theories in SLA, we will now consider the possibility of a relationship between SLA and the philosophy of language by attempting to demonstrate that each of the two disciplines can benefit from studying the work produced in the other. This attempt could take the form of an argument based on some correlation between the main characteristics of the two disciplines but the result might prove to be too abstract to be of real value. I think that it will be much better to do something more concrete. So, two features of natural language, determiners and modals, will be addressed by analyzing work on these features in both disciplines. Specifically, we will analyze work on determiners in SLA by Monica Ekiert and in the philosophy of language by Edward Keenan first, and then analyze work on modals in SLA by Andrea Tyler and in the philosophy of language by Murvet Enc. The strategy will be to analyze in detail a single article by each of the four authors. I found each of the articles to be inherently interesting and I think that anyone who has bent for the theoretical with respect to natural language will have the same experience. More substantially, however, it is beneficial to see how the two disciplines, as reflected in the respective articles, differ in terms of purpose, approach and results. I said above that I did not want to present an argument but perhaps I should have said that I did not want to present a formal argument because I do have what amounts to a thesis that I hope the material of the articles will support, viz. the thesis that those in the discipline of SLA will benefit from studying the formal theory produced by philosophers of language, and that those in the philosophy of language will benefit from reviewing the data on real world language use contained in the studies that are produced by SLA researchers. The schedule of articles is as follows.

Determiners:

'The Semantics of Determiners' by Edward Keenan from

The Handbook of Contemporary Semantic Theory (1996) edited by Shalom Lappin

and

'Linguistic Effects on Thinking for Writing: The Case of Articles in L2 English' by Monika Ekiert from

Linguistic Relativity in SLA/Thinking for Speaking (2010) edited by ZhaoHong Han and Teresa Cadierno

Modals:

'Tense and Modality' by Murvet Enc from

The Handbook of Contemporary Semantic Theory (1996) edited by Shalom Lappin

'Cognitive Linguistics and Second Language Instruction' by Andrea Tyler from

Handbook of Cognitive Linguistics and Second Language Acquisition (2008) edited by Peter Robinson and Nick C. Ellis

The criteria for the selection of the articles are fairly straightforward. First, despite the technical material it may contain, each article is freestanding in that it does not make critical reference to any other work, and is not a link in a chain of articles which cannot be understood unless the other articles have been read. And, second, since the audience for this essay includes those who work in both SLA and the philosophy of language as well as students who find the study of natural language interesting but have not committed to a discipline, as can be seen, all of the articles come from anthologies. This is of some importance because it means that the neophyte with respect to either discipline has not only the article itself but also the context provided by the other articles in the anthology and the editor's introduction. I know that I benefited greatly from reading broadly in the two SLA anthologies – the Robinson and Ellis volume is actually in cognitive linguistics, not SLA, but the two disciplines are closely allied. The dates of the articles were not so important because advancing the discussion of the phenomena addressed is not a main goal of this essay.

§ 6 <u>Two Analyses of Determiners: One in the Philosophy of Language, One in Second Language Acquisition Research</u>

Keenan's article on determiners focuses on what are called 'generalized quantifiers', the concept of which originated in the work of Montague but became an important topic of investigation with the publication in 1981 of Barwise and Cooper's 'Generalized Quantifiers and Natural Language'. A generalized quantifier, in the simplest possible terms, consists of a determiner and a noun so that

every student

consisting of the determiner 'every' and the noun 'student,' is a generalized quantifier, or 'GQ'. When a sentence is formed whose subject phrase is the GQ 'every student' and whose predicate phrase is 'is a vegetarian', i.e. the sentence

Every student is a vegetarian.

where the noun 'student' of the GQ 'every student' refers to the set of individuals who are students and the noun 'vegetarian' refers to the set of individuals who are vegetarians, the GQ 'every student' is a *function* whose *argument* is the set of individuals who are vegetarians and whose *value* is either **T** = true or **F** = false, depending on the way in which the determiner 'every' is defined (alternatively the example sentence 'Every student is a vegetarian.' can be seen as a function operating on the pair of classes that are the extensions of the predicates 'students' and 'vegetarians', respectively). The definition of 'every' is given by the general formula:

For all properties A, B every (A)(B) = T if and only if A <u>C</u> B

where '<u>C</u>' means 'equal to or included in'. Applying the formula to the example sentence here, we get A = the set of individuals who are students, B = the set of individuals who are vegetarians, and the

sentence is true just in case the set of students is equal to or included in the set of vegetarians. The definitions for the determiners 'no' and 'most' are as follows:

No (A)(B) = T if and only if A ∩ B = ∅

where '∩' means 'the intersection of' such that 'A ∩B' means the intersection of the sets A and B, i.e., the set of individuals who are both A and B, and '∅' is the empty set. So if the sentence is

No students are billionaires.

then it is true just in case the intersection of the set of students and the set of billionaires is empty, i.e. just in case there are no individuals who are both students and billionaires.

Most (A)(B) = T if and only if I A ∩ B I > I A − B I

where I A ∩ B I is what is called the cardinality of A ∩ B, i.e. the number of the individuals who are in the intersection of A and B, i.e., the number of individuals who are both A and B, I A − B I is the cardinality of A − B, which is the set of individuals who are A's but not B's, and '>' means 'is greater than'. So if the sentence is

Most students are hard workers.

then it is true just in case the number of individuals who are both students and hard workers is greater than the number of individuals who are students but not hard workers.

Keenan goes on to discuss a vast range of determiners, from simple ones like 'every', 'no' and 'most' above, which occur frequently in English, to complex-compound ones like 'just two of the ten' and 'more than twice as many … as …', which occur much less. The main content of the article, however, has to do with establishing classes of determiners and making generalizations about the nature and use of determiners with reference to those classes. Two of the most important classes established are those of monotone increasing determiners and monotone decreasing determiners. The definitions are expressed in terms of DNPs, or Determined NPs, i.e. noun phrases that are built up from a certain number of nouns and a determiner. But, Keenan makes it clear that it is the determiners of the DNPs, not the nouns, that play the dominant role in the definitions. Thus we get:

A function *F* from properties to truth values is increasing if and only if for all properties A, B if F(A) = T and A ⊆ B then F(B) = T. And the test for increasing is

If all A's are B's and X is an A then X is a B.'

Thus, for example, where F = 'every citizen' and A = persons and B = mortals then 'every citizen' is increasing because if all persons are mortals and 'every citizen' (persons) = T, i.e. every citizen is a person, then 'every citizen' (mortals) = T, i.e. every citizen is a mortal.

The simple inversion of A and B in the definition for increasing gives us the definition for decreasing:

A function *F* from properties to truth values is decreasing if and only if for all properties A, B if F(B) = T and A C B then F(A) = T. And the test for decreasing is

If all A's are B's and X is a B then X is an A.'

Thus for example where F = 'no deity' and A = persons and B = mortals then 'no deity' is decreasing because if all persons are mortals and 'no deity' (mortals) = T, i.e. no deity is a mortal, then 'no deity' (persons) = T, i.e. no deity is a person.

Now based on all of this, Keenan states that decreasing determiners do and increasing determiners do not work with'negative polarity' items, which include the adverb 'ever' modifying the main verb of a sentence and the determiner 'any' modifying the noun of the first object position noun phrase of a sentence. Thus:

No author has ever travelled to Moscow.

No author refused any book deal.

*Every author ever travelled to Moscow.

*Every author refused any book deal.

So the decreasing 'no author' licenses the negative polarity items 'ever' and 'any' but the increasing 'every author' does not. This generalization is valuable because it helps us to understand what might otherwise be a very puzzling part of English. Keenan proposes many rules of this nature which I need not go into at this point.

We turn now to Ekiert's article. She opens with a brief but very interesting allusion to the history of her field:

Much of the current understanding of second language (L2) learning is driven by the assumption that adult L2 acquisition is a cognitive process of establishing form-meaning connections … . This comes after years of the field's preoccupation with providing evidence for the emergence of specific linguistic forms (e.g. grammatical morphemes or syntactic constructions) independent of the meanings they express (125).

This does not belong to the subject of determiners *per se* but one cannot help but wonder about the relationship between this occurrence in SLA research and the question vis-à-vis generative grammar of whether syntax can be developed independently of semantics.

On the view set by the basic division between vocabulary and grammar, we think of vocabulary as the exclusive carrier of meaning, but Ekiert points out that, on the view of cognitive linguistics, grammatical constructions themselves have meaning. In a given language, certain grammatical distinctions are obligatory and they thus become *gramaticized*. Consider just the cases of nouns and verbs. Examples of gramaticized distinctions with respect nouns are 'number', 'gender', 'animacy' and 'definiteness'. And, examples of gramaticized distinctions with respect to verbs are 'tense', 'grounds of evidence', 'relations

of discourse participants', 'direction of movement type' and 'type of moving figure'. Now these gramaticized distinctions influence the language user in the production of a sentence that expresses their thought by forcing them to 'segment' the reality correspondent to the thought in ways that accord with the gramatized distinctions as they are reflected in the words and forms used to compose the sentence. Note that this is essentially Slobin's *thinking for speaking* hypothesis, which is the inspiration not only for Ekiert's article but for all of the articles in the Han and Cadierno anthology from which her article comes, as the anthology's under title indicates.

A study of language development in Finnish children provides a general illustration of thinking for speaking. Finnish is an article-less language. Up to about the age of about five, children ground reference in the 'extralinguistic' context but, after that, they have access to 'intralinguistic' resources. The study found that once the Finnish children in the study had made this transition, they performed less well in studying English than children of their age whose first language has articles in tasks that required definite reference to particular members of a set of objects. The researchers concluded that, while there are lexical items in Finnish that allow identification, the absence of an obligation to refer definitely to particulars within collections of items left the children "… insensitive to certain aspects of experience (128)." This study confirms Slobin's view that each language trains its first users to pay attention to certain aspects of reality, and the effect of this training is so great that individuals may find it exceedingly difficult to develop the intentional focus required by any L2 they take on as adults. He says

> For the child, the construction of the grammar and the construction of the semantic/pragmatic concepts go hand-in-hand. For the adult, construction of the grammar often requires a revision of semantic/pragmatic concepts, along with what may well be a more difficult task of perceptual identification of the relevant morphological elements. (242)

I am one of the faculty tutors in the Writing Center at Pace University, and I am always puzzled by the way in which articles are used in the essays of the ESL students I work with there. At the places in the essay where article use is required, typically, there are to be found a number of cases of the correct use of an article, a number of cases of the absence of an article and a few cases of the incorrect use of an article. There are also a few cases of the use of an article where none is required, and thus of course none is allowed (the most common case being the use of the definite article 'the' before a name, e.g. 'the Manhattan'). The student has been taught the use of articles in the schools they studied in in their native country. What then explains the variation? There are several possible factors involved. First, the student is under pressure to express their ideas, and to do so within the format the teacher has specified for the essay. Second, the student's native language may not have articles and, since the student is operating by means of their interlanguage, i.e. the system of language between their native language and English that they have developed as a result of their study of English and their experience using it, their employment of their knowledge of English article use is inconsistent. Third, there is the immense complexity and subtlety of the rule set governing the use of articles. A student is not expected to get either all right answers or all wrong answers on their math test so why should they be expected to make either all correct uses or all incorrect uses of articles? The math test was challenging so the student failed to understand some problems and the use of articles in English is challenging so the student failed to apply the rules for their use correctly in some cases. The main thing to understand here

is that the ESL student is operating to some extent, perhaps to a large extent, on the basis of explicit knowledge and yet it is only implicit knowledge that provides the basis for the automatic use of features that insures perfect performance. Finally, the student may not be conscientious enough, or hard working enough, or they may simply be pressed for time.

I might note, however, that I think that I have a remedy for the problem of article use that takes the form of what I call a SMEP, i.e. a specific, mechanical editing procedure. This SMEP is complex but the main part of it requires the student to go through their essay word by word and underline all of the count nouns in red and then go back through the essay and make sure that each of these nouns has either a plural ending or a determiner or both. The typical ESL student's explicit knowledge of English grammar makes this perfectly feasible. A plural ending is used where more than one is intended. A determiner is used where consideration of the lists of the seven classes of (basic - f-note on 'some of the') determiners indicates which if any of the determiners listed is needed. The most commonly needed determiners are the articles, and the most challenging determiner is the definite article 'the'. But, it must be admitted that, since students, both native speaker and ESL, use writing centers episodically for the most part, I seldom have the opportunity to train any of the ESL students in the use of the SMEP. However, writing center 'contracts', agreements between the English teacher and the student that the student will go to the writing center a certain number of times during the course of the semester, could solve this problem, although a true solution can be achieved only where the student is conscientious enough to use the SMEP regularly.

It was mentioned above that Finnish has resources for expressing definiteness, even though it does not have articles. A very important general concern has to do with determining which feature or set of features, or whatever else, in an article-less language corresponds to the articles of a language like English that has them. Ekiert reports that

> The accepted view on [- ART] languages [i.e. languages without articles] … is that they possess certain grammatical and discoursal elements that may have the function of expressing definiteness. Polish, unlike English, has no articles and thus has no equivalent way of expressing definiteness. Instead, deictic categories such as demonstratives, possessives, word order, verbal aspects, and case marking have been said to signal definiteness and indefiniteness in certain contexts. (131)

However, there are several studies that challenge this view.

> … Trenkic (2002), using a corpus analysis of Internet newspaper resources in Serbian (a Slavic language with an NP structure similar to Polish) and English, offered an empirical verification that demonstratives, possessives, or quantifiers are no more frequent in Serbian than in English. Similarly. Smocznska (1885) writes that in Polish, possessive pronouns are used less frequently than in English. Terms such as body parts or kinship terms are usually used without possessive pronouns, unless the possessor happens not to be identical with the agent. It appears then that demonstratives, possessives and quantifiers in [-ART] languages can be translation equivalents of English demonstratives, possessives and quantifiers, and not the articles *the* and *a*. (131-2)

Trenkic goes on to suggest that we give up on the idea of finding a feature or feature set in Serbian or Polish that corresponds to the article structure of English and instead assume that semantic definiteness "… is conversationally implicated through relevant context and the speakers' general knowledge of the world (132)."

All of this constitutes a very interesting issue. It appears that in order to establish equivalent means of definite reference vis-à-vis two languages, one [+ ART], the other [- ART], we must have someone who is native level proficient in both languages. This individual must then have two semantic systems, or better, two semantic sub-systems that are analogically related in their mind, i.e. each part of the one sub-system must correspond to one part or one set of parts of the other sub-system, and vice versa. The discussion here, and self-reflection, suggest that the monolingual speaker is not aware of the relevant obligatory distinctions of their language, i.e. they are not aware of their semantic sub-system for definiteness, so the bilingual individual under consideration must be aware of their two sub-systems as a result of having developed proficiency in the two languages during their childhood, or as a result of having developed proficiency in one of the two languages as an adult. The latter scenario seems to encounter the problem cited by Slobin of the exceedingly difficult development of the intentional focus required by the L2 that applies to at least some learners, and the former scenario seems to encounter the problem posed by the claim that, when an individual acquires two or more languages simultaneously as a child, one of the languages will nonetheless be dominant. And, both scenarios seem to be in need of precise psycholinguistic characterization. Note, finally, that the studies and views that Ekiert cites in her article are not all in agreement regarding the [+ART] language / [- ART] language interface vis-à-vis definiteness of reference.

In her study Ekiert seems to have taken a more determinant approach, relying on a combination of what was referred to above as the accepted view of [- ART] languages, and Trenkic's conversational implicature view of such languages. The study was motivated by the fact that only a few empirical studies had explored the relationship between the semantic system of an L1 and the use of articles in L2 English. The L1 selected for the study was Polish, and the specific purpose of the study was to answer two questions:

> 1) How did L1 Polish learners apply articles in L2 English?
>
> 2) What kinds of meanings influenced L1 Polish learner's application of articles in
>
>   L2 English?

The study participants were three adults who were studying English in a program in New York City. The study set three tasks for the participants: (1) a narrative task that required the participants to retell in writing in English a story presented in a brief video clip, (2) a missing article task that required the participants to attempt to fill in articles that were missing from an Aesop's fable with no indication of where the articles were missing, and (3) a recall task that required the participants to try to explain their insertions in the missing articles task.

Ekiert worked with a certain model of article use. Article use in English is classified into the following kinds:

[+ / - SR] presence (+) or absence (-) of specific reference

[+ / - HK] presence (+) or absence (-) of assumed hearer's knowledge

Of the four combinatorial possibilities this allows for, three are realized in use:

1. [+ SR, + HK] – speaker specific, hearer knowledge

Examples: 'Where should we put the table?', 'The engine began to make a funny noise.'

2. [+ SR, - HK] – speaker specific, hearer non-knowledge

Examples: 'A dog bit me.', 'There's a table over there.'

3. [- SR, - HK] – speaker non-specific, hearer non-knowledge

Examples: 'Draw a horse.', 'I don't have a car.'

This is the first part of the model. Ekiert characterizes the second part as a 'finer-grained' classification. It is as follows:

1. Textual uses, also known as anaphoric, refer to situations where *the* is used with a noun that has been previously referred to or is related to a previously mentioned noun (e.g. *Jane bought a ring and a necklace for her mother's birthday. Her mother loved the ring but hated the necklace.*).

2. Structural uses are those where *the* is used with a first-mention noun that has a modifier (e.g. *The horse I bet on is still in front.*)

3. Situational uses of *the* involve visible situations when the person makes use of information readily available within one's sensory reach (e.g. *Pass me the salt.*), immediate situations when the person makes use of information readily available, but not available within one's sensory reach (e.g. *Don't go there. The dog will bite you.*), or larger situation uses relying on specific knowledge available to the local community (e.g. people from the same neighborhood talking about *the church*, *the post office*, *the pub*). (130-1)

The presentation and discussion of the results of the study are extensive, complex and very interesting. Here, for example, are two items out of the many written by one of the study participants. The first part shows how the participant's use of articles in English is affected by the manner in which definiteness and indefiniteness are accommodated in his native Polish while the second part shows how it is affected by the way in which the concept of specificity is manifested in Polish. Unlike English, Polish can, in effect, indicate definiteness and indefiniteness with respect to a term by means of the position that the term takes in the sentence. Thus a 'sentence-final' position suggests new information whereas a 'sentence-initial' position suggests previous information. Consider the following Polish-English match-ups:

Do Sklepu wszed*f* mezczyzna.

to store   entered man

A man   entered the store.

Mezczyzna wszed*f*   do sklepu.

man   entered   to store

The man entered the store.

In the first match-up, 'man' takes the indefinite article 'a' because the term 'mezczyzna' (*man*) appears in sentence-final position, which suggests new information, and some linguists associate this with indefiniteness. In the second match-up, by contrast, 'man' takes the definite article 'the' because the term 'mezczyzna' (*man*) appears in sentence-initial position, which suggests given information, and some linguists associate this with definiteness.

The first of the two items, which consist of English rendering by the participant of parts of the story runs as follows:

> Mr. X waiting for someone, probably his girlfriend. He doesn't feel comfortable because he knows his pants need ironing. He set up ironing set. During this time, his dog still watching what is going on. When iron is ready, he starts ironing his pants. Suddenly, he sees thread. He tries to remove it. Unfortunately, this method doesn't work.

The term 'ironing set' and the term 'thread' both need the indefinite article 'a' (or 'an') since they are being introduced, but they appear in sentence-final, new information providing position and thus, in the mind of the participant, they are perhaps already marked as indefinite. And, the term 'iron' needs the definite article 'the' since it has already been introduced, but it appears in sentence-initial, given information providing position and thus, in the mind of the participant, it is perhaps already marked as definite.

So we might say that here L1 Polish *grammar* influences the L2 English use of articles.

The second of the two items, which is much briefer, is:

> The man, his donkey and a dog were travelling.

Here, the definite article 'the' is applied inappropriately to the term 'man' because this is its introductory appearance. However, the indefinite article 'a' is applied appropriately to the term 'dog' since this is also its introductory appearance. What then makes for the difference between appropriate article use in the one case and inappropriate article use in the other? During the stimulated recall session, the participant author was asked to explain his application of the articles and Ekiert reports that "… the participant interpreted the referents of *man* and *dog* as specific and nonspecific using the fable's

content (i.e. … [the participant] explained that *man* in this story was made specific by the fact that the character was travelling with his donkey, whereas *dog* was not specified at all) (150)." Ekiert interprets this case as one determined by the L1 conceptual system.

The definite article 'the' requires [+ SR, + HK] but, while Polish has means of encoding SR, in the form of demonstratives and possessive pronouns, it does not have means of encoding HK. Thus, taking the fact that the man was traveling with his donkey to provide a basis for SR, the L1 Polish participant found it appropriate to use 'the'.

There is, however, one other possible interpretation based on the model Ekiert uses, namely that the fact that the man is travelling with his donkey might have been transmuted, in the mind of the participant author, into a modifier of the noun 'man', specifically either as a prepositional phrase, yielding

man with a donkey

or as a relative clause, yielding

man who is travelling with a donkey

and, of course, with the application of the definite article 'the' we would get

the man with a donkey

or

the man who is traveling with a donkey

As such, the case would go into the second class of Ekiert's three part classification above to become a structural use, although still an inappropriate use since the introductory status of 'man' calls for the indefinite article 'a'.

On Ekiert's interpretation , we might say that we have here a *prima facie* case in which the L1 Polish *conceptual system* influences the L2 English use of articles.

I would like to end the discussion Ekiert's article by quoting its concluding (summary) paragraph in its entirety. It will be seen that the two examples I presented above, which I associated with *grammar* and *conceptual system*, accord well with the findings of Ekiert's study.

> In conclusion, findings from the study described in this chapter revealed some thinking-for-writing effects … at the level of referent identifiability conceptualization. As Han (2008) notes, the acquisition of distributional restrictions of a new form by an adult L2 learner presents a challenge 'for it requires the restructuring of a primarily L1-based conceptual system' (2008: 74). The overall premise of this study, namely that article errors should not be exclusively attributed to inadequate acquisition of the forms of the TL [Target Language], was shown to be correct. L2 acquisition appears to be hindered by a limited, L1-motivated set of options (i.e. forms) for the

grammatical encodings of characteristics of objects and events, but also by the lack of an equivalent conceptual system (i.e. meanings). As pointed out by Jarvis and Pavlenko (2008), learning a new language involves learning how to make new attributions to familiar objects and events. (150)

We have taken a long journey with Keenan and Ekiert, and now it is time to try to justify that journey by using what we have learned to make the case for a merger of interests and lines of work vis-à-vis the community of formal semanticists and the community of SLA researchers. First, however, I should note that there is just a bit of convergence in the two articles themselves. Ekiert refers to the field of theoretical linguistics and one of her sources is an article by Fodor ad Sag that appears in the journal *Linguistics and Philosophy*. And Keenan considers the implication of generalized quantifier theory for learning theory when he poses the question of whether "… there are constraints on which functions from properties to generalized quantifiers can be denoted by natural language … [determiners]…" and then responds to the question by saying that a positive answer to it "…limits the task faced by the language learner and thus helps account for how the semantic system is learned with limited exposure to imperfect data". (45)

But now, we must come to the point. There would be a great deal to be gained as far as our understanding of natural language is concerned if the respective interests and lines of work of the community of SLA researchers and the community of formal semanticists merged such that a process of cross fertilization occurred between the two. For the SLA researcher, the benefit would be a deeper understanding of the linguistic phenomena they study and, for the formal semanticist, the benefit would be a richer, fuller apprehension of the linguistic phenomena they theorize about, an apprehension of those phenomena as they are grounded in the communicative practices engaged in by the members of society in the conduct their affairs.

Let us consider two points that may help to support the claim that the philosophy of language can be a resource for SLA theorists while SLA research can be a resource for philosophers of language. First, note that, in Ekiert's article, neither the word 'truth' nor the word 'true' appears even once whereas Keenan's article is ultimately all about the specification of truth conditions for sentences that employ determiners. This reflects a general difference of approach between the two disciplines and suggests that SLA research on the use of a feature of natural language by second language learners might be informed by consideration of the semantic theory of that feature. And, second, the sentences that appear in Ekiert's article might be called 'corpus sentences' in that they come from the narratives of the three participant authors and, thus, they are sentences that were actually used for purposes of communication whereas the sentences in Keenan's article might be called 'model sentences' in that they were concocted by him, or others, to model the various aspects of the theory of determiners he presents. This too reflects a general difference of approach between the two disciplines and suggests that the formation of semantic theories of a feature of natural language might be informed by what is revealed by SLA studies of the use of that feature by second language learners under the conditions set by those studies.

A further consideration here is set up by a Ekiert's reference to 'cognitive semantics' and 'cognitively oriented SLA researchers. With respect to the latter, she cites in particular Peter Robinson and Nick C. Ellis, whose anthology *Handbook of Cognitive Linguistics and Second Language Acquisition* is the source of the article we will use in the next SLA research-formal semantics pairing, viz. Andrea Tyler's 'Cognitive Linguistics and Second Language Instruction'. It is convenient to present here two passages from this article that might be taken to show how the set of language-related parts and aspects of the world that formal semantics must be responsible for covering must be expanded by much more than what was indicated in the previous paragraph. In contrasting the view that has served as the basis for most English Language Teaching (ELT) over the years with the view of cognitive linguistics, Tyler says:

> A cognitive linguistic account of language differs radically from traditional perspectives by emphasizing that language is a reflection of general cognitive processes, not a separate, isolated system with its own system of rules. Language is understood as being grounded in lived human experience with the real world and as crucially reflecting the human perceptual system and human understanding of the spatial-physical-social world we inhabit. (459)

And in arguing that the cognitive linguistics approach is one that is useful for L2 learners, she says:

> By viewing language as a function of general interaction with other cognitive abilities and our interaction with the world, Cognitive Linguistics offers explanations that draw on learners' everyday real world experience by tapping into an intuitive reservoir of knowledge that facilitates an understanding of the systematic relationships among the units of language. This is the same reservoir of experiential knowledge of the world which underpins the human conceptual system and hence, language itself. (462)

Being very much what Tyler would no doubt call a traditionalist, I do not cite these passages as an endorsement of the cognitive linguistic approach to the semantics of natural language. My point precisely is that, when we look at any part of SLA research under any approach, we see possibilities for fruitful use of formal semantic tools. In the first passage above, we have reference to our general cognitive processes, with perception highlighted via the citation of the human perceptual system, reference to the physical world and reference to the social world. It may well be the case that the complete, or even a reasonably complete, analysis of the production and/or reception of any sentence that is actually used for purposes of communication must include variables, or even systems of variables, that track aspects of our cognition and the physical and social worlds in which we live. Of course, we have this to some extent in formal pragmatics, and the article covering this branch of semiotic theory in the anthology in which Keenan's article appears, viz. 'Semantics, Pragmatics and Natural-Language Interpretation' by Ruth Kempson, claims that pragmatics and semantics are discrete enterprises and that the former is founded in the study of cognitive psychology. However, what Tyler has in mind seems to go well beyond consideration of the way in which the context of utterance of a sentence factors into its interpretation, as difficult as that consideration is. Now, if the first of the two quotes above brings in our cognition in relation to the socio-physical world, the second one brings in our knowledge of the socio-physical world, and not just narrowly, as in the case presented by Kempson in which the dialogue

Peter: Is George a good cook?

Mary: He's a Frenchman.

seems to require the generalization 'Frenchmen tend to be good cooks.' for its proper interpretation. Rather, it seems that in principle, the whole' of our language is involved in use of language, though only parts of this knowledge are involved in particular cases. So, again, the association of formal semantics with SLA would provide it with a much broader field of application and thus more opportunity.

Now before going on to consider the specifics of the relationship between the Ekiert and the Keenan articles, let me make one further broad point, one that is based on my experience in working with ESL students. When a native speaker makes a grammar mistake, that mistake typically respects the general structure of English. So, English has nouns that take plural and possessive endings, and the native author omits an ending, uses the wrong ending or uses an ending where none is called for. But, these mistakes all respect the

noun + ending

structure, and might thus be called 'conservative'. Now, while the ESL author makes plenty of mistakes of this type too, they also make mistakes that are 'radical' in that they go against the structure of the English language. This is of course not so good for the ESL student, and perhaps not so good for the ESL teacher, but it is great for the ESL teacher or tutor *cum* linguist because, unlike a conservative mistake, a radical mistake, once thought through and understood, has the power to reveal the structure of English that lies below the consciousness of the native user, precisely because it is the form-invariant part of English, the girder assembly to which the exterior, of whatever style, executed in whatever material, is applied in order to complete the edifice of the language. And, the revealing of this structure provides a great learning opportunity for the linguist-instructor. Clearly then, SLA studies, like Ekiert's above, are a steady source of organized corpora of second language mistakes, and thus provide a great opportunity for the formal semanticist by expanding the range of linguistic phenomena that they can choose from among to try to include within their theories.

We come now to the main part of this discussion. We want to look here at the specifics in Ekiert and Keenan to see what kind of positive interchange can take place. We can break out the relevant parts of what Ekiert presents as follows:

1)

the idea that languages differ in terms of the conceptual structures in which they are based so that the L1 conceptual structure of the L2 learner can hinder that learner in their effort to master the L2, which means ultimately learning to negotiate the L2 conceptual structure, no doubt by mapping it effectively onto their L1 conceptual structure

2)

the distribution of the indefinite and definite articles 'a' and 'the' is accounted for by the model

[+ / - SR] and [+ / - HK]

the realized combinations being

[+ SR, + HK] – 'Where should we put *the table*?', '*The engine* began to make a funny noise.'

[+ SR, - HK] – '*A dog* bit me.', 'There's *a table* over there.'

[- SR, - HK] – 'Draw *a horse*.', 'I don't have *a car*.'

3)

a finer grained analysis of the use of the definite article 'the' fields three cases:

- *textual* use: 'Jane bought a ring and a necklace for her mother's birthday. Her mother loved the ring but hated the necklace.'

- *structural* use: 'The horse I bet on is still in front.'

- *situational* use: 'Pass me the salt.'

These are results from SLA research and informal theorizing, and I think that the effort to provide a formal theory of these items, as made by a formal semanticist, an SLA researcher, a formal semanticist and an SLA researcher working together, or even by a third party specifically interested in the relationship between the two kinds of linguistic enterprise, is a very exciting project. Successful completion of the project would yield, for the SLA researcher, a much deeper understanding of the phenomena they have discovered and organized, and for the formal semanticist, the application of their theory to new phenomena which may be more authentic and/or more complex.

Regarding 1) above, we might begin by expressing a note of caution with respect to the idea that different languages are associated with different conceptual structures. This suggests the possibility of a strong linguistic relativism, which is sometimes referred to as 'Whorfism', according to which the world in which one lives, or the reality that one faces is to some meaningful extent determined by the language one uses primarily, effectively one's native language, and yet, while views on the relationship between language and the world vary among theorists in the philosophy of language, there is a strong tradition in the discipline of taking there to be one world in which we all live, one reality that we all face, a world which is given antecedently of our formation of language, and indeed of our coming into existence. Through our interaction with this world or this reality, we have formed concepts. Perhaps in order to try to be clear, we can speak simply and say that these concepts are represented by, or reflected in, the general terms of our language, certain nouns and adjectives preeminently and since there are relations among these concepts, we might say that there is a conceptual structure, but there is just one which is common to all intelligent agents. Given this, we might want to think of what is unique to a particular language not as a conceptual structure but as a representational apparatus in relation to the common conceptual structure. Each such apparatus would be taken to consist in a complex mechanism that coordinates all of the devices that the given language employs in order to access and

represent the various parts and aspects of the common conceptual structure. The L2 user observes or investigates the facts, and accesses the relevant concepts by means of the representational apparatus, using logic all along, in order to either (a) recognize an existing state of affairs and then formulate a sentence which in effect codes that state of affairs, with the intention that the sentence will inform a conversational partner or reader or (b) determine the state of affairs coded by a sentence formulated by a conversational partner or author, whose intention was that the sentence would inform them.

Had we continued with the idea that the L1 conceptual structure of the L2 learner can hinder that learner in their effort to master the L2, thereby forcing them to develop the ability to negotiate the L2 conceptual structure, no doubt by mapping it effectively onto their L1 conceptual structure then we might have felt the need to move from (a) an intuitive model of L2 learning on which there is one semantic sub-system but there are two syntactic sub-systems and these syntactic sub-systems stand in an analogical relationship established on the basis of the common semantic sub-system to (b) a model on which there are two semantic sub-systems as well as two syntactic sub-systems, the two semantic sub-systems stand in an analogical relationship established somehow, perhaps as a result of the dual linguistic experience of the L2 learner, and the two syntactic sub-systems also stand in an analogical relationship, which is determined directly or indirectly by the analogical relationship in which the two semantic sub-systems stand. But by taking the position that there is only one conceptual structure, we can stick with the intuitive model, taking the semantics it provides to be sufficiently rich to accommodate both of the apparatuses involved, that of the L1 and that of the L2, respectively. It should be noted here, however, that is seems perfectly plausible to expect that, while there is a single conceptual structure accessed by and represented in all particular languages, this structure is not so rigid that its configuration is the same from the perspective of every natural language. But, given the great variety among the cultures and languages of the societies of the world, past 0and present, it is perhaps only natural that at least a weak form of linguistic relativity would hold.

It might be possible to get started on the problem related to the three uses of the definite article 'the' by thinking in terms of the speaker's 'delivering' an entity to the hearer in three distinct ways. First, on the structural use, the speaker delivers the entity *by description* by using a noun and possibly one or more of the noun modifiers, adjective, prepositional phrase and relative clause, to construct a noun phrase that refers only to the entity, which the hearer is familiar with. Thus, in the example above:

> The horse I bet on is still in front.

the noun 'horse' and the relative clause 'that I bet on', which has undergone ellipsis to become simply 'I bet on', refers for the hearer to only one entity, one horse, which they are familiar with, perhaps by having viewed all of the horses in the race in the paddock before the race. It should be noted however that the use of the sentence above described here is not the only one. Instead of constructing the noun phrase 'the horse [that] I bet on' for the purpose of identifying an entity for their hearer, a speaker can construct the same noun phrase for the purpose of characterizing an entity for their hearer. We can cash out the difference by considering the states of affairs denoted by the propositions the speaker wants the hearer to entertain in the two cases, respectively. In the identification case, the state of affairs incorporates a horse that the hearer is acquainted with whereas, in the characterization case, the

state of affairs incorporates a horse that the hearer is not acquainted with – at least not as far as the speaker knows. Second, on the situational use, the speaker delivers an entity to the hearer *by demonstration* by gesturing in a pointing way. Thus in the example above:

Pass the salt.

the speaker looks at the salt shaker on the table and nods at it, although this could also qualify as a case of structural use if we take the noun 'salt', meaning 'salt shaker', to refer to only one entity for the hearer. And, third, on the textual use, the speaker delivers an entity to the hearer *by hypothesis* in the sense that the speaker *does not actually* deliver an entity to the hearer but rather ask the hearer to, in effect, accept the existence of an entity under the description provided, on faith, and the hearer does so based on the presumed sincerity of the speaker. Thus, in the example above

Jane bought a ring and a necklace for her mother's birthday. Her mother loved the ring but hated the necklace.

the speaker neither describes the ring or the necklace nor of course demonstrates either by pointing to it. Rather, they ask the reader to accept without the usual introduction that a certain ring and a certain necklace exist, and the hearer does so because of their interpretation of the intention of the speaker.

Turning our attention to the indefinite article, we will consider the two examples above:

A dog bit me.

Draw a horse.

One possible, perhaps odd seeming, way of handling the first example is to use the part of the definite/indefinite article distribution model Ekiert provides for such indefinite cases, viz.

[+ SR, - HK]

as the basis for a structural *definite* interpretation that *applies to the speaker only*. Recall that a structural use consists in a noun that is modified and capped with 'the' – 'the horse [that] I bet on' above. So, the speaker is able to generate, say

the brown terrier that belongs to my next door neighbor

as the basis for

The brown terrier that belongs to my next door neighbor bit me.

for *himself*, the speaker, but not for the hearer, because the hearer does not know the dog involved. Thus, we might imagine the speaker saying to himself

The brown terrier that belongs to my next door neighbor bit me. What do I do now?

In effect then we get + SR but not + HK, thus

[+ SR, - HK]

It appears then that, in straight terms, we might say that the use of the indefinite article in

A dog bit me.

is appropriate just in case there is a (possible)noun phrase *without a determiner* that identifies an entity for the speaker but does identify it for the hearer,

brown terrier that belongs to my next door neighbor

in the present case. It might be necessary to go further and say that there is *no* such expression that identifies the entity for the hearer, or a bit more modestly, that there is no such expression that can be generated with the resources of the speaker that identifies the entity for the hearer. It must be noted here, however, that in assigning, or selecting [- HK] we are not suggesting that the hearer does not understand the speaker's sentence. The hearer will understand the sentence

The brown terrier that belongs to my next door neighbor bit me.

perfectly well. It is simply the case that, as we just saw,

brown terrier that belongs to my next door neighbor

does not identify for the hearer the dog that bit the speaker.

It is interesting now to compare

The brown terrier that belongs to my next door neighbor bit me.

as interpreted here, with

The horse [that] I bet on is still in front.

as interpreted above. With regard to the latter, we distinguished the *identification* case, on which

the horse [that] I bet on

identifies a horse for both the speaker and the hearer , from the *characterization* case, on which

this noun phrase does not identify a horse for the hearer, but does, presumably, do so for the speaker. If we bring back in now

A dog bit me.

we get a simple scheme of classification:

1. The identification use of 'the', exemplified by

The horse [that] I bet on is still in front.

where the noun phrase 'the horse [that] I bet on' identifies a horse for both the speaker and the hearer

2. The characterization use of 'the', exemplified by both

> The horse [that] I bet on is still in front.

> The brown terrier that belongs to my next door neighbor bit me.

where the noun phrases 'the horse [that] I bet on' and 'the brown terrier that belongs to my next door neighbor' identify an entity for the speaker but not the hearer in the two respective cases, and

3. The use of 'a' or 'an', exemplified by

> A dog bit me.

where the noun phrase 'a dog' does not identify an entity for either the speaker or the hearer. What then motivates the choice of noun phrase in the third case? Consider the following progression of sentences:

> A dog bit me.

> An animal bit me.

> Something bit me.

> Something injured me.

Here the speaker gives the hearer less and less – via the noun phrases 'a dog', and 'an animal', the pronoun 'something' and finally the verb 'injured'. Now consider the following progression of sentences:

> A dog bit me.

> A rabid dog bit me.

> A rabid dog that is still on the loose bit me.

Here the speaker gives the hearer more and more – via the noun phrases 'a dog', 'a rabid dog' and 'a rabid dog that is still on the loose'.

The point I want to make is that the speaker gives the hearer as much, or as little, as necessary for her or his, i.e. the speaker's, communicative purpose to be achieved. Needless to say, coming up with some formalism that would spit out this purpose in an arbitrary case of the use of the indefinite article would be no mean feat. We cannot of course settle the case of the English articles here but the line of thinking presented was stimulated by Ekiert's discussion, and I think that it deserves further consideration.

The second example is more complicated. It needs to be investigated so that an acceptable account of it can be developed. Here, however, I will have to settle for a brief exploration. The sentence is of the imperative type. Imperative sentences can typically be taken to be commands or recommendations. As

commands they have the modal force of 'must' and as recommendations they have the modal force of 'should'. And the individual to whom the command or recommendation is addressed can be known only where there is access to the sentence's context of use. Let us imagine then that the imperative is a recommendation and that this recommendation is addressed to John. We then get the sentence

> John should draw a horse.

The first thing to see about this sentence is that, despite the occurrence in it of the term 'a horse', it is not about horses. Rather it is about figures of horses. Formalizing this deduction would be an interesting project on its own but probably the resources for it can be found in lexical semantics. It is likely that the deduction depends on the interpretation of the transitive verb 'to draw'. But all of this is just setting up. All that I can offer of a more substantial nature is an attempt to get at the intuition involved by appeal to a distinction I make in my ESL tutoring related to the understanding of the use of the definite article 'the'. The distinction is that between an 'open class' and a 'closed class'. Thus in relation to the sentence

> Students lead a hard life.

the class of students is open in the sense that individuals pass in and out of it freely because what is of relevance is the idea, or the concept, associated with the class, not its membership. But in relation to the sentence

> The students are waiting for you.

addressed to a teacher who is late for class, the class of students is closed because you could make a list of the members of the of the class. Now the class of figures of horses related to the featured sentence is open in the sense that individuals pass in and out of it freely because what is of relevance is the concept associated with the class. And, for the recommendation conveyed by the feature sentence to be complied with, John must produce something that falls under that concept. It must be noted that the notion of individuals passing in and out of the class of figures of horses is not as natural as that of individuals passing in and out of the class of students, and what I am doing here overall is just pressing into new service what is regularly used as a teaching aid.

Before we move on from Ekiert and Keenan, I would like to make one further point. What has been said so far can be seen as a call to *develop* resources in Keenan's system, or formal semantics generally, for the purpose of formalizing models employed in Ekiert's study. But, there is one part of Ekiert's study, a detailed but important part, in relation to which there already exist a resource in Keenan's system. The study tracks the environments in which the definite and the indefinite articles were used by the study participants in the production of their narratives:

> Following Han (2008), assessment of article accuracy was not confined to morpheme accuracy; 'rather, it [was] carried out within a larger linguistic and discourse context, including constructions that might not specifically involve the morphemes' (2008:72). For example, the narrative task elicited a large number of situational uses of *the* in prepositional phrases. In order to look more closely at contexts that may systematically influence the production of target uses

of articles by L2 learners, situational uses of *the* in prepositional phrases (P + *the* + N) were isolated into a subcategory of situational uses. (135-6)

Therefore, a formal determination of which determiners can front noun phrases that appear as objects of prepositions in prepositional phrases would have to be of great interest to Ekiert and to SLA researchers generally and, yet, Keenan provides such a determination with respect to what are called partitive, or partitive genitive, constructions, i.e. prepositional phrases whose preposition component is specifically the preposition 'of'. Thus

> We are concerned to define the set of NPs which occur grammatically following the *of* phrase in partitives such as *more than ten of John's cats*, *each of those students*, and *all but two of his ten children*. Linguists usually consider that such NPs have the form [Det^1 of NP]…

> Now it turns out that the acceptability of an NP in position after *of* in partitives is significantly determined by its choice of Det … . Observe:

> (51) a. [*at least two of* Det *cats*] is acceptable when Det = *the*, *the six*, *the six or more*, *John's* (*six* (*or more*)), those (*six* (*or more*)), *John's doctor's* (*six* (*or more*))

>   b. [*at least two of* Det *cats*] is not acceptable when Det = *each*, *no*, *most, at least/exactly/less than nine, no children's* (*six*)

Keenan calls the determiners in the a. class *definite*. Now, the formal basis for this characterization is rather complex but, perhaps we can say here that a determiner is definite if, when it appears in the context

> (Det) (A) (B)

the sentence is true if and only if A <u>C</u> B and A ≠ Ø. Thus, for example, the determiner 'the' is definite because the sentence

> The authors are billionaires.

is true if and only if all authors [in the relevant reference set for 'the', or 'the authors', i.e. the relevant situation-determined sub-set of authors] are billionaires and there are (some) authors but the determiner 'no' is not definite because the sentence

> No authors are billionaires.

is quite obviously not true if and only if all authors are billionaires and there are (some) authors. And, consequently, we can have

> at least two of the authors

but not

> *at least two of no authors

I said above that this result should be of value to SLA researchers and teachers, but the value has to be scored as limited because, while the use of the context 'at least two of Det. _____ cats', or 'at least two of Det. ___[noun – plural]' generally, in the formulation above allows Keenan to determine which Det.s are definite and which Det.s are not, when we map the expressions that the formulation sanctions onto the form Keenan attributes to linguists, again

[Det.[1] of NP]

we get, effectively

'at least two' +' of' + [NP = Det. + Noun]

and yet clearly linguists and philosophers of language alike are going to be more interested in the more general form

Det. +' of' + [NP = Det. + Noun]

where Det. ranges over all determiners, including the determiners that Keenan classifies as lexical, and thus simple, viz.

every	no	both	ten
each	several	this	a few
all	neither	my	a dozen
some	most	these	many
a	the	John's	few

such that we can generate:

all of the cats

several of my students

both of John's parents

many of these questions

for example. But, notice how restrictive even this is because the preposition 'of' is being used effectively to put simple determiners together in order to make complex ones, viz.

all of the

several of my

both of John's

many of these

while the more significant use of the [proposition/preposition] has it serve as the basis of a prepositional phrase that modifies a noun. Consider now

all bands [*of* gold]

several tons [*of* reinforced concrete]

both types [*of* nominalized phrase with direct object]

many issues [*of* great concern to the community that still have to be addressed]

We would also like to know which principles determine the distribution of determiners in structures of these two classes, as well as in the class of structures Keenan presents, and perhaps his concept of the definite will play a role in this. But, of course, all of this is just in relation to the preposition 'of'. The general interest is in the full play of determiners across the whole of the language.

§ 7 Two Analyses of Modals: One in Second Language Acquisition Research, One in the Philosophy of Language

We have just explored the relationship between a work in formal semantics and a work in SLA research, both addressing the articles of English. Let us now do the same thing with respect to the modals of English. As was indicated earlier, the articles on modals I selected are:

'Tense and Modality' by Murvet Enc from *The Handbook of Contemporary Semantic Theory*

'Cognitive Linguistics and Second Language Instruction' by Andrea Tyler from *Handbook of Cognitive Linguistics and Second Language Acquisition*

Let us take Tyler first. She begins by sketching a broad contrast between what she calls the traditional view of language and the cognitive linguistic view she is a proponent of. On the traditional view, a natural language is an independent system, largely unrelated to our other cognitive capacities, and to the conceptual structure that undergirds these capacities. It is a system of rules but, ultimately, the rules are arbitrary such that when you look deeply into the system, you encounter a mystery. The system achieves economy by having a relatively small set of basic sentence forms but achieves variety and complexity because sentences that fit the basic forms are subject to various transformations. Thus, for example, the active form of the system is a basic form while the passive form is generated by applying a transformation to the active form. Lexical items are 'plug ins' with respect to the basic expression slots created by the grammar rules. Where lexical items carry more than one meaning, it is declared that there are homophones and no effort is made to show how the meanings involved are related. This of course contributes to the impression of arbitrariness. But, the structure of the language extends only so far and thus the system becomes laden with exceptions. In the end, the language learner's task is reduced largely to memorization: memorize the lexical items, memorize the rules, and then memorize the many exceptions to the structure that the lexical items and the rules together constitute. Tyler

acknowledges the historical development that has taken place within the traditional view by pointing to its recent concern with reflecting the pragmatic aspect of language. Thus, there are now 'formulas' for making requests, and making apologies, and the like. For example, one formula for making a request has the individual in need say 'Could I ask you a favor?' rather than the more accurate 'Can I ask you a favor?'. But, Tyler is critical here too in that she sees the consideration of the pragmatic as an 'add-on' to the original system, not something that has been elegantly integrated into it.

By contrast, on the cognitive linguistics view, our language facility is a reflection of our general cognitive facility. Language is grounded in the experience we have living in the worlds that we do, first the physical world but also the social world. Now, this is very general and programmatic, but it is clear how the cognitive linguists wish to set themselves off from the 'traditional' linguists and philosophers of language who, from the late fifties onwards, have studied natural language formally. The cognitive linguists take a holistic view. The physical world, the social world and the suite of cognitive capacities of the individual, along with the conceptual structure all of these capacities are based in, form a well-integrated whole. And, while it may be true that, in the short run, it can be effective to study a sub-system of the general system of the mind-world on its own, in isolation, clearly in the long run we can have a true understanding of that sub-system only in its relation to the system as a whole. It must be admitted however that this line of thinking is speculative in nature. [+ f-note: is this really new given Chomsky's revolution?]

It seems perfectly legitimate to ask here to what extent this perspective of cognitive linguistics is distinctive, or new. After all, at least as early as Chomsky (1965) we have the idea of the integration of our language capacity with other systems of mind. Referencing the biological constraints on language acquisition, Chomsky says:

> … we do not … imply that the functions of language acquisition are carried out by entirely separate components of the abstract mind or the physical brain, just as when one studies analyzing mechanisms in perception …, it is not implied that these are distinct and separate components of the full perceptual system. In fact, it is an important problem for psychology to determine to what extent other aspects of cognition share properties of language acquisition and language use, and to attempt, in this way, to develop a richer and more comprehensive theory of mind. (207)

And at least as recently as recently as Hulstijn (2002) we have consideration of the need to "… address other dimensions of cognition, such as emotion, personality and motivation … (215)" in the theory of L2 learning. [f-note on Hulstijn's reference to the social]

However, by including both the physical world and the social world along with our suite of cognitive faculties, the cognitive psychologists expand considerably the environment within which the theory of language acquisition and use must be developed. Also important is their claim that the rules and basic expressions of language are not arbitrary. One helpful tool of the ESL teacher is the ESL dictionary *Longman Handy Learner's Dictionary of American English*. It uses brackets with plus signs in its definitions of nouns and verbs to help the ESL student pick the right preposition. Thus for example the definition of the verb 'cooperate' incudes the expression '[+ with]' to show which preposition the verb is

used with in most instances. But the student must either memorize the association or go into the dictionary every time they want to use the verb. The situation would be much better if the association were explained in terms of meaning.

Things get much more specific, however, when Tyler turns her attention to the modals. She again makes a fundamental distinction between the traditional view and the cognitive linguistics view, but now with specific reference to theories of modals. She chooses a grammar book designed for high intermediate to low advanced level students, *Mosaics 2: A Content Based Grammar* (1996) by Werner and Nelson, as representative of the traditional approach to modals. It classifies the modals according to the various speech acts they are used to perform as follows:

- 'may', 'might', 'can', 'could' – used to express ability and possibility

- 'may', 'can' – used to grant permission

- 'may', 'could', 'can' – used to ask for permission

- 'would', 'could', 'will', 'can' – used to ask for assistance

Other speech acts with which subsets of the total set of modals are associated are:

- giving advice

- making a suggestion

- prohibiting action

- expressing a preference

- expressing a lack of necessity

Several modals are associated with several speech acts, and Tyler criticizes Werner and Nelson for failing to provide an explanation of the resulting pattern of distribution. And, she goes on to make the following general statement:

A consequence of this approach, in which a range of shifting interpretations represented by modals are presented in relation to isolated speech acts, is that there is no attempt to relate the various contextualized interpretations. … Hence, any systematic patterns of usage remain unexplored. This results in a fragmented picture of the lexical class in question, leaving the learner with the impression that the various uses are arbitrary. (464)

Thus, we see how the same criticism of the general traditional approach to language we saw Tyler make above is registered here in relation to the particular case of the traditional approach to the modals.

Having rejected the traditional approach to modals, the speech acts approach, Tyler goes on to consider the cognitive linguistics approach. She cites the work of Talmy (1988) and Sweetser (1990) as

foundational. Going beyond the most general terms that characterize the cognitive linguistics perspective on language, again the grounding of language in the external dimensions of the physical and the social, and in the internal dimension of the cognitive, these theorists developed an analysis of modals based on force dynamics. "Specifically, they argue that the root meanings of modals have to do with physical forces, barriers and paths." (467) Tyler chooses to follow Sweetser's analysis on the way to formulating her own, and she chooses further to concentrate on Sweetser's treatment of just four of the twelve or so modals – 'must', 'need to', 'may' and 'can'. Tyler is very succinct, or perhaps better, formulaic. The modal 'must' reflects an external force which compels the individual to act:

> You must get your paper in by the deadline or you will not be allowed to graduate with your class.

The modal 'need to' reflects an internal force which compels the individual to act:

> I need to get a haircut.

And, the modal 'can' reflects the ability of an individual to move along a path, while the modal 'may' reflects an authority that takes away, or keeps away, a barrier to the movement of an individual along a path.

> As Sweetser explains, *can* is the equivalent of a full gas tank in a car and *may* is the equivalent of an open garage door. 'These two factors will exert certain similar influences on the situation: neither factor forces the car (or driver) to travel a given path, and yet if either factor were reversed, then travel would be correspondingly restricted. (469)

This explanatory classification of the modals 'must', 'need to', 'can' and 'may' perhaps reflects the preponderant uses of these terms but it is difficult to maintain the mutual exclusivity of the classes involved. Consider, for example, the sentence

> I must paint because this is the only way I can have any meaning in my life.

It uses the modal 'must' but the force involved seems to be internal.

Be this as it may, there is a fundamental modal distinction that is recognized by all or most analysts even though it has not come up here, viz. the distinction between the *root* and the *epistemic* senses of the modals and, yet, Sweetser's approach allows for an elegant relationship between the two while other approaches, like the traditional one, simply do not. Thus, for example, if we contrast

> John *may* go.

with

> John *may* be at the party.

we have the root sense in the earlier sentence such that 'may' signifies permission but we have the epistemic sense in the later sentence such that 'may' signifies belief. How does Sweetser's approach establish a relationship between the two senses?

> *May* is an absent potential barrier in the socio-physical world, and the epistemic *may* is a force-dynamically parallel case in the world of reasoning. The meaning of epistemic *may* would thus be that there is no barrier to the speaker's process of reasoning from the available premises to the conclusion expressed in the sentence qualified by *may* …" (59)

And, the epistemic senses of the other modals, 'might', 'could', 'will', 'would', 'must', 'shall', 'should', and the others "… represent parallel extensions of the particular forces and barriers indicated by the modal in the socio-physical world to the domain of reasoning and logical prediction." (Tyler 470)

At this point in the discussion Tyler begins to present her own ideas about the modals, and posits beyond the force-dynamics metaphor the metaphor of the NOW IS HERE – THEN IS THERE. The latter part of this metaphor serves as a basis for forms of language the speaker appeals to in order to be polite. Thus, for example, the speaker says

> Hi, are you busy? I *was* hoping you *were* free for lunch.

when quite obviously they *are* hoping that the addressee *is* free for lunch. The point is that if THEN IS THERE then the use of the two past tense verbs puts the speaker into the THEN which, given the action of the metaphor, puts the speaker THERE, i.e. *away* from the addressee, and if the speaker is away from the addressee then the speaker cannot control the addressee and, thus, the invitation is not an imposition on the addressee, which is just what the speaker wants, given their desire to be polite.

And, in the other part of the metaphor, the NOW IS HERE part, we have a device for highlighting surety, realis, and force. According to Tyler, at least some of the modals come in present-past pairs: 'will'/'would', 'can'/'could', 'shall'/'should', and "… we find the past tense forms consistently indicating less surety on the part of the speaker or less social and/or physical force. For example, in legal discourse shall indicates a legally binding circumstance while should indicates a preferred, but non-binding circumstance." (471)

Tyler might not be very happy about the way I have presented her essay thus far. I have skewed things in order to emphasize its strictly theoretical aspect in order to set up a nice interface between it and the essay by Enc. In addition to its theory of modals, taken mainly from Sweetser as we have seen, Tyler's essay contains an argument to the effect that we must develop ESL texts and other materials that reflect the structure of English accurately and, yet, are fully comprehensible to the student, and taking this advice itself, the essay contains as well some simple diagrammatic material designed to teach the English modal system in accord with Sweetser. I will give the argument a prominent place in the section still to come in which I try to motivate the approach of the ESL textbook that is part II of this dissertation, but I will present here a sample of the diagrammatic material, both to show what Tyler has in mind pedagogically and to set up a critical similarity between Sweetser's understanding of the modals and Enc's.

In Tyler's diagrammatic presentation of the modals, each modal is represented by a pictograph that takes the form of a square in which there appears a figure moving forward to the right. The specific form of each pictograph is determined by the values it takes for four (partially nested) variables, which are as follows:

- the pictograph features a path (no graphic representation) or a barrier (a door)

- in the path case, the force responsible for the movement is internal (lines in the figure's head) or external (a second figure applying force to the first from the rear)

- in the external case, the authority of the force is recognized by the first figure (a double headed arrow connects the heads of the two figures) or is not recognized by the first figure (no graphic representation)

- the modal is in the present tense (the line creating the box is solid) or in the past tense (the line creating the box is dotted)

Let us consider the pictographs for 'will', 'should', 'may' and 'can'. This will be pretty much sufficient to show how the pictographs work, and the range of configurations of the values of the variables. In association with each pictograph, Tyler gives 'a metaphoric translation of the root use into the epistemic use' and examples of epistemic uses with explanatory paraphrases. The full set of pictographs is given as Appendix A.

To motivate the diagrammatic approach, Tyler says, because "… a cognitive linguistic analysis is based on experience in the physical world, it is possible to represent the meaning of each modal diagrammatically, or in terms of scenes, rather than only in terms of linguistic propositions or dictionary definitions (472)." Readers who are teachers may have had the experience of thinking up or discovering some device that they excitedly thought would make a certain concept perfectly clear to their students, only to find that, when the device is presented on the board, a lot of its magic disappears: its pedagogical power is shown to be significantly less than what was imagined. I teach a test prep workshop for Touro College that involves arithmetic. The other day I thought up a little technique for making the simplification of fractions easier and, after I showed it to the students, I realized that it is effective but it is also still another thing that has to be patiently explained. Well, I think that Tyler's pictographs show that, in explanation, there is a continuum that runs from perfect concreteness at the one end to perfect explicitness at the other such that an inverse proportion holds between the two qualities and, while I find the pictographs helpful, I think that they should go along with rather than replace linguistic propositions and dictionary definitions. And, indeed, this is what happens in essence because, as we have seen, each pictograph is accompanied by an explanatory note. However, Tyler does not leave the effectiveness of her diagrammatic presentation of the modals to speculation. Instead, she cites two classroom-based studies that tested the presentation against advanced learners, both of which showed that it allowed the learners involved to "…move from a stable but defective understanding of the modals to one which resulted in more nativelike production (485)."

Let us now turn to Enc's treatment of the modals. His main objective is to prove that the word 'will' is not a tense element but rather a modal, which, with some consideration of the (putative) present tense, positions him to claim in turn that English has only one tense, the past tense. His strategy is straightforward in that he attempts to show that 'will' does not behave in a manner analogous to the past tense '-ed' but that it does behave like a modal. He focuses on complex sentences whose matrix verb is 'to say' or 'to claim' such that they take a 'that' clause as complement. Critical to the analysis is the distinction among (1) the time at which the sentence is uttered, often called the speech time, (2) the time of the saying or claiming indicated by its matrix verb, and (3) the time of evaluation, i.e., the time at which the sentence, or more precisely, the complement of the sentence, is to be determined to be true or false. We are invited to compare the sentences

Mary said that she was tired

Mary will say that she will be tired.

where the former features, in effect, the past tense element '-ed' in its matrix and its complement clauses while the latter features 'will' in its matrix and its complement clauses. Now, there is a fundamental difference between the two cases because the former sentence allows two readings, on one of which the time of Mary's being tired is the same as the time of saying, on the other of which the time of her being tired is earlier than the time of saying. But, the latter sentence allows only one reading, on which the time of Mary's being tired is after the time of saying, i.e. there is no reading on which the time of her being tired is the same as the time of saying. Thus, the past tense and 'will' behave differently.

We are also invited to compare the sentences

John said that Mary is upset.

John will say that Mary is upset.

where, as above, in the matrix clause, the one sentence has '-ed' while the other has 'will'. But, here, both of the complement sentences are in the present tense. Again, however, there is a clear difference according to Enc with respect to the number of available readings. The former sentence will be true only if the time of Mary's being upset is the same as the time of utterance such that the utterance time is the time of evaluation for the complement sentence. But, the latter sentence will be true if the time of Mary's being upset is the same as the time of utterance, or, if the time of her being upset is the same as the time of saying, i.e. after the time of utterance, such that the times of evaluation for the two complement sentences differ. What we see further in these two cases is that, ordinarily, the time of evaluation of a present tense complement is the time of utterance but, in the presence of 'will' the time of evaluation of the present tense complement can *shift* to the future.

Consider finally the sentences

John must claim that he is sick.

Mary may say that she is in charge.

John should talk to whoever is guarding the entrance.

All of these sentences have a modal in their matrix clause, and a present tense extension, 'that' clauses, as above, in the first two cases, an infinitive phrase in the third case. And, in each case, the modal has the effect of shifting the time of evaluation of the present tense extension from the time of utterance to some future time with respect to it. Enc in effect concludes his main argument by saying that the present tense extensions here

> … when embedded under a future-shifting modal, can be anchored to the future time introduced by the modal and need not be anchored to the speech time. That is to say, they behave like *will*. It is not the case that *will* just patterns differently from the past tense. It also patterns exactly like future-shifting modals. Thus when we account for the temporal properties of these modals, we will automatically be accounting for the temporal properties of *will* if we take *will* to be a modal rather than a tense. (353)

We come now the relationship between Tyler's article in SLA research and pedagogy in the theoretical framework of cognitive linguistics and Enc's article in formal semantics, both of which address the modals of English. Now there is a bit of intersection already in place in that Tyler, in introducing the traditional view of modals, says:

> All theories of modal verbs must account for the synchronic fact that virtually every modal has two basic senses – a root sense and an epistemic sense. Within traditional or formal linguistic theory, the root and epistemic meanings of modals have often been represented as homophones (Frank, 1972; Lyons, 1977; Palmer, 1986). More recently, several attempts have been made to apply some version of truth-conditional semantics (e.g., Papafragou, 2000) to account for the multiple senses associated with each modal. (463)

Now we saw above what Tyler has to say about the root and epistemic uses of modals. What is relevant here is that she refers to work in truth-conditional semantics as related to modals and thus acknowledges the relevance of formal semantics to her discipline.

Consider now the following passage from the conclusion of Enc's article, taking into account that he has argued that 'will' is not a tense element but a modal, which implies that English has no future tense:

> If, as is plausible, the present is treated as the absence of past tense (a view implemented in different ways in Ogihara (1989) and Enc (1990)), then the past emerges as the only true tense in English. This is not unusual. Comrie (1985) points out that many languages make only a binary distinction. Some, like English, have a tense that distinguishes the past from the nonpast, and futurity is expressed by a modal or some other form reserved for irrealis. Others like Hua spoken in New Guinea, have a tense that distinguishes future from nonfuture. Comrie also notes that there are no languages with a tense which distinguishes present and nonpresent. These facts suggest that universally only two tenses are available, the past tense and the future tense. It

may also be true that each language is allowed only one tense and other temporal notions are expressed through other syntactic categories. (356,7)

Thus, I find it very interesting that Enc concludes his analytical study of a single morpheme of English with a claim of universal scope based, apparently, on a large number of empirical studies. And, needless to say, knowing which 'tense' a given language has is relevant to both SLA research and SLA pedagogy since a language cannot be characterized or taught unless its tense structure is specified.

Beyond this more or less marginal intersection, we have the central fact that both Tyler and Enc take 'will' to be a modal, and both of them take it to indicate the future indirectly. Tyler says that it implies the future while Enc argues that the root use of 'will', to use Tyler's term, is inherently future shifting. And, both authors make the distinction between root uses of modals and epistemic uses of them, although it was not convenient for me to bring this out in the discussion of Enc above. But, once we align the two authors in this way, we can see more clearly how they differ, and thus establish the field in which fruitful exchange between the two disciplines might take place. We will look for features that the one account has but the other does not, and then for features that the other account has but the one does not. However, the formula for the cooperation between the two enterprises should be as above, viz. that the SLA researcher or pedagogist provides data on novel linguistic phenomena that reflect actual use, and typically informal theory of these phenomena, while the formal semanticist provides the formal theory of the phenomena, or the formal counterpart of the informal theory. Of course the formal semanticist receives data on language use from the descriptive linguist but the data received from the SLA researcher is distinctive in that it comes from studies in which circumstances are contrived in such a way as to reveal more about the use of a feature than can be learned by the observation of its use under normal circumstances. An analogy can be made between an SLA study and a scientific experiment.

Here, from the SLA side, we get the general cognitive linguistics approach, the idea that the physical world and the social world and our general cognitive capacity condition our use of language. And, in more particular terms, we get the idea that force dynamics, expressed in terms of forces, paths and barriers, is the metaphoric basis for the system of modals in English. Relating the particular to the general, we might see force dynamics as fitting into the physical world component of the cognitive linguistic perspective. We might see the politeness formula called upon by

Hi, are you busy? I *was* hoping you *were* free for lunch.

as fitting into the social world component of the cognitive linguistics perspective. And, perhaps less obviously, we might see the epistemic use of modals reflected in

John may be at the party.

as fitting into the cognitive capacity component of the cognitive linguistics perspective. Both Tyler and Enc make such sentences something like the conclusions of processes of reasoning, which might be regarded as inductive, or probabilistic and, of course, reasoning is our most distinctive, if not most important, cognitive capacity. Finally Tyler's claim that at least some of the modals come in present-past pairs - 'will'/'would', 'can'/'could', 'shall'/'should' - could be regarded as strictly linguistic, or as related

to the physical world given its dimension of time, or as related to our cognitive experience given its dimension of time. But now, the question then becomes, how might these linguistic phenomena be formalized? If we focus on the main three types of modals considered here, exemplified by

> Jane must pass the test.

> That must/may be Jane at the door.

> Jane, you may leave whenever you like.

then we can use the terms, *deontic* modal, *epistemic* modal and *permissive* modal, respectively, where the term 'permissive' does not have its dictionary sense, 'deficient in firmness or control' but the blander sense 'of or related to permission, or the granting thereof'. And Enc, emphasizing the futurity associated with deontic modals, offers the following formalization of this type

MODAL [S] is true at $< w , i >$ iff in every world w' accessible to w there is an interval i' such that $i < i'$ and S is true at $< w' , i' >$.

where 'S '= sentence, 'w ' = a possible world, 'i ' = an interval of time and '$<$ ' means 'earlier than',i.e. that the interval at its left occurs before the interval at its right.

But now, if we take epistemic modals to involve reasoning, and thus argument, in the manner suggested above, then we might say that we need to have a given world in which the premises of the argument are true and then, taking into account the inductive or probabilistic character of the reasoning, have as well that the conclusion of the argument is true in some or most or some high percentage of worlds accessible to the given world: and thus the formalization

MODAL [S] is *possibly* true in w iff P^1, P^2, … , P^n are true in w and S is true in some world w' accessible to w.

where 'w ' = a possible world, and P^1, P^2, … , P^n are the premises and 'S ' the conclusion of an argument of the speaker of MODAL [S]. The formalization here is based as conservatively as possible on Enc's as given above.

Finally if we take permissive modals to involve agents in relationships of power then we might say that we need to have a given world in which one agent has some kind of control over another agent in some respect, and have as well that the latter agent is free in that respect in at least some world or worlds accessible to the given world: and thus the formalization

MODAL [S] is true in w iff C^3abc is true in w and F^2bc is true in some world w' accessible to w.

where 'C^3abc' says 'a controls b in respect c' and 'F^2bc' says 'a is free in respect c'.

§ 8 A Consideration of SLA Pedagogy from the Perspective of the Philosophy of Language

The general character of the discussion so far has been primarily theoretical. We have considered the nature of the articles and the modals of English, which is to say the structure and function of the

sentences in which these elements appear. The consideration has come from two quite distinct perspectives, the formal semantics perspective, on the one hand, and the SLA research perspective, on the other, and this brings in a significant difference in terms of the degree of formality of the theory involved, but it does not challenge the fact that the character of the discussion has been theoretical. Still, the practical has been implicitly present all along. The ultimate purpose of Ekiert's study of the use of English articles by speakers of an article-less L1 is to create the understanding of the process of article acquisition that will allow learners of L2s with articles to proceed more easily and more rapidly. And while, as I acknowledged, I purposefully emphasized the theoretical and deemphasized the practical in Tyler's case, we knew from the reception of her title that her intent was in large part practical in that she included in her work an actual set of instructional materials designed to teach the use of the English modals. Now as we move towards the conclusion of this presentation of rationale, both the theoretical and the practical will remain in the picture, but the emphasis will shift to the practical. And, as the emphasis shifts to the practical, we find ourselves more concerned with SLA than with the philosophy of language and, in turn, more concerned with SLA pedagogy than with SLA research. However, it should be recalled that the main theme of this introduction is cross-fertilization, and given the focus on the practical, a good way to demonstrate the benefit of cross-fertilization might be to devise a project that draws its inspiration from the philosophy of language while having as its objective the enhancement of the acquisition process of the L2 learner. Let us then take a look at this learner.

The second language learner is not like the first language learner. There is no LAD, or language acquisition device, as in generative grammar, that delivers the language to them with minimal effort on their part. But then the second language learner does not fit the 'inductivist' model of first language acquisition either in that they do not have to generate an understanding of the whole of the second language on the basis of nothing more than the data available to them in the form of the use of the language by those around them, and their ability to sift through and sort out this data. Rather, the second language learner already has a full understanding of structure and meaning in language in view of their competence in their first language. And, they have as well the same general systems of learning, the same suite of cognitive capacities, that they appeal to when they take on ordinary subject matter – history, biology, chess. We might thus see the second language learner as using the considerable resources available to them either to develop an analogical relationship between their first language and the second language, or to figure out the second language on its own terms, using the structure of their first language as a model. Probably both strategies are employed, the former one being more useful where the first and the second languages are specifically similar, the latter one where the two are only generally similar. In more particular terms, the second language learner must master the vocabulary and the set of grammatical structures of the second language. They have to learn how to put these elements together to form sentences that express the meanings they intend (production) and they have to learn how to take these elements apart as they appear in sentences that express the meanings intended by others (reception). But then, the second language learner's real problem has to be faced. If relationships among words and grammatical structures are nicely coded into rules then, the nature of a natural language being what it is in view of the way it develops, there are exceptions to the rules, so many exceptions that, at some point, it appears to the learner that the exceptions simply overwhelm the rules. And then, the learner must take on the various forms of inflection the language

includes, especially verb inflection in English and languages similar to it. Where the verb is regular, this is not so difficult but, where the verb is irregular, the learner encounters a nightmare of specificity. And consider the very large set of idioms the language contains, and the deep dependence we have on metaphor for understanding, and the too often under-considered role of usage. This is not a very pleasant reference in America today but we can say 'I was fired.', 'I was terminated.', 'I was let go.', 'I was given the pink slip.', but we cannot say, for example, 'My work was taken away from me.', or 'I was required to give up my work.', or 'I have been denied continuation at my job.', or 'My work and I were divorced.', even though the same basic meaning runs through all of these sentences. Finally, there is the ontologically deeper issue of linguistic relativity. Recall Slobin's thinking-for-speaking hypothesis. Different languages segment reality in different ways, and call upon the native speaker to focus on different things. So, in reflection of one of the generalizations made above, the second language learner must either map the conceptual structure of the second language onto that of their first, or negotiate the conceptual structure of the second language on its own terms, depending upon that of their first to facilitate understanding.

Now, since the SLA student already has an understanding of linguistic structure and meaning, and depends on general systems of learning in their effort to master the second language, the best way to help them may be to provide them with a maximally perspicuous representation of the grammar, and the vocabulary, of the second language. And yet, part two of this dissertation takes the form of an ESL textbook that presents English as a system that is simple, orderly and intuitive such that it might be claimed that the text is in fact a maximally perspicuous representation of the grammar of English. But, the system is based on the syntactic component of a semiotic system for English that I developed over a number of years and thus it might also be claimed that the text draws its inspiration from the philosophy of language. Given all of this, I believe that the ESL textbook that constitutes the second part of this dissertation has the potential to demonstrate the benefit of cross-fertilization between the philosophy of language and SLA pedagogy. The scope of this dissertation project does not allow the text to be field tested, but it can of course be evaluated in terms of the extent to which it presents English in a way that will facilitate the ESL student's mastery of the language. The way in which the text's chapters segment the subject, and the style in which these chapters are written help the student to grasp the structure and function of English more easily and more rapidly. Particularly important is the fact that the text presents the language as a single coherent whole whose parts are organized so naturally that student's challenge is only that posed by the language itself. But now the system on which the text is based is the heart of the matter and thus the next few sections of this introduction will (1) outline the development of the system, (2) describe it briefly but in sufficient detail to make its character clear, and (3) account for the way in which it has been put to use through a long stretch of my teaching career.

The view of English upon which the ESL textbook is based developed in what I think is an interesting way. I started my teaching career at Rutgers in Newark in 1969. My second teaching position came at Brooklyn College in 1972, shortly after the open admissions policy had been implemented in C.U.N.Y. I worked in the SEEK Program, whose purpose was to support academically the new students coming into the university. Our role was vital because we had to insure that the social equity effected by making it possible for the children of all of those who paid for C.U.N.Y. to attend C.U.N.Y. could go hand in hand

with the maintenance of high academic standards that is critical to the character of the university. I had come to the city in 1968 to join the doctoral program in philosophy at N.Y.U. and thus, in SEEK, I worked with students taking philosophy courses and humanities courses generally. My work soon came to the attention of the philosophy department and I was assigned sections of introduction to logic. The part of the teaching I liked best was helping students learn how to translate from English into predicate logic. I developed early on a distaste for translating

>All men are mortal.

and

>Some men are mortal.

as

>$\forall x\ M^1x \rightarrow M^2x$

and

>$\exists x\ M^1x\ \&\ M^2x$

respectively, because the logic sentences did not seem to be structurally analogous to their English counterparts, and in particular the relationship between '$\rightarrow$' and '&' did not seem to be analogous to that between 'all' and 'some'. So, many years before I encountered them in the literature, I began to use restricted quantifiers such that the translations became

>$\forall M^1x\ M^2x$

for every man x, x is mortal, and

>$\exists M^1x\ M^2x$

for some man x, x is mortal

'$\forall M^1x$' and '$\exists M^1x$' could then be seen as correspondent to 'all men' and 'some men', respectively, and 'M^2' as correspondent to 'are mortal', with the match between the two occurrences of the one individual variable serving the function of concatenation in the English, in effect. And, of course, the difference between '$\forall$' and '$\exists$' is perfectly analogous to the difference between 'all' and 'some'. The scope of the relationship is better shown with a sentence like

>John invited her to every party of the season according to some of his friends.

which, where the antecedent of 'her' is 'Mary', becomes

>$\forall Px\ \exists Fy\ I^4jmxy$

>For every party of the season x and for some friends of John y, John invited Mary to x according to y.

Now individual constants are called terms. Individual variables are called terms. The translation procedure here associates restricted quantifiers with the individual variables in the matrix of the logic sentence, such that in the examples above we get the associations

'VPx' – ' x'

and

'∃Fy' – 'y'

and it then becomes appropriate to call these 'associations' *terms*, especially in view of their relations to the noun phrases

every party of the season

and

some of his friends

respectively, and what remains of the sentence is the *predicate*

I[4]

Thus, the logic sentence can be seen to be an assembly of one predicate and four terms, and correspondingly the English sentence

John invited her to every party of the season according to some of his friends.

can be seen as an assembly of one predicate and four terms as follows

_____ invited _____ to _____ according to _____ .

John

her

every party of the season

some of his friends

Therefore, I came to see English as having a *term and predicate grammar*. Then, in the summer of 1976, the Linguistic Society of America held its Summer Institute at the University of Massachusetts at Amherst. It is a critical fact of my development in the discipline that the theme of the institute was the formal semantics of natural language. I had taken courses in philosophy with Richard Martin, in linguistics with Ray Dougherty, and in computational semantics with Naomi Sager, all at N.Y.U., but it

was probably my participation in the 76 LSA summer institute which determined that my main interest would fall within the philosophy of language. But, without intention, or awareness, I regarded the theories of natural language I was exposed to from the perspective set by the simple translation model I had developed in my teaching in logic at Brooklyn College.

The term and predicate grammar of English can be specified at three levels, the level of the word (or 'word unit' to accommodate basic expressions of more than one word like the preposition 'because of'), the level of the phrase and the level of the sentence. At the word level, the 8 traditional parts of speech, which constitute in my view a remarkable system that has served us very well both educationally and intellectually, are augmented by 7 additional categories of words to produce the following 15 unit scheme:

1 Name	6 Determiner	11 Adverb
2 Relative Pronoun	7 Pronoun	12 Noun
3 W/TH Word	8 Conjunction	13 Adjective
4 Modal	9 Preposition	14 Interjection
5 Copula	10 Verb	15 Particle

Name goes first because of its special character and Particle goes last because I added it only recently. 2 Relative Pronoun through 9 Preposition are the categories that contain very small numbers of words, 5 to 70 approximately, such that they can be specified precisely by lists. And 10 Verb through 13 Adjective are very large categories put in an order of explanation. 14 Interjection was last before Particle was added because, somewhat like Name, it is special. The phases of the grammar divide into the nominal and the verbal. There are 4 types of verbal phrase, which are called predicate bases because they serve as bases of predicates as described above. Thus, for example, the base of the predicate

_____ invited _____ to _____ according to _____ .

is

invited

and the prepositions

to

and

according to

are called predicate extenders. Predicate bases, term position blanks and predicate extenders are the parts of predicates. The 4 types of predicate base are determined by their essential components as follows:

The Action Type / Essential Component = Verb

    Examples: invited   was invited   was probably invited   must actually have been invited

The Quality Type / Essential Component = Adjective

    Examples: is good   is very good   could be very good

The Relation Type / Essential Component = Preposition

    Examples: are in   are certainly in   will certainly be in

The Identity Type / Essential Component = Copula

    Examples: is   clearly is   may clearly be

The components of predicate bases other than the essential ones are copulas, adverbs and modals, although a copula is required in the Quality Type and in the Relation Type and, as we have seen, a copula is the essential component in the Identity Type. There are 6 types of nominal phrase, which are called terms, as follows:

Names, e.g. 'Jane'

Pronouns, e.g. 'he'

Infinitive Phrases, e.g. 'to bake a cake'

Gerund Phrases, e.g. 'baking a cake'

W/TH Phrases, e.g. 'what they want'

Noun Phrases, e.g. 'the huge pot of gold that she found'

Sentences are formed simply by filling terms of the right types into the blanks of predicates. Thus, we get the sentence

John invited her to every party of the season according to some of his friends.

by filling the terms

John

her

every party of the season

some of his friends

into the blanks of the predicate

_____ invited _____ to _____ according to _____ .

in the order given. There are a couple of term types well established in the language that go beyond the 6 types presented here. Thus, for example, in the sentence

The sour cream made John sick.

The adjective 'sick' is a term. And in the sentence

The country has felt itself to be vulnerable since the twin towers were brought down.

The sentence 'the twin towers were brought down' is a term. But, the frequency of occurrence of these term types is too low to motivate giving up the economy of the 6 member set vis-à-vis either pedagogy or theory. The grammar covers only declarative sentences. Interrogative, imperative and exclamatory sentences are left out. All of the sentences covered by the grammar are simple. Complex sentences of the first order, like

The man, who is from Texas, came to the meeting late.

She recruited the rebels into the national army, thereby avoiding a civil war.

are simple sentences that have what amount to simple sentences as components. Complex sentences of any order can be achieved by nesting, or embedding or recursion. Compound sentences of the first order are sequences of simple sentences such that a comma occurs between all adjacent sentences in the sequence except the last two, between which an appropriate conjunction occurs. Compound sentences of any order can be achieved by including sentences of the given order in the sequence. Compound sentences can be nested but this is extremely rare because it challenges our receptive capacity. All of the simple sentences covered by the grammar are in 'standard form'. Sentences not in standard form like the existential sentence

There is a god.

and the proportion sentence

The harder you study, the higher your grade.

are produced by applying transformations to standard form sentences. A great deal of economy and clarity are achieved by having this arrangement.

This view of English has served as the pedagogical underpinning of a great deal of my work. I have taught logic more or less in the critical thinking mode at Marymount Manhattan College and at the College of New Rochelle, but I also taught straight logic, introduction to logic, for many years at Medgar Evers College. I taught the students the term and predicate grammar early on in the semester. There were always questions. 'Why are we studying English grammar in a logic course?' But, a large percentage of the students were of West Indian heritage and still had the 'old world' values of their

native countries so that they were able to respond positively to the sincerity of the teacher. Thus, when I explained that the grammar would serve as the basis for translation, and that translation was their route into the logic as a meaningful subject, they were accepting. I received more general appreciation in these classes than I have in any others over the now considerable number of years I have taught. I have also used the full term and predicate grammar in the English composition courses I have taught at Medgar Evers, College at Old Westbury, Touro College and Pace University. I advise the students that knowing the structure of their native language, or in any case the de facto international language, is of great value in and of itself but that they will also need the know the grammar so that they can understand the explanations of the grammatical errors they make in their writing: you can't understand the explanation of a subject-verb agreement error if you don't know what a subject is, what a verb is and what it means for grammatical elements to agree. But since the course is a course in English, there is also enough time for me to train the students in the technique of sentence diagramming I have developed, one which is based directly on the grammar and is thus very different in nature from the traditional technique. And, it is a source of gratification for me each semester to discover, upon grading the final exams, that two or three of the students have mastered the technique perfectly. I have also used the grammar in ESL writing courses I have taught at Hostos Community College, the predominantly Hispanic institution in C.U.N.Y., and in the English Language Institute of Pace University. However, I don't think that courses like this, as standardly taught, have much power to advance the students' development of proficiency. They are taught too much like regular English composition courses and yet, as we will see shortly, something much different is called for. I have taught two workshop series for the Writing Center at Pace University. The first was a short series called 'The Great Grammar Guru Workshop Series'. The humor of the title was related to my being regarded as the sharpest on grammar among the student and faculty tutors in the center. There were about ten students in attendance at the first meeting of the workshop. I had them go downstairs to the computer lab and write and then email to me a paragraph on the first of a series of open subjects like travel, fashion, sports, etc. and, in the subsequent session I made a PowerPoint presentation of my analyses of the sentences in the paragraphs produced. This pattern was repeated. In the PowerPoint presentations, I used the formal editing system I have developed, according to which there are four 'edits':

Change	[… / …]
Add	[+ …]
Drop	[- …]
Move	[* n < …] , [… > * n] where n = 1,2, … and the left or right 'move to' location is indicated by a second *n

I also projected a lot of enthusiasm. But, voluntary, Friday afternoon workshops are a tough sell, and the student participation level dropped precipitously. The second Writing Center sponsored workshop series I taught was quite different. It was set up like a course in that it ran for 14 weeks, and I called it Analytical English. I started with 13 or 14 students, had about 6 or 7 midway, and wound up with a faithful 4, 3 young Chinese women and 1 young Saudi Arabian man. I served substantial snacks at each

meeting at my own expense, but this did not have the retention power I thought it would. The writing track of the workshop was basically the same as that of the other workshop, short compositions written on the spot with PowerPoint analyses of the sentences in them presented in the subsequent session. The difference was that I had four hours each week, and this allowed me to teach the term and predicate grammar, and the grammar of errors I have developed called the Big 10. It is based on ten commonly occurring error types, Tense, Fragment, Subject-Verb Agreement, etc., precise descriptions of the types, and exercises, each of which consists of ten sentences, with each sentence exhibiting one error of a distinctive type among the ten. But, I have to score Analytical English a failure (except for the strong relationships I was able to forge with the students who stuck it out). Like the typical ESL writing course, it lacked several elements that are necessary if the students are to have a real chance at advancing their proficiency. We will see what these elements are below. The term and predicate grammar served as the basis for a presentation I made in a recent Pace University Writing Center conference. The presentation had the too long title, The Potential Role of The Formal Semantics of Natural Language in Second Language Acquisition Theory, Pedagogy, Teaching and Tutoring. There is another use of the grammar that should be mentioned. I also work as an English and philosophy tutor in the Center for Academic Advancement at Marymount Manhattan College and, because there too I am regarded as the sharpest on grammar among the student and faculty tutors, I was asked last year to make a presentation at a meeting of the staff of writing tutors that might help them to be more effective in dealing with the grammatical aspect of the students' compositions, and I dutifully prepared a nice PowerPoint presentation but, on the day of the meeting, the weather was so bad that the city virtually shut down, and the meeting was cancelled. But now, the main use of the grammar I want to discuss briefly here is in relation to my work in writing centers, as a 'professional coach' (Marymount) or as a 'master consultant' (Pace), i.e. as a faculty level tutor. My students are native speakers of English and ESL students from all points across the globe. The thing I enjoy most in working with the native speakers is what I call interpreting the assignment and planning the essay. The first thing is to determine the rhetorical type of the essay. Is it to be a narrative, a comparison, an argument? The next thing is to work out the organization of the essay under the rhetorical type that has been settled upon, i.e. the segmentation of the essay into parts under that type. The principle I follow is that the assignment has parts, and the parts of the assignment determine the parts of the essay. And, once the parts of the assignment have been identified, it's time to bring in the length of the essay as specified by the teacher so as to set up what I call the 'arithmetic'. Let us take a very simple example. If the essay has to be three pages long and the assignment has been found to have four parts then, on the stipulation that a good paragraph might well run for half a page, the arithmetic says that there will be six paragraphs in the essay overall and, since one of them has to be the introduction and one of them has to be the conclusion, that leaves four body paragraphs, each of which will be devoted to one of the four parts of the assignment. All of these steps in the process are accompanied by notes and diagrams produced on the computer or on a legal pad. The student comes out of the session feeling relief from the anxiety they came into the center with, and feeling confident that they can negotiate the assignment successfully. All of this procedure is of my own devising and it is systematic to such an extent, and produces clarity to such an extent that it represents a superior way of handling contact with the student who is wise enough, or fearful enough, to come into the writing center *before* they begin writing their composition. Needless to say, however, we are dealing here with the routine assignments of undergraduate students,

and most typically first and second semester English composition students, whose tuition pays for the writing center at Pace. I don't have ESL students at Marymount, and at Pace the typical ESL student is not in Dyson College but rather in the English Language Institute (ELI), an adjunct, or 'feeder' school in relation to the university. I love working with these students most because their assignments are usually structurally simple so that the issue is straight grammar. I go through the essay with the student, identifying, explaining and correcting the determinate errors, i.e. the ones that can for the most part be fixed in only one way. I call this approach 'explanatory editing'. I *do* edit the student's essay, with their assistance, but this just provides the opportunity for me to teach the student the features of grammar that they do not know or have misunderstood. What is distinctive about my tutoring is that it *is* teaching, the teaching of grammar. The standard approach is to have the student read the essay aloud with the idea that they will catch their own errors, that they will hear them. On this approach, very little is expected of the session. If some of the surface errors are brought to the student's attention and removed then enough has been done. At Pace now, it even seems to be the *policy* that we are supposed to do less for the ELI students, because they are 'courtesy' students who contribute nothing to the funding of the Writing Center. I can't say this I really understand this. Each student, Dyson or ELI, gets 50 minutes. Why would the tutor not help the student, of whatever financial/cultural stripe, as much as they can in the time allotted? But now, what is most satisfying about working with ESL students is that they don't just make determinate errors, which are 'conservative' in that they respect the structure of English by involving only the 'true parts' of English, a word ending say, which is missing, or mistaken or present where it is neither required or allowed. No, ESL students also make 'radical' errors, ones that don't respect the structure of English but instead rend its fabric in some way, and in relation to errors of this type, I am called upon to provide a more or less instant analysis of a complex linguistic phenomenon. When I am able to do so, I experience exhilaration, and when I am not, I have the pleasure of taking away from the session a problem that is of great interest to me. The big point here, however, is that the reception of radical errors provides an opportunity for the native speaker-grammarian to develop insight into the structure of the language. Such errors draw back the language's curtain of familiarity, exposing its unfamiliar mechanism, its works. And of course we have in this yet another case of the intersection of formal semantics and SLA research and pedagogy creating a space in which a highly beneficial form of intellectual cross-fertilization can take place.

The last thing to be covered in this introduction is in a way one of the most important things and yet it can be presented very briefly. There are at least seven conditions that must be met if ESL instruction is to be effective:

1. The model of the language on which the instruction is based must be as simple and intuitive as possible, and yet have broad explanatory power

2. The student's learning in relation to the model must be multi-faceted: (1) it should involve (a) *listening* and *speaking*, as well as (b) *reading* and *writing*: and, (2) attention must be paid to (a) the student's language *input*, (b) the manner of the student's mental *processing* of, or thinking about, the structure and function of the language and (c) the student's language *output*; the tendency to elect one facet of the experience of learning a second language as the critical one must be defeated

3. The instruction of the student must be bi-modal. In the one modality, the initial focus at least is on the student's work, mainly the compositions that they write. These compositions must be subjected to grammatical criticism, i.e. they must be edited, and in a formal way. But, after a certain number of critiques have been produced, an analysis of the student's writing should emerge, although each subsequent critique will refine that analysis. Then, the focus shifts from the student's work to the student themselves as the effort is made to have them understand, understand thoroughly and deeply, what their grammatical problems are. The hope is that this will lead to grammatical mastery. However, it is very likely that there will be a residue of the un-mastered, despite the best effort, and it is here that the second modality comes into play. In this modality, the focus is on the student throughout. The student must be trained to edit their own work by using what I call SMEPS, or specific mechanical editing procedures. For each common error type, there will be a SMEP already available. Thus, for example, there will be a SMEP for article use, and one for Subject-Verb Agreement, and so on. But, for each student-idiosyncratic error type, a new SMEP must be devised. Now, if the goal with respect to the first modality is 'automatic' mastery then the goal with respect to the second modality is mastery 'with contrivance'. Finally, if the means *cum* theme in the former case is understanding then the means *cum* theme in the latter case is empowerment.

4. The student's term of learning must be long. The ideal scenario for a student at Pace is that they would spend two years in the English Language Institute, four years in Dyson College and two or more years in The Lubin School of Business or some other graduate program of the university, and during all of this time they would have an absolutely dual objective – to learn the general and professional subject matter of their academic programs, and to develop their proficiency in English at least to the near-native level.

5. The instruction of the student must be consistent. The biggest problem for the ESL student is that all of their learning is in a sense episodic. No single learning structure is constant through all of their experience. They take a series of courses, each under a different title and, typically, with a different teacher, although the titles are supposed to form a logical sequence and the teachers are almost always highly competent. And, the student uses the writing center but, except in special cases in which a relationship has been formed, which tutor the student works with in a given session is randomly determined. The student may work with a faculty tutor or a student tutor. The tutor will be more or less able to analyze the student's grammar, and more or less interested in doing so. In any case, while there is a common understanding of English grammar, and a common recognition of the main types of error that occur in English, each tutor's approach to grammatical evaluation is unique. Further, almost always, the goal of the tutorial session is to improve the student's essay so that it will earn a higher grade and the student more or less expects the tutor to 'fix' the essay's grammar. Thus, effectively, there is little or no thought of advancing the student's proficiency. The situation that needs to prevail has 5 main characteristics:

a. all of the teachers and tutors must subscribe to the same grammar and to a certain general approach to teaching it

b. the teachers will present the grammar in their classes and the tutors will use it in their tutorials

c. the teachers will also work as tutors, as faculty (or master or professional) tutors, of their own students: ideally they would meet with each of them once a week, or every other week, for 30 to 60 minutes

d. the teachers and the tutors would work together, as members of one team, (1) to implement the bi-modal approach described above, (2) to cover all of the facets of the student's learning enumerated above and (3) to administer the accounting system described below

e. beyond these constraints with regard to grammar, teachers would design and teach their courses in the manner that is common in collegiate education, i.e., they would conform to the course descriptions upon which the school curriculum is based while at the same time exploiting the limitation of these descriptions to the specification of goals, subjects/skills to be mastered and genres to be explored in order to bring to bear the ideas about teaching that they find to be valid and to employ the strategies of teaching that they think are the most effective: and, they would be expected to teach with their personalities in order to make their courses as lively and as engaging for the students as possible.

6. The student must be accountable for everything they are taught. But, there is no limit on the design of the accounting mechanisms that might be used to enforce this. I will cite one, possibly perverse seeming, example. After the student's composition has been edited in a tutorial session, or as a part of the grading of the composition by the teacher of a course, in either case with the use of the system of edits described above so that each error-correction pairing becomes a discrete enumerable item, and after the student has had ample time to study the edited composition, they will be administered a test which requires them to take the *corrected* copy of their composition provided and *put back* in all of the errors that were originally there. Their grade on the test will be determined precisely by the percentage of the errors they are in fact able to put back and, yet, the average of their scores on all such tests will figure prominently in their grade for the course. Further, the ESL enterprise must have access to a powerful computer system that will be used to record all of the compositions all of the students produce, with their systematized evaluations. This will facilitate the precise tracking of the student's progress in relation to a 'map' of English, i.e. an organized set of its features, whose members could be taken to be all, or virtually all, of the features of the language, or more modestly, all of the features involved in any mistake that has been identified in the general corpus of ESL writing. And, a necessary condition on the language track of the student's academic program should be that they must achieve mastery of 95% of the terrain of the feature map by the time of their graduation, said percentage being perhaps a reasonable gauge of near-native proficiency. The understanding on which this condition would be based is that foreign students studying in America universities or language institutes associated with them are perfectly capable of meeting this standard, if they make the required effort, and yet they almost certainly will not meet the standard unless the condition that they do so be a necessary one.

7. Finally, in order to handle all of this, the students must come to the institution with a very high level of motivation, although the detail of the design of the program, and the manner of the teachers and tutors who work in it must be of such a nature as to engender both the development and the

maintenance of motivation among the students since of course it is unrealistic to think that motivation will exist simply because it is demanded.

Now, I think it goes without saying that when I gave characteristic a. under condition 5., again:

> all of the teachers and tutors must subscribe to the same grammar and to a certain general approach to teaching it

I intended that the grammar be the term and predicate grammar on which the textbook is based, and that the general approach be the one embodied in the textbook itself.

All that remains is for us to take a glimpse into the future. Appendices to the dissertation B. and C. are, respectively, (1) a technique of sentence diagramming called Sentence Analysis and an associated game called *Pick 'n Match: The Game of Sentence Structure*, which is executed in PowerPoint, and (2) a more complicated and correspondingly less algorithmic technique of sentence diagramming called *TNYT Break Down* because the sentences it addresses come from *The New York Times* such that they first have to be 'broken down' into the standard forms that Sentence Analysis can handle. But, I have already begun to study Visual Basic with a view to developing a full-fledged video game version of *Pick 'n Match*. The color, the sound and the action of this game, constrained by the staid forms of English, should make for genuine excitement, at least for those who are inclined to regard language as an entity worthy of independent recognition. Beyond this, I will develop a web site that will feature a variety of language video games and activities that happen on-line with posted results, but also an 'academic network' in which students will appear with their pictures, the computerized analyses of their compositions, as narrated by an animated avatar of their choosing – a 16 year old boy might for example choose a 24 year old starlet, and all the back and forth chat that the students want, provided that they maintain a focus on the development of their proficiency. Further, I called above for the production of simple and intuitive theories in the intersection of formal semantics and SLA research but there is also the related business of developing comprehensible explanations of the theories of linguistic features in the formal semantics and SLA research literature. Good students in ESL will relish the experience of having these explanations presented to them by an enthusiastic teacher, and I feel particularly capable of providing such explanations given my years as a teacher of technical subjects like logic, grammar, compositional rhetoric and, in test prep workshops, simple mathematics (the application of the four basic arithmetic operations to whole numbers, fractions, decimals and percentages, plus word problems), all in introductory courses at the undergraduate level. And, the mix of the insights that the students will develop in being presented with the explanations, the insights I will develop in presenting them, and the sharing of all of these insights has potential as itself a source of theory of some kind. Further still, if the textbook meets with the kind of success that I think it will then there will be a natural impetus to use the term and predicate grammar on which it is based to look in depth at specific linguistic phenomena. I believe that the simplicity and the intuitiveness of this grammar can set a perspective on natural language, English in particular of course but generally all related languages like Spanish and French, at the very least, which will foster the development of insight into the structure and function of the language, even if the theory that eventually emerges is of a quite different form, although there may be any number of cases in which it can at least be argued that the most attractive proffered theory is more

or less of the same form. Finally, there are two smaller considerations that don't seem to have any natural place in the general scheme of this introduction, so I am putting them here. In the direction of the theoretical, I want to study the research methodology of SLA and, in the direction of the practical, I want to study the dynamics of the ESL textbook market, both domestic and foreign.

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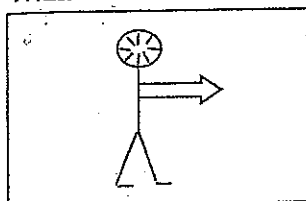
ENGLISH MODAL VERBS

Past tense indicates a weakened force of the utterance and less surety on the part of the speaker (move from realis/here & now to irrealis or there/then). Present tense is indicated by solid lines; past tense is indicated by dotted lines.

ROOT Physical/Social reasoning	METAPHORIC EXTENSION	EPISTEMIC Predictive/logical-causal

WILL

Force emanates from doer.

If I let go of this apple, it will fall.
I will finish the paper today.
You will be happy you took this course.
Absolute surety or commitment → future implied.

Just as I am sure about the state of the world & my commitments, the data & premises support the certainty of my conclusion.

The Court will find in favor of our client. =
"I am certain of the Court's ruling; no other ruling is possible."

Very strong certainty.

WOULD
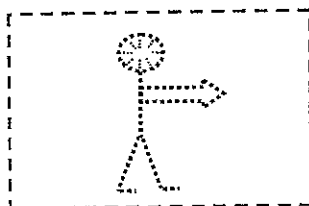
Strong, but lessened commitment.

I think you would like this movie.

Barring any unforeseen contingencies, the data give strong support for my conclusion.

Under these circumstances, the Court would find in favor of our client. =
"I think there is a very good chance the Court will rule this way, but I can't be 100 percent sure. There is a small chance the Court could rule differently."

MUST
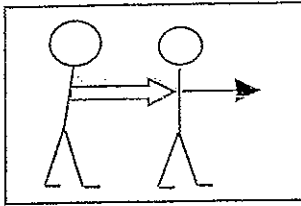
Strong external authority. Irresistible force.

You must pass all your courses in order to graduate.
You must be home by 10.

The data & premises force me to the conclusion.

The Court must find in favor of our client. =
"I believe the Court has no choice; it is forced by the law and the facts to find as I predict."

Very high certainty, but because of the strength of claim, sounds slightly emotional or desperate.
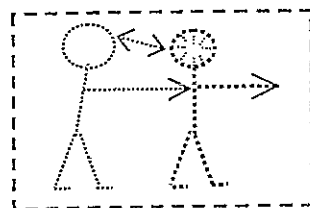
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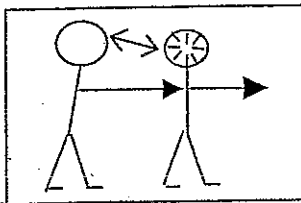
Actor recognizes the authority of powerful external force. Sense of binding obligation.

All the data & premises will follow their appropriate trajectories, or follow the rules, so I can conclude with confidence.

The defendant shall be hanged by the neck until dead.
All parties shall agree to binding arbitration.
"These are binding pronouncements that everyone is forced to abide by."

SHOULD

Lessened sense of the authority or of the power of external force. Lessened sense of binding obligation.

I should finish this project now because the boss wants it soon.

If all the data & premises conform to their appropriate trajectories, or follow the rules, then I can conclude X.

The Court should find in favor of our clients. =
"I believe that if everyone follows the rules and thinks reasonably, the Court will act as I predict."

Strong possibility, with moral overtone.
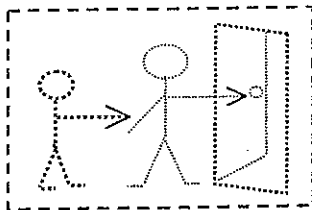
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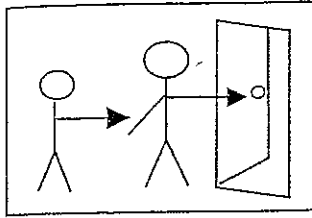
External authority allows action, takes away possible barrier to action.

You may leave whenever you are finished.

Nothing bars me from concluding X (but nothing compels me to conclude this).

The Court may find in our favor. =
"I believe it is possible the Court will rule in our favor, but it is almost as likely it will not."

MIGHT

Weakened form.

I might want to take a walk, but I'm really not sure.
You might want to try another approach.

Probably nothing to bar me from concluding, but nothing seems to compel me to conclude this either.

The Court might find in our favor. =
"I believe it is possible the Court will rule in our favor, but it is just as likely it will not. I have no strong reasons to be able to predict the outcome."
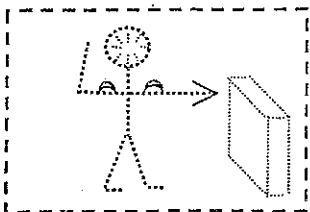
CAN*

CAN
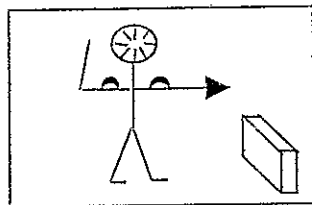
I know I can lift 100 pounds.
Nancy can multiply huge numbers in her head.

This is the only modal that specifically relates to ability. Doesn't have an epistemic extension.

PREMISES GIVE ME THE ABILITY OR KNOW HOW TO CONCLUDE?

COULD

Weakened ability to undertake action. Implies possibility.

I've been going to the gym so I think I could lift 100 pounds now.

You could wash the dishes if you wanted to help.

The data provide weakened support to possibly conclude X, but I see potential barriers.

The Court could find in our favor. =
"We have a number of good arguments. The opposition also has a number of good arguments. I can't make a strong prediction about how the Court will rule."

NEED TO
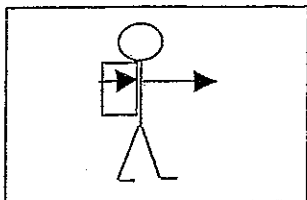
Internal desire to meet certain (societal) expectations.

I need to get my hair cut.
I need to get my taxes done this weekend, otherwise I'll feel too rushed.

The data internally compel me to conclude X.

?? That needs to be John. Doesn't seem to be used to make predictions in legal discourse.

An Examination of the Relationship

between

Implicit Knowledge and Explicit Knowledge

in

Second Language Acquisition Theory

and its Connection to

The Distinction between Knowing-How and Knowing-That

in

The Philosophy of Language

Introduction

    This essay will consider the way in which implicit knowledge of language and explicit knowledge of language relate to each other in the process of second language acquisition. This consideration raises several questions. First, what in fact are implicit and explicit knowledge of language? In order to answer this question we might want to ask the question about the difference between explicit and implicit knowledge in general. The answer here might be arrived at by considering our basic situation. We are agents seeking to survive and prosper in a large and complex world. Our intelligent capability is great. But we have many things to take care of and yet the concentration we can muster at a given point in time is decidedly limited. Thus a kind of division of labor has evolved. Implicit knowledge is what we depend on to help us take care of routine tasks. We take action under the guidance of implicit knowledge in order to accomplish routine tasks without having any awareness of this knowledge or the way in which it thus helps us. Explicit knowledge by contrast is what we depend on when we are faced with a problem and we must marshal the relevant knowledge and apply our reason to it in order to devise a solution. Necessarily then we are aware of this knowledge and of the way in which it helps us to accomplish tasks of this more difficult type. The difference between the roles that the two kinds of knowledge play in our lives can perhaps be made clearer by an example. The individuals living in early human society depended on implicit knowledge to provide themselves with bread. Someone had to discover the process of grinding dried grains to produce a meal, mixing this meal with water to make a dough and then baking the dough to make bread. And in each generation the youth of the society had to be trained in this process, either by observation or instruction or some combination of the two. But once trained, the individual was able to execute the process automatically and thus without any conscious thought. By contrast, the individuals living in early human society depended upon explicit knowledge to figure out what to do when changes in the weather altered the seasonal patterns of plants whose produce constituted a significant part of their food supply. Can similar considerations be also applied to the case of second language acquisition? The answer here in general terms is obvious. Second language acquisition is the learning of a language other than one's native language. One can acquire a second language on one's own by 'picking it up' while living in a country where it is the language spoken or one can acquire a second language through instruction provided by a teacher in a school or a tutor in a setting of one kind or another. But in more particular terms second language acquisition is a very complex educational process which is not fully understood. However a fair amount of this complexity will at least be negotiated in the discussion this essay will provide. Finally the consideration above raises the question of the way in which implicit knowledge and explicit knowledge relate to each other in second language acquisition. In the discipline of SLA (second language acquisition), theorists and researchers have to contend with a broad array of issues that have evolved over time and they

formulate theories and conduct studies in order to advance the positions they take on these issues. The issue that addresses the way in which implicit knowledge and explicit knowledge relate to each other in second language acquisition is called the interface issue. This essay will consist largely in an exploration of this issue.

To understand the interface issue it is necessary to recognize that almost everyone in SLA accepts that both explicit and implicit knowledge of the second language are of value in acquisition. But absolutely everyone understands that the proficient *use* of a second language is based almost wholly on implicit knowledge. To see this we need to consider the phenomenon of ordinary language use. When we are speaking, writing, listening or reading in a second language at any level of proficiency, the operation of the mental processes that make our communication possible is guided by our knowledge of the language, but these processes remain largely hidden; we are aware of the ideas we are hearing, reading or communicating, but not of the linguistic rules that underlie the uses of the language. The knowledge involved is then implicit knowledge given the characterizations of the two forms of knowledge presented above. To be sure, in the early stages of using the language, one consciously appeals to one's explicit knowledge of the translation of words and of the grammatical rules. This is occasionally true also of native speakers, when they search for the right synonym or for the right grammatical form to express a complex idea. For the purpose of our discussion, however, we can ignore these finer points and consider a successful case of SLA, where the student has arrived at a stage in which he or she can use the acquired language proficiently.

Now if the implicit knowledge of the second language is the basis of the use of that language then clearly the second language learner must acquire that knowledge if they are to become proficient to any meaningful extent. And of course a very great deal has to be said about this. Indeed it could be said that the whole SLA enterprise *is* the attempt to specify how the implicit knowledge of a second language is acquired. But the question of focus then becomes, what role does the explicit knowledge of the second language play? We can assume that it plays no role in the use of the second language. What then about the acquisition of the second language? Does explicit knowledge play any role in this? Here we encounter three scenarios. Each one of these scenarios determines a position on the interface issue. The three scenarios are:

(1) The learner acquires implicit knowledge of the second language by means of exposure and then uses the second language on the basis of that implicit knowledge.

(2) The learner acquires explicit knowledge of the second language by means of instruction, this explicit knowledge converts through practice into implicit knowledge and the learner then uses the second language on the basis of that implicit knowledge.

(3) The learner acquires explicit knowledge of the second language by means of instruction, this explicit knowledge facilitates the acquisition of implicit knowledge by means of exposure and the learner then uses the second language on the basis of that implicit knowledge.

Given these scenarios, the three positions on the interface issue can be characterized succinctly as follows:

If the SLA theorist or researcher thinks that scenario (1) is true then they believe that explicit knowledge plays no role in second language acquisition and thus they take the 'no' position on the interface issue.

If the SLA theorist or researcher thinks that scenario (2) is true then they believe that explicit knowledge plays the critical role in second language acquisition and thus they take the 'strong' position on the interface issue.

If the SLA theorist or researcher thinks that scenario (3) is true then they believe that explicit knowledge plays a supportive role in second language acquisition and thus they take the 'weak' position on the interface issue.

So the interface issue reflects differences of opinion about the role of explicit knowledge in second language acquisition among members of the SLA community who largely agree about the role of implicit knowledge.

This essay has two main objectives. The first objective is to establish a connection between SLA research and the philosophy of language by showing that the interface issue has an antecedent in the philosophy of language. And the second objective is to attempt to effect a resolution of the dilemma posed by the fact that (1) there is currently a consensus in the community of SLA scholars that the strong position on the interface issue is to be rejected in favor of either the no position or the weak position and yet (2) the strong position is the one that seems to accord most with (a) traditional pedagogy in second language teaching and in education generally, (b) the relevant philosophy of language theory and (c) thoughtful common sense. The essay has six main sections beyond this introduction. The next three sections present the interface issue in some detail by examining the work of a major representative of each of the three positions on the issue. § 2 examines the work of Robert DeKeyser as a representative of the strong position, § 3 examines the work of Stephen Krashen as a representative of the no position and § 4 examines the work of Rod Ellis as a representative of the weak position. In each case parts of the theorist's work will be examined and then some critical commentary will be offered. In § 5 the essay turns its focus from SLA theory to the philosophy of language in that it presents the work of Gilbert Ryle as it relates to the distinction between knowing-how and knowing-that. It will be shown that the distinction between implicit knowledge and explicit knowledge aligns closely with the distinction between knowing-how and knowing-that. This will demonstrate that the interface issue has a philosophical antecedent and thus achieve the first objective of the essay. At this point there is also a brief discussion of the ways in which Ryle's work can be of service to SLA given the alignment. However Ryle has had his critics and in § 5 I shall also discuss the points made by Jason Stanley and Timothy Williamson, who offer what they take to be a complete refutation of Ryle's argument. I shall argue however that the points they makes in their putative refutation don't hold up to critical scrutiny. Section § 6 addresses the second objective of the essay. It examines the work of Jan Hulstijn. Hulstijn takes the no position on the interface issue but his approach to that issue is more accommodating than Krachen's of considerations that favor the other two positions. I believe that in his work there are the resources necessary for the formulation of a resolution of the apparent dilemma outlined above. I present a detailed argument to this effect after the examination of Hulstijn's work is

complete. The proposed resolution of the dilemma depends upon the adoption of a variant of the strong position on the interface issue. I believe that this variant will accord well both with the interface issue related studies in SLA and the intuitions of teachers, philosophers and others who hold the traditional view of education. In § 7, the final section of the essay, I describe an approach to the design and conduct of studies in what can be called either teacher research or classroom based research and describe as well a model of ESL instruction. The idea is that the findings of studies of the type described and the outcomes of courses that present instruction of the type described will support the claim that the argument for the variant of the strong position advocated is valid. I hope to conduct such studies and to teach such courses myself and I hope that in doing so I might set an example for others. Both SLA theory and the philosophy of language focus on natural language. At minimum each discipline can serve as a resource for the other. Thus SLA can benefit from the study of the theory provided by the philosophy of language generally and by the formal semantics of natural language more specifically. And the philosophy of language can benefit from the study of the rich data on actual language use provided by SLA and from the study of the theory provided by SLA as well.

§ 2   The Strong Interface Position

Theory

DeKeyser (1998) is a broadly based but sharply focused presentation of at least one influential version of the strong interface position. Ellis (2009) credits Sharwood Smith (1981) as having advanced the position formally for the first time but DeKeyser's work has many advantages when taken as a base for the exposition to be provided here. In the typical manner of an SLA theorist and researcher, DeKeyser addresses a more or less specific question. "The crucial question … is whether the explicit knowledge that results from sequential models of FonF [Focus on Form] instruction … can eventually be fully automatized (47)."   Ellis (2009) sets three questions that work well together to bring out what the interface issue amounts to. They are as follows:

(1) To what extent and in what ways are implicit and explicit learning related?

(2) Does explicit knowledge convert into or facilitate the acquisition of implicit knowledge?

(3) Does explicit instruction result in the acquisition of implicit as well as explicit knowledge?

DeKeyser's question is effectively Ellis's question (3) in a somewhat different vocabulary. All SLA theorists and researchers acknowledge that the basis of the competent use of any natural language is the user's implicit knowledge of that language and thus one's answer to question (3) determines whether one regards instruction in a second language to be a valid educational enterprise.

DeKeyser is an SLA theorist and researcher but he apparently discovered at some point that parts of cognitive psychology can serve as a valuable resource in relation to various types of investigation in his discipline. In all three of his works that we consider here, he conducts his investigation from a cognitive psychology perspective. And within cognitive psychology, what he finds to be most relevant is 'skill acquisition theory'. The skills whose acquisition has been studied include those related to algebra,

computer programming, text editing and even cigar making. Among the models of skill acquisition to be found in the cognitive psychology literature, DeKeyser chose Anderson's Adaptive Control Theory (ACT)(1982,1983,1990,1995) because it was at the time the most widely accepted model of its kind. According to the ACT model, there are three stages in the process of skill acquisition.

(1) The declarative stage: the individual as learner acquires declarative knowledge: declarative knowledge is factual knowledge: for example that Napoleon was defeated in 1815 is factual and thus declarative knowledge: in the case of skill learning, it is obvious that the factual knowledge must pertain to the skill: in the typical case the knowledge comes from instruction.

(2) The procedural stage: procedural knowledge directs behavior: it consists in 'condition-action' parings: when a certain condition comes into being, the individual is to perform a certain action: declarative knowledge that derives from instruction determines the pairings: each instance of the occurrence of one of the conditions involved followed by the performance of the associated action works to proceduralize the relevant declarative knowledge.

(3) The automatized stage: as declarative knowledge becomes proceduralized, so procedural knowledge becomes automatized: automatized knowledge directs behavior without the conscious cooperation of the now skilled individual: when the condition comes into being, the action is performed without the individual's having to think about it: it is performed automatically.

It might be noted that whether a declarative stage is even possible depends on the skill. It is highly doubtful that a declarative stage is possible in the teaching of bicycle riding, or how to sing (training of opera singers). But the case of language is different because, in principle, there are rules that determine correct linguistic usage, and they can be expressed in propositional form. In any case these are the stages of the general skill acquisition process according to DeKeyser, following Anderson, but how does this process actually play out in the case of second language acquisition? DeKeyser's text is both instructive and engaging but in order to present its essential content, I found it necessary to patch together passages from three disparate parts of it.

In the first of the three passages, we get a fairly complete characterization of the strong interface position in general terms. In order to develop the student's ability to use the L2 (the second language), you first teach them its grammar and then have them complete exercises in which the grammar taught is used in one way or another.

A formS-focused lesson [lesson focused on particular grammar forms] often takes the shape of reading a short text, and then explaining one or more grammar points, doing some structural exercises and some communicative exercises, and finally, in the case of a foreign as opposed to a second language class, translating a few sentences. But what does skill theory have to say that is relevant to planning a teaching unit? It says that declarative knowledge should be developed first, before it can be proceduralized. This means that if grammar is taught, it should be taught explicitly, to achieve a maximum of understanding, and then should be followed by some exercises to anchor it solidly in the student's consciousness, in declarative form, so that it is easy to keep in mind during communicative exercises (58).

Here the emphasis is on explicit instruction in relation to a feature of the L2 in order to develop the student's declarative knowledge of that feature. Incidentally we see here that DeKeyser is concerned to a great extent with SLA pedagogy as opposed to SLA theory *per se*.

The background that is relevant to the next pasage is the classification of language drills that is given in Paulston (1970). According to Paulston, there are three types of language drills:

 (1) Mechanical drills

These drills do not require the student to understand the L2 language that the drill addresses. They permit just one acceptable response on the part of the student.

Mechanical drills as described here would not be thought of as very useful by most language teachers but they could play a role in preparing students for meaningful or communicative activities. Thus for example a teacher who believes that the association of prepositions with verbs is essentially arbitrary might give their students a lesson that focuses on an article about U.S. elections. The students will learn the vocabulary and the grammar of the article as a part of the lesson but, prior to the lesson, they could be required to memorize the verb-preposition associations that occur in the article. They could then be tested by giving them:

(a) a list of the 'big 10' prepositions of English, viz.

of to at by in on for with from about

and

(b) a sequence of fill-ins like the following:

vote _____

supported _____

take a position _____

The only acceptable answers are 'for', 'by' and 'on', respectively, but the students the students will learn the verbs 'to vote', 'to support' and the verb based locution 'to take a position' as well as the big 10 prepositions only when they are given the lesson. The teacher wants to get out ahead of the problem of students' being confused about verb-preposition associations by using an exercise in the form of a drill to make the point that the associations are arbitrary.

(2) Meaningful drills

These drills do require the student to understand the L2 language that the drill addresses. And they allow a range of acceptable responses. But each response is 'canned' in the sense that the student contributes no information to the discourse by making the response that they do.

A lesson designed to teach the three basic tenses of English serves as an example here. The teacher says to one of her students,

> John, I understand that taking calculus is a part of your undergraduate program.

The student must then respond by saying something like:

> Yes, I took calculus last semester.

or

> Yes, I am taking calculus now.

or

> Yes, I will take calculus next semester.

Then the teacher says to another one of her students,

> Jane, I understand that your parents are concerned about your housing here.

The student must respond by saying something like:

> Yes, they visited me last week.

or

> Yes, they are visiting me now.

or

> Yes, they will visit me next week.

The students understand what the teacher says and what they themselves say. Further the students can form a past tense, a present tense or a future tense sentence so there is a range of choices. But each sentence a student offers as their response is improvised to fit the teacher's prompt so that no real information is conveyed. Indeed it is obvious that the teacher and the students engage in a contrived discourse purely for the purpose of teaching the students the three basic tenses of English.

(3) Communicative drills

These drills differ from meaningful drills in that the range of acceptable responses is unrestricted. The range of acceptable responses is unrestricted because each response that the student makes is an intelligent one conditioned by the preceding discourse. Thus the student does contribute information to the discourse by making the response that they do.

A very simple example will suffice here. The teacher selects a topic and they and their students engage in a discussion of that topic. The students take turns speaking in the discussion and, at their turn, each student must either say something about the topic that follows appropriately upon what has been said thus far or 'take a pass' by saying something like 'I have nothing to add to that.' or 'I agree basically.'. The option to take a pass helps to make the discussion a relaxed one in which all of the students feel comfortable. The discussion is audio recorded and the teacher arranges an individual conference with each student during which they provide them with corrective feedback on the speech that they produced.

Now DeKeyser uses mechanical drills as a point of reference to further his characterization of the strong interface position by saying that:

> They [mechanical drills] are not what is needed to proceduralize this knowledge [declarative knowledge] … because they do not engage the learner in the target behavior of conveying meaning through language. Instead they provide practice in a very peculiar behavior, a "language-like behavior," which consists of linking forms with other forms, of shuffling forms around, according to a pattern held in working memory, without ever linking those forms with meaning, that is, without the student ever engaging in the target behavior of using language (53).

So for the student's declarative knowledge of the L2 to become procedural knowledge, they must recognize that the condition specified by the declarative knowledge has come into being and then perform the action that it pairs with that condition during meaningful discourse. The declarative knowledge will typically take the form of a rule that governs a feature of the L2. The student must practice (1) receiving L2 language with that feature in order to apprehend meaning and (2) producing L2 language with that feature in order to convey meaning. Here then the emphasis is on the need to have the student engage language as a repository of meaning at the same time that they develop their ability to process it mechanically.

The final passage from DeKeyser clarifies how, on his conception, the pedagogical enterprise proceeds:

> The essential notion to bear in mind here is that proceduralization is achieved by engaging in the target behavior – or procedure – while temporarily leaning on declarative crutches … in other words …conveying a message in the second language while thinking of the rules (49).

We saw above that, for each feature of the L2, the student must first receive instruction that secures for them declarative knowledge in the form of a rule that specifies a condition-action pairing and then they must employ that rule repeatedly in both reception and production as they participate in meaningful discourse. Here we see that the student must have the rule before their attention while they are participating in the discourse. That is to say, the student must think of the rule as they are participating in the discourse. The rule thus serves as a kind of template. But of course the template will be needed only until the declarative knowledge in the form of the rule has been proceduralized. A very simple analogy is provided by the case of a cook who must have the cookbook open to the page on

which the recipe for a dish is given as they prepare that dish for the first several times. But after that they can prepare the dish without the aid of the cookbook, and with little or no attention paid to the preparation process itself.

So on Dekeyser's view, a learner acquires a feature of the second language by (1) receiving explicit instruction on the rule that governs that feature and then (2) applying that rule as they participate in meaningful discourse while (3) keeping the rule consciously in mind as they do so. But note that (1) – (3) are not themselves stages in any process. Rather they are best thought of as the essential parts of a type of educational experience whose purpose it is to propel the learner through the three stages of skill acquisition outlined by Anderson as a means of increasing their proficiency in the second language.

Practice

It is somewhat surprising that DeKeyser says so little about practice in his presentation of the strong interface position since the view on which that position is based focuses on instruction in grammar and vocabulary followed by practice as the means to the acquisition of a second language. He does however make critical reference to exercises at several points and these exercises have to be understood as forms of practice. He is also the editor of and a contributor to a book on the subject of practice as it relates to second language acquisition. The book, *Practice in a Second Language: Perspectives from Applied Linguistics and Cognitive Psychology*, is an anthology in which DeKeyser wrote the first and last chapters. In the first he attempts to situate the concept of practice in SLA , and in the last he speculates about the future of that practice. The number of particular topics covered in these two chapters is quite large but brief consideration of about half dozen will suffice for our purposes.

Definitions of the term 'practice' produced by several other SLA theorists and researchers are cited but according to the definition adopted by the contributors to the anthology, practice consists in "… specific activities in the second language, engaged in systematically, deliberately, with the goal of developing knowledge of and skills in the second language (DeKeyser 2007a 1)." Still one tends to miss here the element of repetition that seems to be so central to the nature of practice. Later on however DeKeyser says that the contributors to the anthology are not opposed to the idea of multiple repetition even though they did not include it in their definition.

DeKeyser sees practice as having many specific goals corresponding to the terms of a number of distinctions that are central in SLA theory. These include:

- listening /speaking /reading /writing

- accuracy /fluency /complexity

- rule use /formulaic use

- implicit /explicit

- declarative/ proceduralized /automatized

The nature of practice must be determined by the specific goal that is being pursued. Thus for example practice aimed at the development of accuracy might take the form of self-conscious production with extensive, direct feedback from the instructor. Practice aimed at the development of fluency might take the form of freewheeling conversation with minimal, indirect feedback from the instructor. And practice aimed at the development of complexity might take the form of essay writing with a directive to use one or more complex grammatical structures in the composition.

Two fundamental aspects of practice are segmentation and transfer. Complex skills can be broken down into their component parts for purposes not only of practice but also of teaching and providing feedback. The newer methods of teaching that emphasize fluency are not inclined to segment complex skills but the older methods that emphasized accuracy were inclined to do so. "… what exactly the ideal point is on the analytic/synthetic dimension of curriculum design, and what this implies for practice activities, is still far from resolved … (DeKeyser 2007a 9)." I do not find DeKeyser to be so clear on the concept of transfer but it is nonetheless an important one. Transfer of skill from one kind of task to another seems to depend on the extent to which the two kinds of tasks are similar and on the form which the knowledge involved takes. Transfer is more likely where the two kinds of tasks are similar and where the knowledge involved is abstract. Thus for example there is little transfer of skill from the task of reading computer programs to the task of writing computer programs because the two tasks are quite different in specific terms even though they are obviously related. And if the knowledge related to a skill takes the simple form of familiarity with several examples then it is less likely to transfer but if it takes the form of a rule or a principle then it is more likely to transfer. "Knowledge that is overly contextualized can reduce transfer; abstract representations of knowledge can help promote transfer (Bransford et al. 1999 41 quoted in DeKeyser 2007a 6)." Where transfer from reading computer programs to writing computer programs does occur, it is a function of the learner's possession of declarative knowledge of a rule or a principle that underlies both task types.

Instruction and practice are the key components of the pedagogical model implied by the strong interface position. Factors like (1) the amount of time that has been allotted to a course, (2) the level of motivation of the students in the course and (3) the quality of the technology available to the teacher of the course are all quite important. But effective instruction and effective practice are necessary conditions of the success of the course.

It is very difficult to know what to say in reaction to DeKeyser's theory of second language acquisition and the strong interface position it has him take. The views he expresses regarding learning are intuitively valid for virtually everyone living in advanced society. And in the schools, colleges and universities that are responsible for the education of the populace, it is simply presupposed that (1) instruction followed by study is the means to the acquisition of knowledge and (2) instruction followed by practice is the means to the acquisition of skill. Beyond school we have professional life and leisure. At work we have to become knowledgeable of and skilled at accounts payable, or computer assisted design, or customer relations. And away from work we take up bridge or become intrigued with crochet or fall in love with building model airplanes. DeKeyser's theory accords very well with our experience in these various realms and if we asked anyone outside of linguistic scholarship to account for the way in which we develop the skills involved, they would almost certainly come up with something that amounts

to a lay version of that theory. Thus it seems fair to say that what DeKeyser offers has ha high degree of credibility in the everyday walks of life. But from the perspective of SLA scholarship, things are completely different. The thesis reflected in DeKeyser that the explicit knowledge produced by instruction converts somehow into the implicit knowledge that is the basis of both L1 and L2 language use is now taken to be refuted. The strong position on the interface issue has been supplanted by the no position and the weak position. Only these latter positions figure meaningfully in the ongoing debate. The opposition between the intuitive appeal of the strong position and the rejection of that position in SLA scholarship constitutes what I will call the dilemma of second language acquisition theory. Initially I had planned simply to register the dilemma but having read the work of Jan Hulstijn I saw new possibilities for resolving it. So I will say no more about DeKeyser until we reach the point at which the resolution can be attempted. For the moment I shall focus on the no position as it is represented by Stephen Krashen and on the weak position as it is represented by Rod Ellis. In both discussions there will be ample of criticism of the strong position.

§ 3 The No Interface Position

Theory

While Krashen cites authors whose work antedates his own, especially Wagner-Gough and Hatch (1975), he himself is the dominant figure associated with the no position on the interface issue. In Krashen (1985) he presents what he labels a theory of second language acquisition. This theory is based on five hypotheses which he calls 'the acquisition-learning hypothesis', 'the natural order hypothesis', 'the monitor hypothesis', 'the input hypothesis' and 'the affective filter hypothesis', respectively. He introduces them in the introductory chapter of his text by providing a brief description of each one. The input hypothesis is regarded as the most important member of the set. Krashen does not specify any structure for the set but I think that a certain structure is implicit in it and I will try to bring this out later.

In addition to the hypotheses of his theory, Krashen also presents two other components of his overall case: eight '… very plausible predictions about a variety of interesting and yet poorly investigated phenomena in second-language acquisition …' as well as responses to five challenges that have been made to the input hypothesis by other SLA researchers. The order of my discussion will be the following:

(1) brief sketches of the five hypotheses

(2) an attempt to justify the ordering scheme I have suggested for these hypotheses

(3) a brief discussion of Krashen's eight predictions

(4) a critical evaluation of Krashen's response to the most basic and most important of the five challenges to his input hypothesis.

The Five Hypotheses

The Acquisition-Learning Hypothesis:

We can form a relationship with a second language in two distinct ways. Either we *acquire* the ability to use the language automatically by a subconscious process under certain circumstances or we *learn* about the nature of the language by a conscious process. In the latter case we either observe the use of the language so as to deduce what its form and function are or we are instructed so as to apprehend directly what its form and function are. The acquisition of a second language is very much like the acquisition of a first language and all SLA theorists and researchers agree that it is acquisition rather than learning (in Krashen's sense) that is the basis of our actual use of a second language.

The Natural Order Hypothesis:

Krashen attributes this hypothesis to Corder (1967). It is the claim that the features of a second language are acquired in a certain fixed order. For example the rule governing the plural meaning of 's' might be acquired before the rule concerning the use of 's' for the third person possessive. But the order is not determined by a progression from simplicity to complexity. Thus in the case of English as the second language, the placement of the adjective at the left of the noun might *not* appear in the fixed order before the placement of a relative clause at the right of the noun even though an adjective is a simple modifier while a relative clause is a complex one. Moreover instruction is not supposed to be able to alter the sequence. However, in the recent literature I have seen only two attempts to specify in the case of a second language, what the order actually is, and then only for a rather limited number of cases. Moreover I have seen no attempt to explain why, in the case of a second language, the order is fixed in this way rather than another.

The Monitor Hypothesis:

As noted above Krashen makes a fundamental distinction between acquisition and learning. Of these two phenomena acquisition is far and away the more important one because it provides the basis for the actual use of the second language by individuals who have reached any level of proficiency. But learning does have a role to play. We can use what we have learned about the second language to monitor, i.e. to edit, the language that we produce when we speak or write. That is, we can hold up a rule that we have learned against what we have said or written to see if there is a match or a mismatch and then revise what we have produced where there is a mismatch. Thus monitored production is at least somewhat more accurate grammatically than unmonitored production. However only individuals who are highly motivated to speak and write correctly and who in fact know the rules can monitor their production. But such individuals are rare according to Krashen. Further when someone does monitor, it makes their production less efficient. Krashen does not actually describe the monitoring process but it seems quite natural to think that the second language user who engages in it must (1) formulate a sentence that conveys at least roughly the meaning that they intend and then (2) check that sentence against any number of rules in order to determine whether it is in conformity with them. By contrast the second language user who does not engage in the monitoring process has only to perform task (1). And since the mental capacity available to us at a given point in time is limited, monitored language

production takes longer than unmonitored language production to output a sentence that conveys a certain meaning. It is true that a sentence produced without monitoring will quite likely contain more errors than one produced with monitoring but I share with most of the language teachers I have known the idea that there are two kinds of errors in a certain respect, viz. those that do not affect the clarity of the sentence and those that do. Errors that do not affect clarity are for the most part what I call 'discrete' errors. Examples are failure to use the plural 's' on a noun, failure to use the past tense '-ed' on a verb and confusing expressions that look and/or sound alike – confusing 'their' with 'they're'. Errors that do affect clarity are for the most part structural errors. The sentence consists of a number of phrases and/or clauses that aren't in the proper order – they are 'scrambled' in relation to the proper order – and invariably there are problems with respect to at least some of the phrases and clauses themselves. I try to bring out the difference between the two kinds of errors by using a car accident analogy. A discrete error is like a 'fender bender'. The car's fender was bent in the accident and the repair shop just takes it off and puts on a new one. A structural error is like a 'total wreck'. The car is badly damaged in general and the chassis is bent in particular. The car must be sold as nothing more than a source of parts and scrap metal and thus must be replaced. By the way I try to cancel any grim implication of this second part of the analogy by making the joke that the car involved was a Volvo so that no one was hurt in the accident. Now to return to the issue at hand, the vast majority of the errors produced by both native and nonnative speakers of English are of the discrete kind, and thus the errors produced by the individual who does not monitor might be exclusively of the discrete kind such that the meaning of their sentence is clear despite the errors. Thus there can be a strict tradeoff between the accuracy achieved by the individual who monitors and the greater efficiency preserved by the individual who does not.

The Input Hypothesis:

The only way in which we acquire a second language is by means of 'comprehensible input'. When we hear or read language that contains a certain feature and we understand that language, we acquire the feature. However this process is subject to the natural order of acquisition reflected in the natural order hypothesis. We can learn a feature at point i + 1 in the natural order only when (a) we have already arrived at point i and (b) we receive linguistic input containing that feature, which we understand, by virtue of various contextual extra-linguistic items and/or our general knowledge of the world. These factors thus serve as a kind of 'scaffolding' for the construction of our understanding of language containing the i + 1 feature. Acquisition of the new feature is automatic under the circumstances specified although factors related to the affective filter hypothesis can thwart the acquisition, as we will shortly see. But what guarantees the acquisition when the affective filter does not thwart it is our 'internal language processor'. Krashen identifies this internal language processor with Chomsky's Language Acquisition Device, or LAD.

The Affective Filter Hypothesis:

Whether comprehensible input automatically results in acquisition depends on whether the individual's affective filter is 'up' or 'down'. Their affective filter is 'up' where they lack motivation or confidence, where they are anxious or on the defensive, or where they fear that their weakness will be

revealed or that they will fail. But their affective filter is down where they consider themselves to be potential members of the community that uses the second language, and are so focused on the meaning that is being communicated that they temporarily forget that they using a new language. Where the filter is up comprehensible input will not reach the LAD in order to connect with it and acquisition will not occur. But where the filter is down the connection will be made and acquisition will take place automatically.

The acquisition-learning hypothesis is obviously the basic one because it claims that there are two distinct ways of getting to know a language– the unconscious "automatic" one and the conscious learning of rules, and it does not make any place for a way that combines the two elements, even in the case of a second language. The two terms in its name, 'acquisition' and 'learning', correspond to these two ways, which form a simple classificatory scheme, which can be applied to the other rules. Monitoring is the process that allows learned knowledge of language to play a role in an individual's use of a second language. They can use the knowledge that they have learned through instruction to control the grammatical quality of the language that they produce. But this according to Krashen is an inefficient way and it applies only to a small minority. Krashen presents the following as his 'fundamental principle': " … people acquire second languages only if they obtain comprehensible input and if their affective filters are low enough to allow the input 'in'(4)." We see then that the input hypothesis and the affective filter hypothesis form a pair that gives us necessary and sufficient conditions for second language acquisition. What then of the remaining hypothesis, the natural order hypothesis? It plays a regulative role in relation to second language experience. If the learner is at point *i* in the natural order then they can neither acquire a feature nor monitor language containing it unless it is at point i + 1. Thus the natural order hypothesis cannot be seen as falling under either the concept *acquisition* or the concept *learning* of the classificatory scheme. Instead it must be seen as standing outside the complex of the other four hypotheses in the role of a broad 'regulator' of the complex set of processes that they generate collectively. I think that uncovering this structure in Krashen's set of five hypotheses provides at least a modicum of insight into the general nature of his theory of second language acquisition.

<div align="center">Evidence</div>

As we turn our attention now to evidence for the Input Hypothesis, it is very important to point out that Krashen considers both L1 and L2 studies and it is important to be mindful of when he is discussing which. Further the studies vary broadly in terms of the phenomena addressed, the methodologies employed and the findings arrived at. So there is a good deal of complexity overall. Krashen introduces the section on evidence as follows:

> In this section, we very briefly review previously published evidence supporting the Input Hypothesis and fundamental principle. While alternative explanations are not excluded in every case, the Input Hypothesis can account for a wide variety of phenomena. (4)

Krashen presents his evidence for the input hypothesis under ten headings, which are as follows:

- caretaker speech   - lack of access to comprehensible input

- the silent period   - method comparison research

- age differences   - immersion and sheltered language teaching

- the effect of instruction   - the success of bilingual programmes

- the effect of exposure   - the reading hypothesis

The selection of these headings is to be accounted for only by noting that each one of them refers to something that Krashen takes to provide evidence for the input hypothesis. The space he devotes to the referents of the headings varies from five pages for 'caretaker speech' to eight lines for 'lack of comprehensible input'. Some of the discussions of the referents include considerable citation of studies, others include minimal citation of studies and still others include no citation of studies. Work specifically by Krashen is cited in just a few discussions. It might be said in a general way that what Krashen provides is a survey of studies. Surveys of studies are common in SLA research but the typical such survey is sharply focused on a specific research question and tightly organized. Krashen's survey addresses whatever seems relevant to the input hypothesis and the studies cited in the various discussions of the heading referents are not brought into relation to each other. Let us now consider the discussions in turn. The objective in each case will be to determine to what extent the input hypothesis is supported by what the discussion reveals.

Caretaker Speech:

In the discussion related to this heading, Krashen is concerned with four factors of acquisition, viz.

(1) whether the child is directly engaged in conversation by the caregiver, most typically the mother

(2) to what extent the caregiver simplifies their language in conversation with the child

(3) the role of caregivers beyond the mother

(4) the way in which context helps to make the caregiver's speech comprehensible to the child

It should be noted that, while it took me some time to realize it, in this discussion Krashen addresses first language acquisition for the most part. The larger part of the discussion focuses on (2) so let us begin with it. Cross (1977) reports that "… the syntax of mothers … is not uniformly pitched just a step ahead of the child in either linguistic or psycholinguistic complexity. Some utterances are pitched at the child's level, some below this, and others are considerably in advance of what the children themselves can say (180)." Ochs (1982) reports that Samoan caregivers "… do not use baby talk lexicon, special morphological modifications (diminutives, etc.), simpler syntactic constructions or constructions of reduced length in talking with young children … (101)." And Heath (1982) reports that working-class

caretakers in an African American community "… do not simplify their language, focus on single-word utterances by young children, label items or features of objects in either books or the environment at large (68)."

These reports might seem to be at least contrary to the input hypothesis since it is natural to think that language becomes comprehensible to the child by virtue of their mother's adjustment of the complexity of her language to the level the child has reached in their progression towards proficiency. But Krashen sees the evidence in the reports by Cross, Ochs and Heath as helpful to him. He says the following about this evidence:

> It is, in fact, valuable data in that it focuses attention on what is essential for language acquisition: not simplified input but comprehensible input containing *i + 1*, structures 'slightly beyond' the acquirer's current state of competence. It should be emphasized that the Input Hypothesis does not claim that all acquirers will receive simplified input, expansions, or middle-class caretaker speech. It does claim that all acquirers will obtain comprehensible input, and there is good reason to posit that such input is available to acquirers in each of the situations described above. (6)

Regarding factor (1) above Krashen cites Harkness (1971) and again Heath (1982). Harkness says, "One [Guatemalan] mother told me, 'I never talk with my child. I just tell him to do something and he does it. When he talks, it's with other children.' (498)." And Heath says that the working-class caretakers in the African American community referred to above "… while very responsive to young children's non-verbal behavior, make no special attempt to involve children in conversation until the child can make himself understood (68)."

The situation here is very similar to the one above. If the mother or other caregiver does not even engage the child in conversation then how does the child receive what is presumably their first and most valuable comprehensible input, viz. the level adjusted language of the individual who is with them all but constantly when they are very young? Krashen does not say that the data here is valuable but he does not see it as posing a problem for the input hypothesis either. In the situations cited, the child has an alternative. Krashen says:

> … in each case there is a large amount of exposure to language; language is used around the child a great deal. Heath notes that the Black working-class children she studied 'are in the midst of constant human communication, verbal and non-verbal … they are held, their faces fondled, their cheeks pinched, and they eat and sleep in the midst of human talk … they are talked about and kept in the midst of talk about topics that range over any subject …'. They are exposed to 'almost continuous communication' … (7)

Presumably similar considerations apply in the case of Guatemalan children.

We turn now to factor (4) above, which is quite different from the other three in that it represents Krashen's best effort to explain how input becomes comprehensible for the child. Two passages need to be cited here. Krashen says that "… the fact that caretaker speech tends to be limited to the 'here and

now' aids comprehension, supplying the extra-linguistic context that helps the child in decoding the message (4,5)." And, relying on Ochs, he says:

> 'Exposure' does not necessarily entail comprehensible input. In these cases [ones in which the child is not talked to directly], however, extra-linguistic context is present to make the available speech the child hears more comprehensible. Ochs points out, for example, that 'the topics entertained between caregiver and child tend to focus on the immediate past (e.g. accusations and reports of misdeeds), immediate present, and immediate future (e.g. directives to carry out acts) …', topics that 'characterize household talk in general and are part of a register used by familiars and intimates'. Samoan caretaker speech thus focuses on the 'here and now' … (7)

The idea that context can help a child to understand language is a highly intuitive one. Let us employ some simple semantics here. A sentence denotes a state of affairs and a state of affairs is a structure of some kind. Now to the extent that at least the parts of the structure can be indicated demonstratively because they are in the context of the conversation, the child should find it easier to figure out from the sentence what state of affairs *cum* structure it in fact denotes. However Krashen says nothing about how context helps to make input comprehensible.

The final factor of the four above, (3), can be dispensed with quickly. Krashen discusses briefly four kinds of caregivers beyond mothers, viz. other children and, in the case of second language acquisition, teachers, foreigners and other learners. This is a relatively minor point but in a society like that of America today, I think that it is also important to mention nannies and babysitters in case of first language acquisition.

The thing I find most interesting about this, the longest of the discussions in Krashen's section on evidence, is that he takes the input hypothesis to apply to first language acquisition as well as to second language acquisition. This strongly implies that he thinks that the two language acquisition forms are alike. And it seems that, on Krashen's view of second language acquisition, they are alike with respect to the role played by exposure. But aren't they quite different in that first language acquisition is unconscious and automatic whereas second language acquisition is conscious and typically difficult? Not so for Krashen. In the sub-section of the section on the five hypotheses entitled 'The Fundamental Principle in Second Language Acquisition', he says:

> We can summarize the five hypotheses with a single claim: people acquire second languages only if they obtain comprehensible input and if their affective filters are low enough to allow input 'in'. When the filter is 'down' and appropriate comprehensible input is presented (and comprehended) acquisition is inevitable. It is, in fact, unavoidable and cannot be prevented – the language 'mental organ' will function just as automatically as any other organ … (4)

Following his own statement, Krashen quotes Chomsky (1975) as follows:

> The learner (acquirer) has no 'reason' for acquiring the language; he does not choose to learn (acquire) under normal conditions, any more than he chooses (or can fail) to organize visual space in a certain way – or for that matter, any more than certain cells in the embryo choose (or

can fail) to become an arm or the visual centers of the brain under appropriate environmental conditions. (71)

Clearly, Chomsky is talking about first language acquisition here. So the individual does not choose to acquire the first language according to Chomsky and the individual's acquisition of the second language is inevitable and unavoidable according to Krashen, under the circumstances he cites. Hence for Krashen both first and second language acquisition are automatic simply speaking. And note that Krashen refers to 'the language mental organ', which we must take to be the same thing as the LAD, or language acquisition device. Thus it appears that for Krashen the LAD is the basic mechanism responsible for both first and second language acquisition.

I must admit that I am simply puzzled by this. I don't think that any of my ESL students have found the acquisition of English to be automatic. Given what Krashen says, this must mean that their affective filters have not been down or that they have not received sufficient comprehensible input. But how is this to be understood in practical terms?

The Silent Period

A child who has moved to a new country whose dominant language is different from his own typically goes through a silent period which usually lasts for about six months. Krashen says:

> The child's reluctance to speak for the first few months of his residence in a new country is not pathological, but normal. The child, during this time, is simply building up competence by listening, via comprehensible input. His first words in the second language are not the beginning of his second-language acquisition; rather, they are the result of the comprehensible input he has received over the previous months. (9)

In his discussion of caretaker speech, Krashen cites a number of scholarly sources beyond Cross, Harkness, Ochs, Heath and Chomsky for a total of sixteen, but here he relies on partial biographies of two individuals, Richard Rodriguez, a well-known author, and Richard Boydell, who can barely speak and has no use of his hands and arms due to cerebral palsy. Rodriguez knew only Spanish when he entered an all English school in Sacramento as a boy. Krashen says that he did not speak in class until he had received sufficient comprehensible input from a teacher who talked with him and read with him after the school day was over. As a child, Boydell listened to the conversations that took place in his home and later his mother helped him to learn how to read. These were his sources of comprehensible input according to Krashen, and at age thirty Boydell was able to write an elegant letter using a foot-controlled electric typewriter.

Both of the stories here are interesting and inspiring but I am not so sure what to make of them as evidence for the input hypothesis, or of the notion of a silent period itself. There are just the two cases and they differ in fundamental ways. Rodriguez's silent period must have run from some months to a year or so while Boydell's ran for 30 years, his very difficult oral communication with his mother aside. And the problem for Rodriguez was cultural whereas the problem for Boydell was physical.

Age Differences

Krashen believes that the input hypothesis and the affective filter hypothesis can account for age related differences in second language acquisition. "The data indicates that while children are generally superior in second-language attainment in the long run, adults, at least initially, acquire at a faster rate … older acquirers progress more quick in early stages because they obtain more comprehensible input, while younger acquirers do better in the long run because of their lower affective filters (12)." Adults obtain more comprehensible input for three reasons. They have considerable experience and knowledge of the world and this helps them to make input more comprehensible. They can begin to participate in conversations in the second language earlier on as a result of their ability to use the grammar of their first language in combination with the vocabulary of the second language and then apply monitoring to improve the product. And they have greater conversation management skill in that they are better at indicating to their partner that they have not understood something, and at encouraging their partner to keep the exchange going. Krashen says the following about the role of the affective filter:

> Child-adult differences in ultimate attainment may be due to differences in the strength of the affective filter. I have hypothesized (Krashen 1981a) that the affective filter gains dramatically in strength at around puberty, a time considered to be a turning point for language acquisition (e.g. Seliger, Krashen and Ladefoged 1982), and may never go 'all the way down' again. While the filter may exist for the child second-language acquirer, it is rarely, in natural informal language acquisition situations, high enough to prevent native-like levels of attainment. For the adult, it rarely goes low enough to allow native-like attainment. (13)

But the language acquisition device remains with us throughout life, and it does not degenerate in effectiveness. Thus 'perfect post-puberty acquisition' is at least possible.

The Effect of Instruction

Formal instruction in classrooms is helpful when the language generated there is the student's primary source of comprehensible input. This is especially true for the beginner because they find real world use of the L2 much too complex to be a good source of comprehensible input. Formal instruction is less helpful, however, when the student lives in a society where the second language is dominant and they find at least some of the language they are exposed to comprehensible because of their level of proficiency. Krashen says that this explains "… why advanced ESL courses for international students in North American universities are not effective (Upshur 1968; Mason 1971). The students are competent enough in English to get their comprehensible input elsewhere, i.e. certain subject matter classes and in social situations (14)." Krashen's unqualified claim that such courses are ineffective seems to beg the question that is central to the interface issue. Clearly students can gain advanced explicit knowledge of English in such courses, and the question that is central to the interface issue is - does this explicit knowledge convert with practice to the implicit knowledge that all agree is the basis of the proficient use of a second language at any level of proficiency.

The Effect of Exposure

Krashen (1982a) reviews a range of studies of the relationship between exposure and proficiency and argues that the effect of exposure to the L2 depends on the situation of the individual. If the individual is in school then exposure probably provides comprehensible input. But if the individual is an immigrant who can perform their work with minimal use of the L2 then exposure may not provide comprehensible input.

Lack of Comprehensible Input

Long (1983a) presents a review of cases in which individuals did not receive sufficient comprehensible input. In one such case hearing children of deaf parents had adult-to-adult speech on television as their only source of comprehensible input. As a result acquisition was delayed to a great extent. By contrast hearing children of deaf parents who had a great deal of interaction with hearing adults experienced no delay in acquisition. Krashen says that this is exactly what the input hypothesis predicts. It should be noted however that the children who did experience a delay were nonetheless able to catch up.

Method Comparison Research

A number of studies, including Krashen (1982a) and Krashen and Terrell (1983), that compare grammar-based and drill-based methods of instruction show no significant difference in effectiveness. This is due to the fact that neither method provides a high enough level of comprehensible input. However courses that do provide a high enough level of comprehensible input and maintain a low-anxiety environment do work. Book flood classes are those in which students read broadly out of interest or for pleasure and such classes are more effective than classes based on the audio-lingual method. But Krashen does concede that grammar instruction helps with 'discrete point tests focused on late-acquired items'. Tests of this type feature complex rules that are encountered only late in the natural order of feature acquisition.

Immersion and Sheltered Language Teaching

Immersion and sheltered language programs are effective. In immersion language programs students take all of their classes in an L2. In sheltered language programs students take one or more of their classes in an L2. These programs are effective because they provide a very high level of comprehensible input. Native speakers of the L2 are excluded from the classes and the teachers are thus encouraged to speak at a level of the language that allows the students to understand. Textbooks and associated materials are also level adjusted and supplemented where necessary. Lambert and Tucker (1972) claim that if immersion students of French are provided with the opportunity to use the language in a variety of social situations, they may achieve native-like proficiency in their speech. And students at the University of Ottawa who took their second semester of psychology in the second language rather than taking a course in the second language itself increased their proficiency as much as students who did take a course in the second language itself (see Wesche (1984) for details). Krashen concludes dramatically as follows: " … [what] immersion has taught us is that comprehensible subject-matter

teaching *is* language teaching … (16)." And he adds the point that immersion and sheltered language programs may serve as a bridge from academia to the larger world.

The Success of Bilingual Programs

Properly designed bilingual education programs can be effective. Immigrant students who are given solid subject-matter classes in their L1 plus classes in which they study the language of their new society, i.e. their L2, perform well. The subject-matter classes develop the students' cognitive academic language proficiency, or CALP. In plain language CALP is 'the ability to utilize language to learn and discuss abstract ideas'. This ability is transferable to any other language. Thus when the students are strong enough in the L2, they experience the transfer to that L2 of the CALP that they developed in in their L1. Legarreta (1979) suggests that bilingual education programs are ineffective when they use the method of concurrent translation. If a translation of the material in the L2 being studied is always provided then the students have no motivation to try to comprehend the L2 and the teacher has no motivation to make the L2 comprehensible to them.

The Reading Hypothesis

Krashen (1978a, 1984) and Smith (1983) claim that good writing comes from reading broadly for interest and/or pleasure. Moreover the structure of natural language is very complex and the fact that so little of this structure has been described makes it extremely unlikely that it can be taught deliberately. Through reading however the individual is provided with the whole of the language as comprehensible input. It is nonetheless important to take into account that the student must move through the natural order of acquisition and thus not every book is suitable for a given student at a given point in in their development. A note on terminology may be of value here. It would perhaps have been better if Krashen had not chosen to use the term 'the reading hypothesis' as the heading for a discussion of evidence in support of the input hypothesis.

Collectively we have here a massive amount of material of a wide variety of types. It is difficult to know exactly what to say about it. Krashen uses a number of locutions in presenting what he takes to be evidence for the input hypothesis. These locutions include: 'predicts', 'accounts for', 'could easily be interpreted in terms of', 'helps to settle', 'conclude', 'would predict', 'has revealed', 'provides additional evidence for', 'provides an explanation for' and 'show'. Perhaps the verb and noun pair 'explain' and 'explanation' is the most apt choice. Explanation addresses a fact that we do not understand. We have all of these cases of successful second language learning but there was no one factor or set of factors that allowed us to understand why all of them are in fact successful. But Krashen claims that the factor that explains all of the cases of success is the receipt of comprehensible input. It is not so clear what this amounts to, however. What causes a unit of L2 language that was not comprehensible to an individual to become comprehensible to them, and once that unit becomes comprehensible, how does it help the individual to find the whole of the L2 to be comprehensible? Without something on the order of a *projection* mechanism that takes us from incomprehensibility to comprehensibility and perhaps another *projection* mechanism that takes us from the comprehensibility of parts of the L2 to the comprehensibility of the whole of the L2, we don't seem to have anything that really helps to

understand L2 acquisition. I know that this is quite vague but the question at hand is a very basic one, and Krashen's notion of comprehensible input is completely unelaborated. It may be that what Krashen does is to identify something that is common to all cases of successful L2 learning, but has no power to explain them.

<div align="center">Krashen's Criticism of the Other Positions</div>

We turn now to the third and final part of Krashen's position: his criticism of other positions, and in particular the strong interface position. While, for reasons indicated above, I chose DeKeyser as the representative of that view, it was Sharwood Smith (1981) who took the position first; in fact, Krashen's criticism of that work, followed by his exchanges with Sharwood Smith gave rise to more precise statements of both the strong and the weak interface positions. Smith argues that " there is every reason to accept the older, intuitively attractive version [account of second language acquisition] which says that explicit knowledge may aid acquisition via practice (167)." But the terms 'may' and 'aid' make this a rather mild expression of the strong position. Krashen characterizes it as follows:

> The strong interface position holds that there is only one way to develop automatic-type skills in a second language, that being via conscious learning and practice and drill: learning must precede acquisition. If this is true, it implies that language teaching is truly 'applied linguistics', completely dependent on research in formal linguistics; linguists discover a rule, applied linguists include it in texts and write exercises using the new rule, teachers teach it, and students learn it. If true it also implies that the Input Hypotheses is wrong. Many classroom methods assume the correctness of the strong interface position. (39)

I think it fair to say that there is a bit of caricature here but the position is made clear.

Besides the criticism that is implied in the very phrasing of that passage, Krashen proposes the following two points: (1) there are cases in which an individual knows a rule but has not acquired the corresponding feature and (2) there are cases in which an individual has acquired a feature but does not know the corresponding rule.

Let us take (1) and (2) in turn. We rely here on arguments against the strong position presented in Krashen (1981a, 1982a) and counterarguments presented in Sharwood Smith (1981). Regarding (1) Krashen argues that there are individuals who know the rule but don't have the feature. Smith responds by saying that such individuals are simply not " … prepared to invest the extra time and energy to automatize what is currently exclusively explicit knowledge (165)." To this Krashen replies by citing the case of 'P'. P is an intelligent, hard-working and highly motivated speaker of English as a second language who has a B.A. in linguistics. In her writing she uses the third person singular 's' for regular verbs, e.g., 'walks', 'thinks'. But after a number of years, she still has not acquired it in her speech. (see Krashen and Pon (1975)) Regarding (2) Krashen points out that Seliger (1979) reports that there are performers who have acquired the correct use of 'a' vs. 'an' but don't have explicit knowledge of the rule. Sharwood Smith responds by saying that such cases can be explained in one of two ways:

1. A rule may have been learned at some time before it was acquired but was then forgotten.

2. The rule may be known to the speaker but they may nonetheless be unable to articulate it.

Krashen replies by claiming that self-report data contradicts this. Citing Cook (1973) and d'Anglejan and Tucker (1975), he says:

> … performers who report that they operate largely on the basis of 'feel' do not say that they knew the rule once but have forgotten it, or that they have a version of it in their heads but cannot communicate it. Moreover, second-language performers have been shown to acquire rules that are probably never taught. (40,1)

Needless to say this is a very difficult question. Krashen writes in a persuasive manner but there seem to be several concerns with respect to his argument.

First the no interface position is *prima facie* counterintuitive because everyone living in any kind of society has had many experiences in which they developed a skill after receiving explicit instruction related to it and then practicing it, and it is difficult to believe that the instruction had no role in developing the skill. Obviously what I am saying here does not constitute a disproof of the no interface position because we realize that we don't in fact *know* the exact role that the instruction plays. Nevertheless counter-intuitiveness is a hurdle for any theory marked by it and this hurdle is not such an easy one to surmount.

Second Krashen doesn't say in any detailed way how acquisition results from the receipt of comprehensible input. In his presentation of the input hypothesis, he mentions context, extra-linguistic information and our general knowledge of the world as factors that provide a kind of scaffolding which helps us to understand language containing a new feature. But this is sketchy at best. It is not even clear that we actually have three separate factors here. For example are not both context and general knowledge of the world extra-linguistic information with respect to a particular discourse situation? But let us say that we do have three separate factors. How do they act individually or in concert to convert incomprehensible language to comprehensible language for the second language learner? We are concerned with the acquisition of new features. Let us consider a case in which the new feature is a word, a metaphor or a grammar rule that the learner does not understand. If that feature is somehow the only element that they don't understand in a sentence that someone has spoken to them then perhaps Krashen's scaffolding will allow them to figure out the feature. But how could a learner's discourse history in the L2 present them time and time again with a complex expression in which the only item that they don't understand is a new feature for them? And we must remember that second language acquisition is for Krashen an entirely unconscious process and thus no part of the figuring out can be activity of the kind involved when we are trying to understand a step in a logic proof or plot our next move in a chess game.

There may however be a broader range of possibilities for the discovery of the meanings of new expressions in the L2 than is suggested here. The mechanisms for the discovery of new meanings seem to be demonstration and implication. Demonstration is typically simple. Someone holds up an apple and

says the word for apple in the L2. Implication is more complex. It may be possible to say that an implication goes either from (a) the learner's knowledge of some semantic structure common to the L1 and the L2, or from (b) the learner's knowledge of some of the syntax of the L2, to the discovery of new meanings. Let us consider two examples. The first illustrates the semantic case. The learner knows that the L1 and the L2 both reflect the cause-effect relation. They hear an L2 expression that they know from context refers to a particular cause-effect phenomenon. They already know the meaning of one of two key terms in the expression and, given this and their knowledge of the phenomenon, they are able to figure out the meaning of the other key term in the expression. If the semantic structure has more than two parts then there is the opportunity to discover the meanings of more than one new expression. The second example illustrates the syntactic case. It also shows how the meaning of an expression larger than a word can be discovered. Your friends in the foreign country you are visiting are having fun discussing something that happened in a restaurant. One of the women in the group saw a man at another table whom she found attractive and, when he turned his attention to her, she blew him a kiss. Well one of the other women in the group says in the L2 'She blew him a kiss.' and then acts this out using one of the men in the group as her prop. Everyone laughs reflecting the humor they find in the boldness of the original gesture. Now you know that SVO, with an option to add objects, is a syntactic pattern for basic sentences in the L2, and you recognize the SVO^1O^2 structure of the L2 sentence. But with this you are able to figure out the meanings of all of the words in the sentence.

Third, Krashen claims that his theory predicts the various items of evidence he adduces, of which there are many more than the ones listed and discussed above. Let us represent Krashen's theory of second language acquisition as 'T(NP)' (i.e., the theory of the 'no position') and let us represent his evidence as 'E'. Then Krashen claims that there is some sort of implication:

$$T(NP) \rightarrow E$$

But what kind of implication is this? In the natural sciences, say physics or chemistry, there is sufficient rigor and precision that make such claims meaningful. But here we are in an area that is too loose and indefinite for justifying such a claim. What we need is a situation in which the evidence is not compatible with alternative theories, but this does not seem to be the case. Moreover, Krashen makes the claim post factum. There is no prediction of results of new experiments or new measurements, nor postdiction of patterns in existing data. The prediction claim is better understood as the claim that the evidence E fits well with T(NP), or fits it better than it fits other theories – which is of course what the debate is about.

Fourth, Krashen depends on the natural order hypothesis to a great extent in his theory of second language acquisition. I have remarked already on the difficulty of substantiating this hypothesis on the basis of empirical data. I should also add here that it does not accord with my experience working with ESL students. I have worked in writing centers for many years and many of my tutees are ESL students and in the course of my work I have taught students of different backgrounds and of diverse nationalities. The following details are relevant to the point at issue. In each grammar oriented session I employ what I call 'explanatory editing': the students are supposed to revise under my guidance, their sentences so that they conform with the Standard English convention, while expressing clearly and

accurately the student's intended meaning. There are typically many errors in the student's composition. I have not performed exact counts, but I could say that there might be as many as 100 errors that are discovered, corrected and explained during the typical 40 to 60 minute session. The errors come in two broad varieties. There are:

(1) 'discrete' errors of various kinds: mostly they have to do with

     a. the parts of nouns that change under inflection – 's', ''s' and 's''

     b. the parts of verbs that change under inflection – 's' and '-ed'

     c. the auxiliaries of nouns in the form of determiners – the articles 'a/an' and 'the'

     d. the auxiliaries of verbs in the form of copulas – forms of the verbs 'to be' and 'to have'

     e. misspelled words

     f. homonyms – 'their' vs. 'they're'

     g. disagreement cases related to subjects and verbs – 'She assist the manager of the Computer

       Lab.'

     h. disagreement cases related to pronouns and their antecedents – 'General Motors is a

       major American corporation. They produce so many of the products we depend upon.

(2) structural errors - whose scope is either one sentence or a short sequence of sentences

Typically discrete errors can be corrected in only one way whereas structural errors can be corrected in any number of ways.

Now there are two points to be made in relation to error types and the natural order. The first point is that I have never encountered an error that I could not explain to a cooperative student well enough for them to understand it basically, or to understand it thoroughly if multiple sessions are devoted to the project. Now each error amounts to a failure of mastering a certain feature of L2, but the order in which they are treated in class is independent of the order of the corresponding feature recommended by the natural order hypothesis; it would be miracle of pure chance if they happened to be the same. The difficulty of a student in understanding the feature does not seem to have any connection to the natural order. Some types of errors are much more difficult to explain to the students than other. But, again, the reasons for this have to do with complexity and lack of an analogous feature in the student's native language, not with the natural order. Good examples of errors that are difficult to explain are those relating to the perfect tenses, those involving the 'who' vs. 'whom' distinction, and those involving use of an infinitive phrase vs. use of a preposition - gerund phrase sequence. Now if a student can understand an error type thoroughly then they also understand the related feature thoroughly. And with this kind of understanding of the feature, they are well equipped to use it in their writing. The most capable students can probably even use the feature in their speech. This is especially true if the student

employs what I call strategic pausing which gives them time to plan the use of the feature 'online'. And after a certain amount of use in writing and perhaps in speech as well, the student will develop some kind of command of the feature. Ellis would say that their explicit knowledge of the feature had been 'automatized'. Of course truly acquired features are known implicitly but consider how odd a situation could develop given the natural order hypothesis. Imagine a situation in which the student can use the feature somewhat fluently in their writing and in their speech but it is as yet *impossible* for them to acquire it because it is still down the line on the natural order. Consider how awkward such an explicit knowledge- implicit knowledge gap is.

The second point to be made in relation to error types and the natural order is that acquiring a feature of a language amounts to being able to use it correctly and spontaneously without any reflection but this means that if the natural order hypothesis is correct then, in the writing of the ESL students I work with, some features should be present and well controlled while other features should be absent. In fact however there is almost always a mixture of correct uses and incorrect uses of the features related to the discrete error types. Thus for example the student uses articles correctly in some cases and incorrectly in others. It does not matter whether the article is 'a/an' or 'the'. But I can see how the advocate of the natural order hypothesis might reply to this objection. They might say that the hit or miss use of a feature shows that the student has only explicit knowledge of the feature and thus they have not acquired it. By contrast they have implicit knowledge of the features that they have acquired and this knowledge is the basis of their being able to use the features correctly and spontaneously without any reflection. But I am not sure that in the writing of my ESL students there are any features related to discrete error types that stand out as particularly well controlled. There does not seem to be any possibility of setting up column A and column B with well controlled features in A and hit or miss, and absent, features in B. These considerations suggest a *prima facie* conflict between my experience as a tutor and the natural order hypothesis.

Finally, my main concern with Krashen's theory has to do with his central thesis, which claims that acquisition results only from the receipt of comprehensible input. Taken in the right way this is certainly true but not so much to the point. I think that the receipt of comprehensible input must be posited as a critical stage in the second language acquisition process on *any* theory. The thing that characterizes a theory is the way in which it explains *how* input becomes comprehensible. Being in receipt of comprehensible input is something like a state of the learner whereas what we need is something on the order of action, something that causes the learner to be in that state. There are only four possibilities for the kind of action needed that I know of from the study of the SLA literature. First there is the action of instructing the learner and the associated action of the learner's practice. Second there is the relatively complex and variable set of actions involved in 'picking up' a second language that results from the learner's living in a country whose language is different from their native one. Third there is the process   proposed by Krashen, in which the student is repeatedly exposed to texts from which, on the basis of contextual and semantic clues, the student can interpret correctly various linguistic features, according to the natural order hypothesis. And fourth there is a type of action to be described later in this essay, when we discuss the view of Jan Hulstijn.

All four of these types of action can be seen as making the learner's input comprehensible to them. Thus these four types of action have the explanatory power associated with theories. They explain how input becomes comprehensible and this amounts to explaining how acquisition takes place. By contrast Krashen's thesis that acquisition takes place when the learner receives comprehensible input seems to lack explanatory power. It is then possible that he does not offer a theory of acquisition so much as he identifies the critical process in acquisition as it is caused by all of the four types of action enumerated above. Now it may seem to the reader that I am being unfair to Krashen here because of course the third of the four types of action, viz. the process of using factors of context and the like to interpret language, is due to him. But two points have to be made here. First, Krashen does not use this process throughout his theory of second language acquisition and he certainly does not give it the central role in his theory that, say, DeKeyser gives to instruction + practice in his theory. Krashen uses this process only in his discussion of caretaker speech and at one or two other points in his discussion. He gives the central role to his 'fundamental principle', viz. the principle that "… people acquire second languages only if they obtain comprehensible input and if their affective filters are low enough to allow input 'in' (4)." And second it seems that the process of using factors of context and the like to interpret language works only for a relatively narrow range of sentences. This is the range of sentences that denote states of affairs whose components are represented in the context in which the sentence is used. Thus for example, the mother says to the child, 'Apples are delicious.' as she first holds up an apple and then bites into it with an expression of delight on her face. The class of apples denoted by 'apples' is represented in the context by the apple and the quality 'being delicious' is represented in the context by the mother's biting the apple while having a look of delight on her face. It is not at all clear how the process of using factors of context and the like to interpret language works for sentences that denote states of affairs none of whose components are represented in the contexts in which the sentence is used, especially where one or more of these components is abstract. Consider for example the sentence, 'The decision of the court was just.' used as a part of the conversation at the dinner table in a private home. None of the components of the state of affairs denoted by the sentence is represented in the context in which the sentence is used, and the quality 'being just' is of course a very abstract one.

So far we have discussed Krashen's criticism of the strong position. Concerning the weak position he says the following:

> A weak interface position is that learning can become acquisition, but that it is not the only way. Learning becoming acquisition is an 'alternative route'. … If this position is true, it means that there are two paths to acquisition, one via comprehensible input, and another via conscious rules; there are two 'language acquisition devices' or the language acquisition device works in two different ways. (41)

Krashen sees two serious problems with the position as stated. First it violates Occam's Razor in that comprehensible input on its own accounts for phenomena like $1 - 8$ discussed briefly above under the concept of evidence. Thus there is no need to appeal to explicit instruction + practice in the account. "The alternative route does not help to explain the efficacy of caretaker speech … the success of methods utilizing comprehensible input and subject-matter 'sheltered' language classes, the success of certain bilingual education programs, or the reading hypothesis (41)". But either there is a basic flaw in

Krashen's logic here or I misunderstand him badly. He does not seem to understand that the alternative route interpretation of the weak position implies that there are two *sufficient* conditions for acquisition. These conditions are comprehensible input and explicit instruction + practice. The two conditions are then independent of each other and it makes no sense to consider either one *helping* the other.

   The second problem Krashen sees with the weak position is that it implies that the natural order of acquisition can be defeated. "If learning should become acquisition, any rule can be acquired at any time via the alternative route. Thus, evidence for the natural order, and evidence that the natural order is independent of the teaching order … is evidence against the [weak] interface position (41)." But the advocate of the weak position has two options here. One is to accept the natural order but say that explicit instruction + practice can serve as the means to acquisition when an individual reaches the point in that order at which a given feature becomes acquirable. The other option is the more radical option that Krashen considers exclusively. This is the option of directly challenging the natural order hypothesis by claiming that any feature can be acquired at any time via explicit instruction + practice. Of course this option comes up directly against the research Krashen refers to that concludes that the natural order is independent of the teaching order. But it is still difficult for me to imagine any feature that a bright, well-motivated student who has reached the point in their development that is typical of international students enrolled in American universities and the feeder schools attached to them could not master through the receipt of highly effective explicit instruction followed by diligent, long term practice with explicit critical feedback. Of course the question might be what is this mastery: is it implicit knowledge or is it just explicit knowledge?

   All of this having been said, it must be noted that Krashen's interpretation of the weak position as represented in the quote above is quite different from the standard interpretation as we saw it above in the introduction and will see it again below in § 4 where we will discuss Ellis as the representative of the weak position.

   Krashen considers one additional position on the interface issue. He labels it the 'weaker' interface position and explains it as follows. If an individual has learned the rule corresponding to a feature and they produce language in which that feature is employed correctly then they thereby provide *themselves* with comprehensible input. And receiving this input can then foster that feature's acquisition. But this weaker position is perfectly compatible with the input hypothesis since it is the comprehensible input and not the learning that fosters the acquisition. Thus the weaker position does not amount to much in the consideration here of challenges to the input hypothesis.

   The argumentation here relating to Krashen's theory of second language acquisition has been extensive and complex but I conclude from it that the theory should not be accepted.

<div align="center">§ 4 <u>The Weak Interface Position</u></div>

<div align="center">Theory</div>

   The weak interface position is, as its name indicates, one that stands 'between' the strong and the no positions. Here it will be represented by Ellis (1997, 2009). The weak position establishes a positive

causal connection between explicit knowledge of the L2 as imparted by instruction + practice and implicit knowledge of the L2 as the basis for the use of that L2 but the connection is partial and indirect. Ellis says:

> While both a non-interface and a strong interface position are doubtful, a weak interface position is tenable. If it is assumed that most communication calls for the use of implicit knowledge, a test of whether explicit knowledge can become implicit is whether form-focused [i.e., grammar focused] instruction directed at a specific linguistic feature results in the use of that feature in spontaneous communication. (1997:114)

Ellis's answer to this question is a qualified 'yes' and, invoking the natural order hypothesis, he describes the circumstances under which the explicit knowledge of language developed by grammar focused instruction can in fact convert to implicit knowledge of language as follows:

> Explicit knowledge derived from instruction may convert into implicit knowledge, but only if learners have reached a level of development that enables them to accommodate the new linguistic material. In such cases the learners' existing implicit knowledge constitutes a kind of filter that sifts explicit knowledge and lets through only that which they are ready to incorporate into the interlanguage (IL) system. However, in other cases – when the focus of the instruction is a grammatical property that is not subject to developmental constraints – the filter does not operate, permitting learners to integrate the feature directly into implicit knowledge. (1997:115)

An example might help to make what Ellis presents here clearer. Let us say that on the natural order hypothesis, feature x [(fx)] must be learned before feature y [(fy)]. Now if a given student is at a point in the natural order at which they have learned (fx) but have not learned (fy) and they receive instruction on (fy) then they can learn (fy). But if the student is at a point in the natural order at which they have learned neither (fx) nor (fy) and they receive instruction on (fy) then they cannot learn (fy). When we say here that a student has learned a feature we mean that they have acquired that feature by developing implicit knowledge of it. Thus on the first scenario here the student's implicit knowledge (+ fx) , (- fy) allows them to learn (fy) as a result of having received instruction on it. But on the second scenario the student's implicit knowledge (- fx) , (- fy) does not allow them to learn (fy) as a result of having received instruction on it. So the student's existing implicit knowledge serves as a kind of 'filter' on the stream of feature instruction that they receive. However there are features that are not in the natural order. If (fz) is such a feature then it can be learned as a result of having received instruction on it at any time.

The two quotes above represent about as much as Ellis says in this chapter about the weak hypothesis *per se*. But he goes on to present two sections entitled 'Learning explicit knowledge' and 'Learning implicit knowledge' and it seems that some of the material contained in the latter section can be taken as a kind of analysis of the main process by which the explicit knowledge of grammar that

instruction develops is converted into implicit knowledge. I will present Ellis's view of the explicit-implicit knowledge conversion as a process that has three stages;

1. Noticing:

Instruction must bring the learner to notice a feature of the L2 that they have not yet acquired. Following Schmidt (1990,1994), Ellis distinguishes noticing from perceiving. The criterion is that what has been noticed is 'available for verbal report' whereas what has been perceived may not be. Ellis then goes on to cite six factors that can induce the learner to notice a feature:

(a) the task that the learner has been assigned: the learner's task can be to understand a feature having been given a lesson on it or to engage in communication which somehow involves the use of the feature

(b) the frequent appearance of a feature as a result of its occurrence in 'teacher talk' or in lessons about it provided by the teacher

(c) the unusualness of a feature results from its being different from what is expected in view of the course of instruction up to that point

(d) the salience of a feature which is due to its phonological form or its position in utterances

(e)the modification of the interaction between the learner and the teacher or other students which results from the need to 'negotiate for meaning': negotiation is needed where one party to the interaction has to clarify the meaning of something they have said after the other party has indicated that they do not understand it

(f) the ability of the learner to notice a feature as a function of their existing linguistic knowledge

Ellis is careful not to claim more than what the available evidence confirms. Thus he says that none of the factors above or any combination of them guarantees that noticing will occur. They only make it more likely that it will occur.

2. Comparing:

The second stage of the acquisition process being described here is comparing. If a feature is to be acquired then instruction must not only bring the learner to notice the feature. It must also bring the learner to compare that feature with whatever there is in their interlanguage system that is analogous to it or functionally equivalent to it. Ellis provides an example in which the teacher used a technique called 'recasting' in order to get the learner to compare. The Learner-Teacher dialogue is as follows:

Learner: No go disco this Saturday.

Teacher: Oh, so you're not going to the disco this Saturday.

Here the teacher 'recasts' the learner's sentence in order to get them to compare their form of expression with the correct form. Of course logically and psychologically the learner must notice the correct form before they can compare it to their form.

3. Integrating

The third and final stage in the acquisition process is integrating. Once instruction has brought the learner to notice a feature and then compare it with the correspondent feature in their existing interlanguage, they may be able to revise their hypothesis about the relevant part of the L2. Ellis credits Gass (1988) for this idea but does not develop it. However the point seems to be that the learner is exploring the L2 and they formulate a hypothesis about one of its parts that they have no actual knowledge of. But the learner may develop a new hypothesis about that part of the L2 as new information about it comes in as a result of noticing and comparing. Presumably the new hypothesis is a better hypothesis, being based on more information. The part of the L2 being hypothesized about may be simple or complex. Simple parts like words and 'formulaic chunks' (e.g. 'Have a nice day.') are actually or effectively lexical items and they are integrated into the learner's interlanguage simply by adding them to it. But complex parts like rules and broad patterns can perhaps be integrated into the learner's interlanguage only by restructuring it. Whether restructuring occurs with or without the conscious awareness of the learner is a matter of some controversy. Ellis cites skeptical views found in DeKeyser (1995) and several other sources. Finally the learner can integrate a feature of the L2 into their interlanguage only when they have reached the point in the natural order of acquisition at which that feature is located. Citing Gass (1988) again, Ellis says that when instruction leads the learner to notice and compare a feature that is beyond the point they have reached in the natural order, they may lose their acquaintance with that feature or store it as explicit knowledge which can help them to acquire it when they are ready for it.

Ellis concludes his argument for explicit instruction in the grammar of the L2 as follows:

> An implication in the position being advanced here is that acquisition will proceed more rapidly if learners have well-developed explicit knowledge and access to communicative input. … The synergistic … effect created by implicit and explicit learning working together outweighs the effect of either kind of learning working separately. (1997:124)

We chose Ellis to be the representative of the weak interface position and we have now considered his theory in support of that position. Those who believe in what can be called the traditional approach to teaching English to first speakers of other languages face a dilemma. The two horns of the dilemma are (1) the preponderance of negative critical opinion of the strong interface position in the SLA community and (2) the counter-intuitive character of the no interface position. Given this dilemma, the weak interface position takes on a special status since it stands somewhere in between the strong position and the no position. At this point it might be useful to supplement our consideration of Ellis's theory with a brief review of an important study he conducted which supports the weak position.

A Study

The article presenting the study is quite long and some of its technical content is quite complex. For our purposes we need not go into the details and a short overview will suffice. The point will be to show how the design and the findings of the study dovetail with Ellis's theory. The study also illustrates the methodology of SLA research.

The study addresses the practice of providing students who are first speakers of other languages with 'corrective feedback' when they make a mistake in their production of spoken English. Ellis uses a two-fold classification of the forms of response that constitute corrective feedback:

(1) The provision of an alternative phrasing that expresses what the student intended to say in a correct form that avoids the error.

(2) The provision of a 'metalinguistic' explanation of the nature of the mistake, i.e. an explanation of the error that is based on a statement of the grammatical rule which has been violated by the student's phrasing.

As is typical, the study was driven by a specific research question:

Do learners learn more from implicit or explicit corrective feedback directed at their grammatical errors?

We can see the connection in interest between Ellis's theory and this study right away. His theory claims that explicit teaching of grammar is effective, and the explicit corrective feedback that is one of the two approaches the study addresses amounts to explicit teaching of grammar.

For the purpose of the study, the concepts of explicit and implicit corrective feedback were 'operationalized' as responses of type (1) and type (2), respectively. A response of type (1) is a 'recast'. For example, if the student says, 'I no go to school today' then the teacher recasts this as 'I *won't* go to school today'. Note that a response of type (2) does *not* include a correction of the error.

The participants in the study were the members of a class of 34 students in a private language school in New Zealand. They were divided into three groups: groups 1 and 2 had 12 students each, and group 3 had 10 students. Groups 1 and 2 had to perform two tasks separately. In the first task, the group was divided into four groups of three students and each triad was given a sequence of pictures, which told a story along with a written version of that story. The written versions the triads were given were all different from each other. The triads were then given a short amount of time to read their written version and they were told that they should read it carefully because they would have to retell the story in detail (orally) without having the written version or any notes to help them. When the written versions were taken away, the triads were given a list of verbs they would need in the retelling of the story. So they had just the picture sequence and the verb list as they performed the retelling. The words

Yesterday, Joe and Bill …

were written on the board and the triads were told that they would have to begin their stories with this word sequence . As the student in a given triad performed the retelling of their triad's story, the other three triads listened. The listening groups were told that they had to listen carefully because they would have to say what was different about the stories they were listening to. The second task was a variant of the first, the main difference being that the sequence of pictures that told the story contained a picture that did not fit in and the triads were informed that they would have to identify that picture. The two tasks were completed on two successive days. Group 3 was the control group and did not perform either of the tasks but simply continued with their normal school routine.

The target grammar structure chosen for the study was past tense '-ed'. It was chosen for two reasons. First the researchers were interested in seeing how instruction in the form of corrective feedback would affect a learner's proficiency in the use of a structure that they had already mastered to some extent. And second the researchers wanted to test a structure that ESL students find difficult. The tendency is for the learner to use the simple present form of the verb even where the need for the past form is evident. Thus the learner might say:

> Yesterday, I visit my sister.

The researchers offered no hypothesis regarding the reason for this difficulty. However my own experience suggests that beginning and intermediate ESL students simply cannot handle both (1) producing the sentence that expresses the often complex meaning that they intend and (2) handling noun auxiliaries like articles, plural endings, and possessive endings as well as verb auxiliaries like copulas, singular 's', progressive '-ing', and past tense '-ed' at the same time as they speak or even as they write.

The instruction which was at the heart of the study came in the form of corrective feedback that the members of the two non-control groups received as they retold the story involved in each task. Presumably one member of each triad performed the retelling as the entire membership of the group listened closely. The dynamic of the study was set up by the fact that the corrective feedback Group 1 received was of the metalinguistic explanation type while the corrective feedback that Group 2 received was of the recast type. As noted above, the use of recasts is thought of as implicit instruction while the use of metalinguistic explanation is thought of as explicit instruction.

The students in all three groups were then subjected to a battery of three tests on three separate occasions. The three tests in the battery can be described briefly as follows:

(1) The Elicited Oral Imitation Test (EIT)

This test consists of 36 belief statements. 18 of the statements are grammatically correct and 18 of them are grammatically incorrect. 12 of the statements target past tense '-ed', 12 target comparative adjectives (for the purpose of another study) and 12 target 'distractor items'. The student is presented with the statements one by one via audiotape. Upon each presentation of a statement, the student has to do two things. First they have to indicate whether they agree with, disagree with or are unsure about the belief the statement expresses. And second they have to repeat the

statement orally in correct English. The student receives a score of 1 if the statement contains no error and they repeat it as given or the statement contains an error and the student repeats the statement with the error corrected. The student receives a 0 otherwise. This test is designed to test implicit knowledge of grammar (presumably, because the student will avoid the error 'automatically').

(2) The Untimed Grammaticality Judgment Test (UGJT)

This test was given in a pen and paper format (it can also be given in a computer format) and it consists of 45 sentences. 15 of the sentences target past tense '-ed' and the other 30 sentences target other structures. Of the 15 sentences that target past tense '-ed', 7 are grammatically correct and 8 are grammatically incorrect. In relation to each sentence, the student has to do three things. First they have to indicate whether the sentence is correct or incorrect. Second they have to indicate on a scale of 0 – 100 how confident they feel about their judgment. And third they have to indicate whether they made their judgment on the basis of 'rule or feel'. The scoring here is simpler. If the student indicates that a correct sentence is correct or that an incorrect sentence is incorrect then they receive a score of 1. The student receives a score of 0 otherwise. Having the test taker register the degree of confidence they feel in making a judgment may help to some extent to assess their knowledge of grammar. Because they can make the right judgment purely on the basis of luck, a correct judgment with a high register of confidence might be more impressive than a correct judgment with a low register of confidence. And having the test taker indicate whether they made their judgment on the basis of rule or feel helps to determine whether they relied more on explicit knowledge or implicit knowledge in making the judgment.

(3) The Metalinguistic Knowledge Test (MKT)

This is a pen and paper test that consists of 5 ungrammatical sentences. 2 of the 5 sentences contain a past tense '-ed' error. In relation to each sentence, the student has first to correct the error and then to explain the error in their own words in English. The student receives a score of 1 for correcting the error in a sentence and another score of 1 for explaining the error correctly.

Before each test, the students participated in a preparatory session in which they were given a sample test. With respect to the EIT and the UGJT, some of the items on the sample test appeared on the test itself. Thus there was some transfer of material. This was especially important in the case of the EIT because if the student could perform about as well on the new material as on the transferred material then it could be claimed that they were able to generalize from particular grammar structures they had learned to structures of that type in general.

The battery of the three tests was administered first as a pre-test five days before the first task day, then again as an immediate post-test the day after the second task day and finally as a delayed post-test twelve days after the day of the immediate post-test. The test items were scrambled from test occasion to test occasion in order to create three different versions, at least in the case of the UGJT.

In its Analysis, Results and Discussion sections, the study presents several complex statistical arrays with respect to the outcomes of the testing. However the authors of the study also present these outcomes in a summary and non-technical way. The following points convey the content of this non-technical summary:

(1) the pretests show that all groups had strong explicit knowledge of past tense '-ed' but weak implicit knowledge of it

(2) there were no significant differences of any kind among the three groups in the immediate post-tests

(3) in the delayed post-tests, both Group 1[explicit feedback] and group 2 [implicit feedback] made significant gains on the EIT and to a lesser extent on the UGJT but the gains for Group 1 were greater

Now since the EIT registers implicit knowledge, the conclusion to be drawn is that explicit feedback is more effective than implicit feedback in advancing the learner's implicit knowledge of grammar. The authors of the study offer explanations of both (3) above and the general conclusion here. Regarding (3) they cite Mackey (1999) who has shown that the effects of instruction on implicit knowledge are more apparent on delayed tests of such knowledge. In the time between the instruction and the delayed test, learners are able to incorporate the structure targeted by the instruction into their interlanguage systems. And regarding the general conclusion, the authors of the study claim that:

(a) the learner finds explicit feedback to be more overtly corrective than implicit feedback

(b) perhaps because of (a), the learner is more aware of the need to correct a mistake when they receive explicit feedback with respect to it

(c) with greater awareness of the need to correct a mistake, the learner is more likely to have greater awareness of the 'gap' between the mistaken structure they have produced and the correct structure corresponding to it. This in turn facilitates the acquisition of the implicit knowledge of the correct structure.

It should also be noted that the corrective feedback was provided as the students participated in a communicative activity. The learner was distracted from participation in the activity when they were provided with the corrective feedback but the distraction was brief and partial, and the feedback allowed them to focus on grammatical form. Combining communicative activity with focus on grammatical form is thought to be a highly effective means of developing implicit knowledge of a second language.

The authors of the study conclude as follows:

[These findings support the claim] … that L2 knowledge can enhance the processes involved in the development of implicit knowledge (e.g. noticing and cognitive comparison). That is, the awareness generated by metalinguistic feedback promotes the kind of synergy between explicit and implicit knowledge that is hypothesized to underlie L2 learning. (330)

The study was small. It involved only 34 participants. Further there were only two days of instruction and the instruction actually ran for just 30 minutes on each of these two days. But small studies are common in SLA research and this one was well designed and well conducted. Indeed the report of the study analyzed here is a chapter in the book *Implicit and Explicit Knowledge in Second Language Learning, Testing and Teaching*. It contains twelve studies that cover (a) the measurement of implicit and explicit knowledge, (b) the application of the measures of these two forms of knowledge and (c) the acquisition of these two forms of knowledge as driven by form-focused instruction, along with an introduction and a conclusion by Ellis. The book originated in a project which was funded by the Marsden Fund. The fund supports 'ideas-driven' research and is administered by the Royal Society of New Zealand.

More to the point, if we compare the conclusion of the study with the conclusion of Ellis's chapter on the theory of instructed second language acquisition discussed above then we can see how the two dovetail and how together they form a strong case in support of the weak interface position. The critical line in the conclusion of the theory chapter is:

> The synergistic … effect created by implicit and explicit learning working together outweighs the effect of either kind of learning working separately.

and the critical line in the conclusion of the study chapter is:

> … the awareness generated by metalinguistic feedback promotes the kind of synergy between explicit and implicit knowledge that is hypothesized to underlie L2 learning.

But now what of the weak position itself? I do not think that it is possible to make a meaningful comment here without bringing in motivation and interest. The weak interface position does have the appearance of being a residue. That is to say, it has the appearance of being what is left of the strong interface position as represented by DeKeyser after it has absorbed the critical blow administered by the emergence of the no interface position as represented by Krashen. Given the SLA consensus that the strong position is untenable, Ellis has to concede that explicit knowledge of the L2 does not convert into implicit knowledge of the L2 with practice except under the special circumstances specified earlier. In general, explicit knowledge of the L2 + practice merely *facilitates* the development of implicit knowledge of the L2 by other means.

The disciplined researcher may be able to accept this residue without regret but the pedagogist who adheres to the traditional idea that instruction followed by practice is the means to the development of competence may not be able to do so. However we will see that there may be a way out of this difficulty when we come to the work of Jan Hulstijn.

§ 5 Knowing-How vs. Knowing-That

While Ryle's 1949 book *Concept of Mind* is a classic, the overall position he endorses is not, in general, acceptable nowadays and is not a living subject of discussion. But the knowing-how versus knowing-that distinction, which was introduced in that book continues to be a central distinction of

analytic philosophy. It came to the fore in a relatively recent attempt to undermine it, which I shall argue, did not succeed. I shall do two things in this section. First, I shall describe very briefly Ryle's introduction of the distinction and his goal of upsetting the Cartesian picture and replacing it by a different ontology of the mind. Second, I shall evaluate the distinction and some recent attempts to undermine it, from my own perspective. Without going into the details of the historical Ryle, I shall argue that the distinction is essentially correct and important.

Ryle attempts to locate the emergence of Cartesian dualism in Western intellectual history. He says that Galileo's general mechanical theory posed a dilemma for Descartes. Descartes accepted Galileo's theory because he was a scientist. But he was reluctant to do so because he was also a religious philosopher and Galileo's theory implied that man differs from the other entities in the world only in degree of complexity. Descartes thus established a basic division between mind and body. Bodies exist in space and time. They interact with each other according to the law of cause and effect. By contrast minds exist in time but not in space and they form a different substance. Cartesian dualism is a two-substance theory, in which minds and bodies are manifestations of different substances, and it gives rise to the basic problem of interaction: how to reconcile this view with the widely accepted commonsense picture of a continuous causal interaction between the two that appears to go in both directions. Furthermore, each person has direct knowledge of the operation of their own mind but there is no way for one mind to know directly the operation of another. It is not even possible for one mind to know whether other minds exist. Ryle labels this view 'the dogma of the Ghost in the Machine'. Each person's body is a machine, and their mind is a ghost that somehow resides in that machine. Still body and mind are represented in a common framework of substance and attribute. But to represent them in this way is to commit a basic mistake because "… 'there occur mental processes' does not mean the same *sort* of thing as 'there occur physical processes' …" (italics mine) (22). The mental and the physical are not of the same logical type but the Cartesian view treats them as if they were. The mistake committed by this view is then of a fundamental kind that Ryle famously called a category mistake.

Ryle introduces the distinction between knowing-how and knowing-that as a means towards the undermining of the basic picture that underlies Cartesian dualism. This goal, as well as the historical Ryle does not concern me here. Instead an effort will be made to align the philosophical distinction between knowing-how and knowing-that with the SLA theory distinction between implicit knowledge of language and explicit knowledge of language. A major debate in SLA research concerns the way in which the implicit and explicit forms of knowledge relate to each other in the process of second language acquisition. If an alignment can be established between the two distinctions then it follows that there is a philosophical antecedent for the SLA debate.

Ryle follows his harsh criticism of 'the Ghost in the Machine' with a criticism of what he calls an 'intellectualist legend', which, he claims, is at the core of the Western way of viewing 'mental conduct'. On this view the primary form of mental conduct is intellectual activity, which is mainly manifested as theorizing. All other forms of mental conduct derive their real value from their connection to theorizing. According to the legend an intelligent performance is a performance that follows what Ryle calls a 'regulative proposition'. This proposition states various criteria for performing the act in question. Once the agent has considered that proposition, the agent is able to act in accordance with the required

criteria, in which case the performance can be classified as intelligent. Thus the mind (the 'ghost') knows that the performance is to be regulated according to such and such a proposition and it is this knowledge that enables the agent to produce the required performance. The agent's ability to produce the performance intelligently is therefore assimilated into the agent's knowledge that such and such propositions hold. Now the ability to perform correctly, in purposeful mind-directed activities is referred to by using the expression *know how to …*, e.g., one knows how to play the piano, how to ride a bicycle, how to express oneself in English, and so on and so forth. On the other hand knowing the truths of certain propositions is expressed by *knowing that* …, e.g., one knows that the earth turns around the sun, that gold is heavier than lead, that the allies won the second world war, and so on. In his book Ryle introduces this distinction as a basic distinction between two types of knowledge, claiming that the 'intellectualist legend' assimilates knowing how to knowing that, and arguing for the impossibility of such an assimilation. The relevance of the distinction to SLA is obvious: what in the SLA literature discussed in the previous sections is called *implicit knowledge* is *knowing how*. This is the knowledge manifested by using the language 'automatically', or spontaneously, in a non-reflective way. On the other hand explicit knowledge is knowledge that is based on the agent's awareness of the grammatical rules. While my position is that teaching the grammar can lead to implicit knowledge, I accept the basic distinction between knowing-how and knowing-that. While this distinction is, I think, the distinction introduced by Ryle, the latter is part of an ambitious project in the philosophy of mind, which deals with the mind-body problem and does not belong to the subjects of this work, or to the debates with regard to the SLA framework. I have included some material concerning Ryle for the sake of completeness only. On the other hand some recent attempts to undermine the knowing-how/knowing-that distinction do have some relevance to the SLA framework and I shall discuss them later.

Ryle presents three arguments against the 'intellectualist' thesis that knowing-how is knowing-that. First, he argues that the thesis has an unacceptable consequence because it implies an infinite regress. Second, he points out the basic differences between the two types of knowledge and third, he proposes that the 'intelligence' of the performance is to be identified with the performance itself. For my purposes, I can ignore the first argument and I will focus on the other two.

The Critical Differences

Ryle's second argument aims to show that knowing-how cannot be knowing-that because the two phenomena are so basically different. He lists at least four differences. First it is altogether appropriate to ask, in cases of knowing that, what are the grounds of the agent's belief in the truth of the proposition in question. For example if someone believes that the Romans had a camp at a certain place, it is perfectly natural to ask them what the grounds are for this belief. But it makes no sense to ask of someone's skill at something what the grounds are for that skill. For example if someone is skilled at playing cards, it makes no sense to ask the person for the grounds of that skill. One's first take on this argument is that it seems to be rather obviously sound. But as is so often the case where there seems to be obvious soundness, one must be careful that the argument does not beg the question. If we take it that X is a belief in a proposition and that Y is a skill then of course they are different. However the position of those who claim that knowing-how is a species of knowing-that must be that although Y is regarded as a skill, upon close examination it becomes clear that it is not a skill. Rather it is in essence is

a type of action that is regulated by a proposition that specifies the criteria for actions of that type. So it is the proposition that is of critical importance and yet propositions fall under knowing-that, not under knowing-how. This argument for the position that knowing-how is a species of knowing that may be fine in the abstract but it may not be so fine when the attempt is made to apply it to particular cases. What if there is a children's show in which one child recites the capital cities of all the 50 U.S. states and another child does all kinds of fabulous tricks with a yoyo? Imagine the difficulty involved in introducing the audience to the two terms 'knowing-that' and 'knowing-how' and then trying to use an argumentative strategy like the one outlined above to convince them that both performances are instances of knowing-that.

Second, some of the actions that are performed as expressions of skill or ability are determined to be intelligent or unintelligent on the basis of criteria that remain unformulated. The example that Ryle offers is that of the wit. The wit "… knows how to make good jokes and how to detect bad ones, but he cannot tell us or himself any recipes for them (30)." Ryle's point might be criticized by saying that the wit's skill may not have explicitly formulated criteria but this does not mean it does not have implicitly formulated criteria. And there are many theories of humor in its various forms. I was a great admirer of Johnny Carson, the host of *The Tonight Show*. Watching Carson run the series of jokes in his monologue often tempted me to try to come up with some kind of formula of my own. A joke typically has a butt. Something negative is said about some person, group or institution. Thus there is something on the order of cruelty at the heart of humor. However in most cases the negative attribution is either mild or relates to some 'other' in relation to the one who makes the joke and their audience. Jokes almost always seem to involve a surprise that is effected by a departure from what is expected. And very often jokes employ some clever linguistic construction. A simple example illustrates all three of these elements. The comedian says something like

> Women deserve special consideration. Take my wife. No, really, take my wife.

This joke comes from the pre-feminist era of vaudeville but I use it because I know of no other joke that reflects the set of elements enumerated above so simply. The joke has a butt. It may seem that the butt is the comedian's wife but I think that it is the comedian himself. Thus the joke is self-deprecating. There is a surprise resulting from the violation of expectation because husbands are supposed to be protective of their wives and thus the last thing they could abide is giving her away to a stranger. And linguistically there is the double entendre of 'Take my wife.' Of course it means 'consider my wife as an example' in the audience's first understanding but it means 'take possession of my wife' in their developed understanding. But now try to imagine someone becoming a wit as a result of studying the formula that these three elements constitute. So Ryle's point is I think well taken. What kind of proposition or set of interrelated propositions can we see someone as appealing to in any way in the process of doing something as complex as making a joke? And there is the wisdom of the author E.B. White, who said, "Humor can be dissected as a frog can, but the thing dies in the process and the innards are discouraging to any but the pure scientific mind."

The third difference is that while having a skill is obviously a matter of degree, knowledge-that is not. The fourth difference, which is related to the third, is that knowledge how is usually acquired gradually, but not so knowledge that. While these differences are rather suggestive, they are far from decisive; adherers of the 'intellectualist' thesis can find ways around them.

Identification vs. Causation

What I will treat here as Ryle's third counterargument is actually a set of three closely related arguments. All of them are quite subtle but I think that they are more convincing than the arguments above, since they point to more basic differences between knowing-how and knowing-that. In the first of the three arguments, Ryle tries to establish an identity between the intelligence of a typically outwardly performed action and the *manner* in which that action is performed. . On the alternative view the intelligence of an action is due to an internal process of the mind that precedes the action temporally. That is, the action is intelligent because it has been directed by an internal process of the mind. Of course this alternative view is the one promoted by Cartesian dualism according to Ryle. Thus Ryle's argument not only works to clarify the nature of knowing-how but also serves his larger philosophical purpose of refuting Cartesian dualism. Ryle accepts the commonly held view that an agent performs intelligently if they are thinking of what they are doing as they are doing it. With this in mind he says:

> 'thinking what I am doing' does not connote 'both thinking what to do and doing it'. When I do something intelligently, i.e., thinking what I am doing, I am doing one thing and not two. My performance has a special procedure or manner, not special antecedents. (32)

In a given case, the special antecedent is an internal process of the mind as discussed above. And we saw there that Ryle rejects the view that the intelligence of an action is due to any such process. But it is important to note that Ryle does not replace a special antecedent with a special procedure or manner as the factor that is responsible for the intelligence of an action. Let us put aside for the moment the term 'procedure' and focus on the more apt term 'manner'. An action is something on the order of an 'individual' while the manner of that action is something more on the order of a 'quality'. But the manner of an action is not something that is separate from that action. Thus it is not in a position to be responsible for the intelligence of that action. Rather the manner of the action is to be *identified* with its intelligence. This is what Ryle argues. It is not perfectly clear however that a manner's being a part of an action precludes its being responsible for the intelligence of that action.

In a different passage Ryle makes his point by referring to efficiency rather than intelligence, yet these two qualities are on par in the general case that he makes. And what is important here is that he makes the identification of manner with efficiency more explicit than he made the identification of manner with intelligence. The passage gives us a hypothetical example in which the subject is an 'intelligent reasoner' who knows the rules of Aristotle's logic.

> He does not cite Aristotle's formulae to himself or to the court. He applies in his practice what Aristotle abstracted in his theory of such practices. He reasons with a correct method, but

without considering the prescriptions of a methodology. The rules that he observes have become his way of thinking, when he is taking care; they are not external rubrics with which he has to square his thoughts. In a word he conducts his operations efficiently, and to operate efficiently is not to perform two operations. It is to perform one operation in a certain manner or with a certain style or procedure … (48)

This passage is quite similar to the one above, but it adds to and reinforces the point. Further reinforcing is provided by the following example that involves four distinct professions.

The boxer, the surgeon, the poet and the salesman apply their special criteria in the performance of their special tasks, for they are trying to get things right; and they are appraised as clever, skillful, inspired or shrewd not for the ways in which they consider, if they consider at all, prescriptions for conducting their special performances, but for the ways in which they conduct those performances themselves. (48)

Note that the term 'way' appears in the slot that is occupied by 'manner', 'procedure' and 'style' in the two passages above.

We will be able to dispense quickly with the second of the three arguments having to do with identification. This argument differs from the one above in terms of the elements that it identifies. It does not identify the intelligence of a performance with the manner of that performance but rather the typically outward intelligent performance of an agent with the workings of that agent's mind. Note that the criteria that we apply in judging someone's performance are, according to Ryle, external. Even when a great deal of a person's thoughts remains hidden, it can, in principle, be revealed as any other external fact:

Overt intelligent performances are not clues to the workings of minds; they are those workings. Boswell described Johnson's mind when he described how he wrote, talked, ate, fidgeted and fumed. His description was of course incomplete, since there were notoriously some thoughts which Johnson kept carefully to himself and there must have been many dreams, daydreams and silent babblings which only Johnson could have recorded and only a James Joyce would wish him to have recorded. (58,9)

In making sense of what you say, in appreciating your jokes, in unmasking your chess-stratagems, in following your arguments and in hearing you pick holes in my arguments, I am not inferring to the workings of your mind, I am following them. (61)

While, the knowing-how/knowing-that distinction is largely accepted – except for some recent challenges to it, to be discussed in the sequel – Ryle's metaphysical position on the mind-body problem is no longer at the focus of current attempts to address the problem. Here the focus of attention has shifted to physicalism, supervenience and brain studies, which are beyond the scope of this work and the current SLA framework.

More pertinent to the subject matter of this work is the following remarkable passage from Ryle's book:

> Consider first a boy learning to play chess. Clearly before he has yet heard of the rules of the game he might by accident make a move with the knight which the rules permit. The fact that he makes a permitted move does not entail that he knows the rule which permits it. Nor need the spectator be able to discover in the way the boy makes this move any visible feature which shows whether the move is a random one, or one made in knowledge of the rules. However, the boy now begins to learn the game properly, and this generally involves his receiving explicit instruction in the rules. He probably gets them by heart and is then ready to cite them on demand. During his first few games he probably has to go over the rules aloud or in his head, and ask now and then how they should be applied to this or that particular situation. But very soon he comes to observe the rules without thinking of them. He makes the permitted moves and avoids the forbidden ones; he notices and protests when his opponent breaks the rules. But he no longer cites to himself or the room the formulae in which the bans and permissions are declared. It has become second nature to him to do what is allowed and to avoid what is forbidden. At this stage he might even have lost his former ability to cite the rules. If asked to instruct another beginner, he might have forgotten how to state the rules and would show the beginner how to play only by himself making the correct moves and cancelling the beginner's false moves. (40,1)

Note how nicely this example fits with our common sense. My own view is that one will almost certainly think that Ryle is right when you see the example juxtaposed with what his critics have to say against what the example suggests. In any case what Ryle gives us here is a nice picture of how we develop a skill. And this development is clearly a matter of knowing-how, not one of knowing-that. Two points are noteworthy here. It is not necessary that we receive instruction in order for us to acquire a skill. Close observation is a substitute for instruction. It is tempting to say that we can learn how to do something either deductively by instruction or inductively by observation. If the boy learning chess is taught a rule then he must figure out how to move the piece that the rule governs. But by watching how a piece in moved, he can figure out the rule that governs it. Of course whether we learn by instruction or observation or some combination of the two we must practice in order to become good at whatever it is that we are learning. All of this supports the view endorsed by common sense. The second point concerns the importance of instruction. In another passage Ryle says that "… the learning of all but the most unsophisticated knacks requires some intellectual capacity. The ability to do things in accordance with instructions necessitates understanding those instructions. So some propositional competence is a condition for acquiring any of these competences. … I could not have learned to swim the breast stroke, if I had not been able to understand the lessons given me in that stroke … (49)."

Ryle's characterization of habits and skills is brief and fairly simple. Habits and skills are dispositions. And to ascribe a dispositional property to a thing or an agent is like subsuming it under a law. "To possess a dispositional property is not to be in a particular state, or to undergo a particular change; it is to be bound or liable to be in a particular state, or to undergo a particular change, when a particular condition is realised (43)." Given this common root in dispositions, habits and skills nonetheless differ in

terms of (1) the means by which they are inculcated, (2) the manner in which they are exercised and (3) the forms of behavior that their exercise produces.

 (1) Habits are inculcated by drill. Ryle does not develop this point very much but the soldier learns to present arms by learning what amounts to a template for the action and then performing the action repeatedly with the intention of matching the template exactly every time. In the purest case criticism by the drill sergeant consists only in citing variation from the template. Skills however are inculcated by training. The soldier learns to shoot by receiving instruction in shooting and by practicing shooting but the training involves the attempt to stimulate the soldier's judgment by means of example and criticism. Marksmanship is a complex skill and the exchange between the shooting instructor and the soldier is correspondingly complex. It involves not only direction but also the reasoning required to apply the relevant generalizations to a particular set of circumstances. (2) The exercise of a habit is automatic. The agent does not have to think about what they are doing when they are behaving according to habit. The exercise of a skill, by contrast, requires care and vigilance on the part of the agent. They must think about what they are doing as they are doing it so that they can do it well. The hallmark of a skill is that every exercise of it provides a lesson which should be learned in order to improve future performance. (3) A habit is based on a single-tract disposition and its actualizations are as uniform as is possible. But a skill is based on a higher-grade disposition and its actualizations form a potentially infinite variety. To return to the soldier, all of their presentations of arms should be the same, but their shooting performances will differ considerably given the variables of target, distance, terrain, wind and so on.

    With this we conclude our discussion of Ryle's analysis of the distinction between knowing-how and knowing-that and turn our attention to a consideration of the relationship between this distinction and the SLA distinction between implicit knowledge and explicit knowledge as a means of casting more light on the interface issue.

The Implications of Ryle's Work for SLA Theory

   In the SLA sections above we discussed implicit knowledge of language and explicit knowledge of language, and in the Ryle section just completed we discussed knowing-how and knowing-that. The original intention for this part of the essay was to compare the respective terms of these two distinctions in order to determine to what extent the distinctions themselves align with each other. That is to say the original intention was to compare

    - implicit knowledge of language (or more generally implicit knowledge *per se*) with knowing-how

     and

    - explicit knowledge of language (or more generally explicit knowledge *per se*) with knowing-that

in order to determine to what extent the two distinctions that the four terms form align with each other. I think that the overall discussion up to this point makes it rather clear that the two distinctions do align rather closely. Thus a better strategy might be to take advantage of what we have learned in

order to produce a single account that works for both distinctions. Let us consider the following six points:

(1) implicit knowledge and knowing-how help us with routine tasks whereas explicit knowledge and knowing-that help us with special tasks

(2) implicit knowledge and knowing-how fuel automatic processing whereas explicit knowledge and knowing-that fuel deliberative processing

(3) implicit knowledge and knowing-how are totally or mainly unconscious whereas explicit knowledge and knowing-that are totally or mainly conscious

(4) implicit knowledge and knowing-how are *inculcated* whereas explicit knowledge and knowing-that are *imparted*

(5) implicit knowledge and knowing-how aim at efficiency, value low resource use, and have as their objective to get the job done whereas explicit knowledge and knowing-that aim at accuracy, accept high resource use, and have as their objective to get the job done right

(6) implicit knowledge and knowing-how promote sameness and seek to achieve stability whereas explicit knowledge and knowing-that promote difference and seek to achieve innovation.

Full characterizations of the two distinctions could vary considerably in terms of the number of points involved, the nature of the points involved and the ways in which the points are expressed. So what is offered here is not claimed to be complete, non-redundant or final in any way. However I do believe that we can see in it faithfulness to the views of the authors studied above along with some projection from those views in the interest of developing the fullest and deepest possible understanding of the nature of the target phenomena.

Before going on it is important for us to point out that even though the explicit knowledge vs. implicit knowledge distinction and the knowing-that vs. knowing-how distinction align in the manner established above, under no circumstances are the respective terms of these distinctions to be identified, and in particular implicit knowledge and knowing-how should not be identified. And when we try to figure out what the relationship between the two actually is, we encounter considerable complexity. Let us try to get a foothold here by considering three cases in turn:

1. A meeting is to be held in New York and someone there says, 'John won't be able to come to the meeting. He's in Madrid.' Here the proposition that a person can't be in two places at one time is implicit in that it is not laid out explicitly. What we have is something like the suppressed premise of an argument that we learn about in a logic class. But clearly our implicit knowledge of the proposition is not an instance of knowing-how.

2. Someone hears a noise. They know that something caused the noise but this knowledge is internal and deeply entrenched. Here the proposition that if there is a noise, something caused it is also implicit because it is not laid out explicitly. In physics we have explicitly stated laws that could be applied to the case in order to provide an explanation but this is not to the point. The person who hears the noise may not know physics, and even the physicist would not think about theory if they were the one who heard the noise. But clearly again our knowledge of the proposition is not an instance of knowing-how.

3. Someone is riding a bicycle. Something which is not laid out explicitly undergirds this action, a set of dispositions and a set of sensory-motor connections perhaps. But no proposition or a set of propositions is involved. Riding a bicycle *is* an instance of knowing-how.

We might tend to run the three cases together because they are similar in two important ways. First as we have seen, in none of the cases is anything laid our explicitly. And second all of the cases are cases of reliance. We rely on the proposition in the first case to get our communication business done. We rely on the proposition in the second case to know what to do. And rely on the dispositions and the sensory-motor connections in the third case to be able to ride the bicycle. But the critical difference has already been seen. In the first and second cases there is a proposition that could be made explicit, although with much greater difficulty in the second case, whereas there is no proposition or set of same in the third case.

It is very interesting to consider the case of language here. A bit later we will appeal to Chomsky's distinction between competence and performance in the discussion of Ryle's critics. Here we might use the distinction in the following way. Language represents a kind of split case. Our competence with respect to language is our knowledge of the language and it seems natural to think that this consists in a set of propositions that could be made explicit. Indeed it is the business of theoretical linguists to do just this. But our performance with respect to language is a completely different affair. Hearing and speaking and reading and writing can perhaps be seen as like riding a bicycle in that what undergirds them is a set of dispositions and a set of sensory motor connections. And note that putting the matter in this way raises the very interesting question of how the competence and the performance are related.

One of the major goals of this work has now been achieved. In establishing the alignment between the SLA distinction between implicit knowledge and explicit knowledge and Ryle's distinction between knowing-how and knowing-that, it has been shown that the SLA distinction has an antecedent in the philosophy of language. And since the interface issue is based on the SLA distinction, by extension it too has an antecedent in the philosophy of language. This means of course that Ryle's analysis is a resource for SLA theorists and researchers who use the implicit knowledge - explicit knowledge distinction in their work. Ryle's use of dispositions in the explanation of knowing-how may be what is most helpful. And there is already an easy connection to be made between DeKeyser's condition-action pairings and Ryle's '[being] bound or liable to be in a particular state, or to undergo a particular change, when a particular condition is realized'. For the future Ryle's identification of the intelligence of a performance with the manner of that performance may prove useful when brain research has reached an advanced state and we have to figure out the relationship between the brain structure and activity that we will then know

well and the qualities of the performance and behavior generally that we observe in others and in ourselves. Ryle's model may or may not fit the factor set that will have evolved but I think that his implied thesis that identification rather than causation has to be the lead concept in the construction of explanations of the relationship between mind/brain and experience could prove to be true.

DeKeyser, Krashen and Ellis hold the positions they do on the interface issue as a consequence of the way in which they see the relationship between implicit knowledge and explicit knowledge in second language acquisition. And second language acquisition is a form of learning. But Ryle has the equivalent distinction between knowing-how and knowing-that. And the main part of the case he makes has to do with the way in which the two forms of knowing figure in learning. So perhaps it can be said that Ryle's work implies a position on the interface issue. But if his work does imply a position on the interface issue then the question is of course, which position does it imply? Consider again the story of the boy learning to play chess as presented in the long quote above. And look now again at what Ryle had to say more pointedly about instructions and lessons as they relate to skill acquisition:

> The ability to do things in accordance with instructions necessitates understanding those instructions. So some propositional competence is a condition of acquiring any of these competencies. … I could not have learned to swim the breast stroke, if I had not been able to understand the lesson given me in that stroke; (49)

It seems most likely then that if Ryle had somehow been presented with a choice among the three positions, he would have taken the strong one. The no position might not have made sense to him, and the weak position would probably have seemed too weak. So perhaps Ryle's work offers support for the strong position. If so then it is distinguished support because it comes from philosophy. But I do not think that the resources in Ryle can reinforce the strong position enough for it to overcome the research findings and argumentation that have effectively driven it from the field of competition with the result that the only the no position and the weak position are now recognized as viable.

Knowing-how/Knowing-that and Chomsky's Competence/Performance Distinction

The most important challenge to Ryle's account of knowing-how vs. knowing-that which I am aware of is Stanley and Williamson (2001). These authors attempt to show that both Ryle's argument that the intellectualistic legend implies an infinite regress and his positive account of knowing-how in terms of dispositions are to be rejected. And they go on to offer a positive account of knowing-how of their own, which claims that knowing-how is a species of knowing-that. Ryle's infinite regress argument is an issue that concerns the historical Ryle, which can be bypassed – as far as this work is concerned. When it comes to Ryle's positive account of the distinction, S&W take Ryle to be wrong in a fairly obvious way. They think that considerations pertaining to some simple cases are sufficient to dismiss his positive account of knowing-how:

> According to Ryle, an ascription of the form 'x knows how to F' merely ascribes to x the ability to F. It is simply false, however, that ascriptions of knowledge ascribe abilities. … For example, a ski instructor may know how to perform a certain complex stunt, without being able to perform it

herself. Similarly, a master pianist who loses both of her arms in a tragic car accident still knows how to play the piano. But she has lost the ability to do so. It follows that Ryle's own positive account of knowledge-how is demonstrably false. (416)

Thus we might say that S&W accuse Ryle of identifying knowing-how with the ability to perform while they sharply separate the two. But there is considerable terminological and conceptual ambiguity in this. Ryle classifies 'knowing how' among dispositional properties, and it is unfair to construe him as identifying knowing-how with abilities *simpliciter*. A pianist whose hands are handcuffed behind her back is unable to perform. But surely Ryle does not imply that she has lost her *ability* to perform, let alone her *knowledge how to* perform. 'Ability' is an ambiguous term, which by itself implies a dispositional property. We might say that the handcuffed pianist is unable to perform without, however, losing her ability. So it all depends where the line that determines loss of ability is drawn. Ten years ago a person who lost both his legs lost the ability to run, but nowadays we have amputees, who, using prosthetic legs, compete along with other runners in the Olympics. Possibly, the retention of 'ability' can be traced to the preservation of certain neural organizations in the brain–and this is a resource that Ryle's externalistic approach cannot appeal to. This case is different from the case of the ski master, which requires a different analysis and into which I shall not go. But it should be obvious that the S&W conclusion that Ryle's account "is demonstrably false" is based on a gross simplification.

We can perhaps achieve better clarity by invoking a distinction proposed by Chomsky in (1965), between competence and performance:

> We thus make a fundamental distinction between *competence* (the speaker-hearer's knowledge of his language) and *performance* (the actual use of language in concrete situations). (4)

Furthermore, competence has to do with *internalizing* the grammar:

> Obviously, every speaker of a language has mastered and internalized a generative grammar that expresses his knowledge of his language. (8)

Chomsky combines here two ideas, the idea of a generative grammar and the idea of having this grammar internalized. Concerning the grammar, we have the well-known conception of grammar as a mechanism that enables the expression and the understanding of an indefinite number of thoughts: age

> Within traditional linguistic theory … it was clearly understood that one of the qualities that all languages have in common is their "creative" aspect. Thus an essential property of language is that it provides the means for expressing indefinitely many thoughts and for reacting appropriately in an indefinite range of new situations … The grammar of a particular language, then, is to be supplemented by a universal grammar that accommodates the creative aspect of language use and expresses the deep-seated regularities which, being universal, are omitted from the grammar itself. (6)

Chomsky appeals to the work of Wilhelm von Humboldt, and in particular, to the notion of generating an infinite number of sentences according to a finite set of rules. The Chomskian term 'generate' matches the term 'erzeugen' used frequently by Humboldt, and he quotes Humboldt's expression 'make infinite use of finite means'. Mastery of the grammar is thus having the ability to use this system of rules. All of this is a well-known story, which has been developed by Chomsky and his followers in the last fifty years into the huge project of generative grammars, with all its ramifications. The performance/competence distinction does not depend however on the particular grammar one adopts, but on the difference between correct use of the grammar which is manifested in concrete situations and the state in which this grammar has been internalized by the speaker. In Chomsky's system the two are brought together, since considerations of possible implementation of the grammar in brain modules are relevant to the choice of grammar. We might say that everything that has been considered here thus far is 'formal' in nature but we get some idea of what the 'substance' of the speaker's competence is when Chomsky says:

> … in the technical sense, linguistic theory is mentalistic, since it is concerned with discovering a mental reality underlying actual behavior. Observed use of language or hypothesized dispositions to respond, habits, and so on, may provide evidence as to the nature of this mental reality, but surely cannot constitute the actual subject matter of linguistics, if this is to be a serious discipline.(4)

So competence is mental, and it does not consist in dispositions, habits or the like – although in normal situations it will be manifested by the non-reflective free use of language There is no effort to say specifically what competence as a mental entity does consist in, but Chomsky can, and in later works does point to physical-neural organization, brain modules and other items that are subject to brain studies. It should be noted that Chomsky's appeal to mental content amounts to an internalist position that contradicts the externalist behaviorial-oriented position of Ryle. Indeed Chomsky is openly sympathetic to certain aspects of Cartesianism, which he embraces, without embracing the metaphysical two-substance theory, and without being committed to a particular position on the mind-body problem (in 1986 he published a book entitled *Cartesian Linguistics*).

In an idealized situation, performance would be a 'direct reflection' of competence. But under the actual conditions of the use of natural language, 'memory limitations, distractions, shifts of attention and interest, and errors (random or characteristic)' have an effect. Chomsky refers to performance models. These models might be developed through the use of deviant sentences. And the deviant sentences would be rated in terms of the extent to which they are 'acceptable'. The term 'acceptable' is distinct from the term 'grammatical'. All of the example sentences Chomsky discusses are grammatical but they vary in acceptability due to several factors, including:

nested constructions

self-embedded constructions

multiple-branching constructions

left-branching constructions

right-branching constructions.

Two of the example sentences discussed are:

I called the man who wrote the book that you told me about up.

The man who the boy who the students recognized pointed out is a friend of mine.

Let us see how the grammatical/acceptable distinction works out in the cases of these two sentences. We will want to show both why they are grammatical and why they have a low level of acceptability. Let us take the two sentences in turn. The first thing to see about (1) is that it has undergone particle movement. The particle 'up' has moved from its verb phrase position to the position after of the object of the verb phrase, which is 'the man who wrote the book that you told me about'. But if we move the particle back, we get

I called up the man who wrote the book that you told me about.

which we can see to be grammatical by means of the following labeled bracketing:

[I $_{SP}$] [called up $_{VP}$] [the man who wrote the book that you told me about $_{OP}$].

where SP = subject phrase, VP = verb phrase and OP = object phrase. So the sentence has SVO form, its subject phrase is the pronoun 'I', its verb phrase is the phrasal verb 'called up' and its object phrase is a noun phrase based on the noun 'man', which is modified by the article 'the' and the relative clause 'who wrote the book that you told me about'. The sentence is perfectly grammatical. But it has a low level of acceptability for two reasons. First the object phrase that the particle moves to the position after, 'the man who wrote the book that you told me about', is long and complex. Compare the sentence

The mother picked her daughter up.

It has undergone the same particle movement but the object term involved, 'her daughter', is short and simple. And second, the relative clause of (1) exhibits nesting. The simplest way to see this is to imagine the relative clause as having been formed in two stages. First we had

who wrote the book

and then the relative clause

that you told me about

came along to attach to the noun 'book' of the first stage relative clause to produce

who wrote the book that you told me about

These two factors create the acceptability problem.

Now sentence (2) can be shown to be grammatical as it stands by labeled bracketing as follows:

[The man who the boy who the students recognized pointed out $_{SP}$] [is $_{VP}$] [a friend of mine $_{OP}$].

The sentence's subject phrase is the noun phrase 'the man who the boy who the students recognized pointed out', which is based on the noun 'man' which is modified by the article 'the' and the relative clause 'who the boy who the students recognized pointed out' (which is itself grammatical despite appearances to the contrary as we will see), its verb phrase is the identity copula 'is' and its object phrase is the noun phrase 'a friend of mine, which is based on the noun 'friend' which is modified by the article 'a' and the prepositional phrase 'of mine'. This sentence too is perfectly grammatical. But it has a *very* low level of acceptability because of the nesting that its relative clause exhibits. The simplest way to see this is again to imagine the relative clause as having been formed in two stages. First we had

who the boy pointed out

and then the relative clause

who the students recognized

came along to attach to the noun 'boy' of the first stage relative clause to produce

who the boy who the students recognized pointed out

Now the thing to see here is that, whereas the second relative clause in (1) came along and attached to 'book', which is *at the end of* the first relative clause, the second relative clause here comes along to attach to 'boy', which is *inside of* the first relative clause. This makes for a tremendous processing difference. In the case of (1) the reader gets to process the *whole* of the first relative clause before they have to take on the second relative clause but in the case of (2), the reader has, in effect, to try to process the second relative clause after having processed only a *part* of the first relative clause. I have read (2) innumerable times and I still have to struggle with it.

In any case the idea of using sentences of low levels of acceptability seems to be that correlations might be established between constructions of various types and factors of performance like (1) the amount of memory required and (2) the amount of computation required in the processing of a sentence.

With this background we are now in a position to apply Chomsky's competence-performance distinction to the cases presented by S&W. However it is very important to take into account the fact that Chomsky's distinction is intended to apply only to the skill of using natural language whereas the cases presented by S&W in their criticism of Ryle cover a very broad range of skills. Given this there is one major difference between the case of language and the cases of skiing and piano playing on Chomsky's view. This difference has to do with the acquisition of the relevant skill. Chomsky claims that we have an innate faculty of language which houses the universal principles of language. This greatly reduces the problem the child faces in learning their native language. The child has only to use the data of the language they are exposed to in order to determine the specific parameters of that language. But

clearly no one thinks that we have such a faculty for all other skills. And there is a sense in which it may be inappropriate to use the one term 'skill' to cover using language, skiing and playing the piano. Every human being whose development is not impaired in some way uses language 'perfectly' but not everyone can be an expert skier or a master pianist. Still everyone *has to* use language 'skillfully' and if everyone also had to ski or play the piano 'skillfully' then probably people in general would do so. I don't think that anyone can claim to have perfect clarity in these matters yet.

Further let us note that there is at least a possible basic difference between the two cases that S&W present. I don't know whether they intended it or not. To see the difference we have to compare not the ski instructor and the injured pianist but an able master skier and an able master pianist. If the pianist is a classical pianist then her skill and that of the skier are rather different. Despite the great difficulty involved in producing the composition at the concert, the pianist does not have to make any real decisions as she is playing unless something goes wrong. And her objective is that what she will produce will be more or less the same as what she produced in her last successful performance of the same composition. But things are quite different for the skier. She must make any number of decisions as she descends the slope. These decisions are forced by the particulars of the configuration of the snow she encounters. She no doubt has a strategy for negotiating the slope as efficiently as possible but she knows that even if she skies very well, there is a wide range of possible outcomes for her overall performance.

The case of language use seems to be more like the case of the skier than the case of the pianist. What Chomsky calls the creative aspect of language requires the language user to make many decisions as they negotiate the discourse they are engaged in. An idea occurs to them and instantly they have to produce a sentence that expresses it. Or someone else produces a sentence and they have to react to it instantly in some way. They react by producing a sentence of their own, or a gesture or just a look. Thus it would seem that we must attribute to the skier something like the generative capacity that Chomsky attributes to the language user. It is not so clear that we need the same kind of mechanism to account for the performance of the pianist.

Given all of this, I think that we can apply Chomsky's competence-performance distinction to the cases that S&W present quite efficiently. At base, knowing-how is competence. Thus it is true to say that the injured pianist knows how to play the piano. She has lost her arms but she retains the sensory-motor couplings developed by years of diligent practice. She also retains the knowledge of music and the ideas about music developed by years of diligent study, along with the feelings for music spawned by the practice, the study and of course the experience of actually playing. The consideration here supports S&W's claim that knowing-how is competence.

But while knowing-how is at base competence, it is also performance. Consider the case in which the master pianist is injured on her way to a concert of very great importance in which she will accompany the orchestra in one of its performances. The show must go on, but there is no 'understudy'. The directors of the concert rack their brains trying to come up with a solution to the problem but they are simply stumped – until one of them realizes that he saw Jones in the audience earlier and she is an accomplished pianist who knows the composition to be performed very well. The director exclaims,

'Jones knows how to play the composition, and she's in the audience!', to the relief and the delight of his co-directors. It is clear here that the director's report includes a reference to Jones's ability to perform. The consideration here supports Ryle's claim that knowing-how is both performance and competence.

Thus neither Ryle nor S&W get things exactly right. Both are perhaps guilty of confusion in their understandings of the terms 'knowing-how' and 'the ability to perform'. But when we realize that both competence and performance are factors in knowing-how then we can see that S&W are right in claiming that the ski instructor knows how to ski and that the injured pianist knows how to play the piano because both have competence, but Ryle is also right in claiming that the boy knows how to play chess both because he has the competence and because he has the ability to perform.

I think that what Chomsky's competence-performance distinction allows us to see when it is applied to the Ryle vs. S&W debate is that sentences like

> X knows how to play the piano.

and

> X knows how to ride a bicycle.

are two way ambiguous. Thus they have two senses. On one sense they mean simply that X has competence. The question of whether X also has the ability to perform is left open. On the other sense they mean that X has competence and the ability to perform. Note that it is in this latter sense that such sentences are used in the vast majority of cases.

Perhaps it might be useful to formalize this a bit and distinguish 'knowing-how$_C$' from 'knowing-how$_{C\&A}$'. The former is knowing-how as it is related to competence. The latter is knowing-how as it is related to both competence and actual ability, as manifested in concrete cases. However since there can be no actual ability to perform without competence, 'knowing-how$_{C\&A}$' might be better rendered simply as 'knowing-how$_A$'. Given this, we can say that

> The ski instructor knows how$_C$ to perform the complex stunt.

> The pianist knows how$_C$ to play the piano.

are both true but that

> The ski instructor knows how$_A$ to perform the complex stunt.

> The pianist knows how$_A$ to play the piano.

are both false. So Ryle's positive account of knowing-how has to be relabeled as a positive account of knowing-how$_A$, and that account needs to be expanded to include consideration of knowing-how$_C$.

§ 6 <u>A Possible Resolution of the Dilemma Concerning the Strong Interface Position</u>

Recall that by the 'dilemma' I mean the conflict between (1) the traditional idea that instruction and practice constitute the main way of acquiring a second language, and (2) the emergence of a consensus in the SLA community that only the no position and the weak position on the interface issue are viable, a consensus which seems to give to explicit instruction a minimal role, at most (thus Ellis accords to instruction merely a facilitating role). In this section I shall outline a thesis, which derives from ideas proposed by Hulstijn (2002), which gives to explicit instruction a more significant role than what is implied by the no and the weak positions. Hulstijn proposes two kinds of systems that can underlie, or embody linguistic knowledge: *symbolist* and *connectionist*. Symbolist systems represent knowledge of language in terms of symbols and rules or other operations that specify possible relationships among symbols. Connectionist systems embody knowledge of language by means of neural networks with 'hidden units', which can contain symbols or parts of symbols (in the second case they are referred to as 'sub-symbolic').The analogues of the rules and operations of symbolist systems are *patterns of activation* in the neural network. Symbolist systems treat the representation and the processing of knowledge separately, but in connectionist systems usually there is no such principled distinction.

Each of the two types has its advantages and disadvantages. Symbolist systems are good at simulating abstraction and also productivity (i.e., the ability to generate an infinite number of structures using a finite number of rules) because their rule sets can lead to recursive processing and thus can represent an infinite number of structures. However symbolist systems are also rigid because exceptions to rules create the need for more rules. Connectionist systems are good at handling irregular and even conflicting input because the degradation of performance caused by the irregularity or the conflict occurs gradually – the system experiences 'graceful degradation'. However, connectionist systems are relatively inefficient when it comes to symbol manipulation. Linguistic phenomena occur across a broad range from 'high' to 'low'. There is general recognition of phonetics, phonology, morphology, lexis, syntax, semantics, pragmatics and discourse as separate domains in a hierarchy of complexity. For the most part connectionist systems are better at handling lower level phenomena whereas symbolist systems are better at handling higher level phenomena.

Despite all of these differences, Hulstijn subscribes to the claim made in Carpenter (1999) that "… the two architectures [symbolist and connectionist systems] are completely compatible abstractions, which suggest that a wise scientific strategy is to figure out their interrelation, rather than to choose between them (258)". And indeed there are hybrid systems. Hulstijn himself favors a hybrid system of modular design. The modules exist in a network and some of them are sub-symbolic while others are symbolic. Linguistic knowledge can be represented via sub-symbolic modules in network activation patterns or via symbolic modules in sets of lexical items or rules. It all depends on the specific type of linguistic knowledge involved.

Although our main concern here is with second language acquisition, it is worth noting that Hulstijn also contrasts the symbolist and the connectionist approaches with respect to first language acquisition. He says that some symbolists believe that we are born with a language specific faculty which encodes certain abstract principles of grammar whereas most connectionists believe that we are born with a

general capacity to detect similarities in the acoustic and visual stimuli that we receive and to store these stimuli accordingly. In this latter case induction (that is, generalization from observed patterns to general regularities) provides the required principles of language. However the connectionists who espouse this view do not rule out the possibility that a language specific faculty develops at some early period.

Quite naturally, explicit knowledge of language is associated with the lexicons and rule sets of symbolist systems, and implicit knowledge of language with the networks and activation patterns of connectionist systems. In explicit learning we consciously engage lexical entries and rules of grammar in order to develop proficiency in assembling the words and short word-sequences, which serve as the lexical entries according to the patterns set by the rules, so as to form sentences that express our intended meaning. But in implicit learning, processes that start at the sub-symbolic level lead by induction to the development of the same kind of proficiency in the expression of meaning. This takes place in a network whose operation escapes conscious awareness.

Three critical ideas in Hulstijn's text have the potential for resolving our dilemma. Each one of them is expressed in a fairly brief passage. The selection and enumeration of these passages are my own.

(a) Implicit learning is an autonomous process, taking place whenever information is processed receptively (through hearing and seeing), be it intentionally and deliberately or unintentionally and incidentally. Implicit learning is not under conscious control. That is, once we have decided to listen, read, speak or write, we cannot choose not to encode and store information, or not to adjust the connection weights in our network. Implicit learning is unstoppable in the sense that it is not under conscious control and that its processing components cannot be verbalized. (206)

 (b) Anderson's model [his ACT model of skill acquisition discussed in connection with DeKeyser above] requires the processing of the required information over a great number of trials, during training. Thus, it may be the repeated processing of primary linguistic information that establishes implicit knowledge. The most likely conceptualization of the proceduralizing that takes place is the construction of a separate network of an implicit nature. (207)

 (c) Since implicit learning takes place as an unstoppable information processing mechanism, it will automatically accompany explicit learning activities whenever L2 learners engage in practicing the pronunciation of a particular sound, or producing a grammatical structure. (207)

Now what we want to do is pull together the points made in these three passages in order to form a single statement, or an argument, that represents what Hulstijn implies and which may help us here. According to the first passage, whenever we process language, either by inputting it through listening or reading, or by outputting it through speaking or writing, we automatically learn in an unconscious way, and what we learn takes the form of implicit knowledge. According to the second passage, whenever we attempt to develop a skill, we perform a great number of trials: in other words we practice. And if the skill we are trying to develop is the skill of using the language then the trials we perform are acts of language processing, i.e. listening and reading, and speaking and writing. But according to the first passage the processing of language results in unconscious learning that takes the

form of implicit knowledge of language. Further, in the case in which we are processing language by the performance of trials, or drills or exercises, the implicit knowledge we develop is procedural: it is knowledge of how to do something, and the physiological mechanism responsible for this is the construction of a new neural network. The last passage works here as a conclusion, so we do get an argument. According to this passage, whenever we practice using a language we develop implicit knowledge of that language of the procedural kind, that is to say we develop the skill of using the language.

For obvious reasons one tends to identify the claim about the centrality of traditional instruction, made in (1) above, with the strong interface position such that the two rise and fall together. But Hulstijn's argument makes room for a more refined view of the issue. At the heart of the matter is the question that defines the interface issue. This is the question

> Does the explicit knowledge of language that is produced by explicit instruction in vocabulary and grammar and the like convert into the implicit knowledge of language that all parties agree is the basis for the use of a second language with any level of proficiency?

Those who answer 'yes' take the strong position, those who answer 'no' take the no position, and those who answer 'no' but with positive qualifications about the facilitating value of explicit instruction take the weak position.

But the notion of 'conversion' is rather vague and it covers more than one possibility. Hulstijn's idea about neural networks that incorporate symbolic and sub-symbolic subunits suggests that explicit teaching of grammar and the lexicon, *when it is accompanied by repetitive drills*, may result in a hybrid kind of network that operates at a subconscious level, but in which the explicit teaching has left its traces. This will be a different network than the one produced by mere repetition of comprehensible input, when the subject is immersed in a linguistic community that speaks the second language, without an explicit teaching process. We have seen in § 3 that Krashen considers a similar possibility of 'alternative routes', which he calls 'a weak interface position'. Against this hypothesis he invokes Occam's razor: If we agree that sufficient comprehensible input can by itself lead to implicit use of the new language, there is no need for an alternative route. But this use of Occam's razor is inappropriate, given all that we know already about the plasticity of the brain and the possibilities of using different modules to achieve the same goal. Also the 'alternative route', when it is conceived in terms of Hulstijn's connectionist models, has more explanatory power in that it clarifies the positive role of teaching and the evidence concerning the different efficacies of different teaching methods. There is surely more to explicit teaching than the occasion it provides for repetitive use of the second language. Elis speaks of teaching as having a 'facilitating' value, but Hulstijn's suggestions give this vague term a more concrete meaning.

While this proposal strengthens considerably the 'facilitating value' position, it is not clear whether it counts as a variant of 'the strong position'. Given the broad way in which 'strong' and 'weak'' are distinguished from each other, and the fact that this, to a large extent is a matter of degree, I do not think that it is important.

§ 7 <u>Classroom Based Research</u>

This section has three divisions. The first division addresses the design and implementation of a certain kind of practical research pertaining to ESL instruction and potentially to SLA instruction generally. This is the main division and it describes in some detail five particular ESL research projects. The second section is a critical comparison of practical research in ESL and theoretical research in SLA. The third division moves away from research to consider instruction proper. I do not provide any course designs but I do describe in some detail an important instructional technique, and I offer some thinking about what the proper goal of ESL instruction and SLA instruction generally should be.

Research

Clearly, the studies most needed to evaluate the implications we drew from Hulstijn's theory, are studies of the type produced by SLA researchers; the study of the effect of explicit feedback on the acquisition of past tense '-ed' conducted by Ellis and associates, which we reported above, is a good example. However, there is also what is called 'action research'. This type of research is conducted in SLA classrooms and it takes three distinct forms.

1. Technical action research: an SLA researcher comes into a class to conduct a study, with the cooperation of the teacher and the students, in order to address a research question prompted by a certain theory, or to confirm or disconfirm the results of one or more studies that have already been done.

2. Practical action research: here the teacher conducts the research with a view to the certification of new methods of teaching that they hope to employ in order to improve the students' performance.

3. Critical action research: the teacher conducts research not only for the purpose of certifying new methods but also for the purpose of determining the underlying social causes of the problem in the students' performance which suggested the need for new methods in the first place.

Practical action research can also be called teacher research and classroom based research. I will use this last term because I think that it is the more informative of the three. But typically I will use a related term, viz. classroom based studies, to facilitate individual reference.

I am interested in conducting classroom based studies that are inspired by the ideas about second language acquisition developed in the discussion of Hulstijn above. Each one of these studies will have a structure that is similar to studies conducted in SLA research, as exemplified by the study above by Ellis and his associates. Thus it will have components of the following kind.

- research question   - instructional procedures

- design   - testing instruments

- participants   - results

- target feature   - discussion

      - tasks   - conclusion

Later we will see the specific form that these components might take in a certain study. It must be emphasized however that the purpose of the research will not be to support any SLA theory, no matter how narrowly framed it might be. Rather the purpose will be to validate an approach to teaching some feature of the second language by showing that the use of that approach results in better outcomes in terms of student learning. Note that a definite tradeoff is implied here. Studies intended to support SLA theories typically have a sharply focused research question. They aim at establishing something about the acquisition process itself while meeting formal and rigorous standards. But classroom based studies can have a greater immediate practical payoff, in that they are conducted in classrooms, by teachers, in order to achieve certain pedagogical objectives.

    The main features of English that I am interested in presently are as follows.

1. the articles of English: 'a', 'an' and 'the'

2. the six basic tenses of English: the past, the present, the future, the past perfect, the present perfect and the future perfect

3. the prepositions of English, with a concentration on the 'big 10'': 'of', 'to', 'for', 'with', 'by', 'in', 'on', 'at', 'from', 'about'

4. the pronouns of English: especially the ones that typically take antecedents: 'he', 'she', 'it' (singular, subjective); 'him', 'her', 'it'(singular, objective); 'they' (plural, subjective); 'them' (plural, objective); 'himself', 'herself', 'itself' (singular, reflexive); 'themselves' (plural, reflexive); and 'it' vs. 'this' used as subjects

5. clarity: sentences and short sequences of sentences that are unclear due to the disarrangement of the terms, i.e. the subject phrases, verb phrases, object phrases, occurring in them

    Let us now consider these five features from the perspective of the ten component structure for second language acquisition studies given above. Clearly each of these features will be the target feature of a study. The participants will be students in my classes. The research question will always be of the simple form:

        Is a certain approach effective in increasing the students' level of proficiency in the use of the given feature?

    The design component of the study structure will be equally simple:

(1) The students will be tested at the beginning of the course to determine their starting level of proficiency with respect to the use of the target feature.

(2) They will be taught the use of the feature, using a particular approach, during the period through which the course runs.

(3) They will be tested at the end of the course and at two intermediate points spaced evenly between the beginning and end points in order to plot their progress. The results, discussion and conclusion components of the structure cannot be realized until the study is completed of course, so the critical components in relation to each study are:

- instructional procedures

- tasks

- testing instruments

Let us now consider how these three components will be realized in relation to each of the five target features which we shall take one by one.

1. the articles of English: 'a', 'an' and 'the'

The use of English articles is a very difficult problem for most ESL students. Some of the students' first languages don't have articles and the first languages of others have articles whose grammar is different from that of English articles. And of course the grammar of English articles, especially the definite article 'the', is complex and challenging.

Over the years I have developed a number of ideas about the grammar of English articles and how best to teach it. Here I shall consider a set of three distinctions that I propose to employ as instructional procedures in relation to the definite article 'the' in this study. The distinctions are:

- open class vs. closed class

- class concept vs. class membership

- characterization vs. identification

In the graphic representation I employ in class I use circles to represent classes and 'x's to represent individuals. The instruction is set up by the presentation of two sentences like:

Students have a hard life.

Prof., the students are waiting for you.

where the focus is on the plural count noun 'students'. The three distinctions are in an obvious sense 'parallel' and they are employed in order to give different perspective on the indefinite/definite distinction. These different perspectives can be helpful in leading the student to master the same grammatical distinction.

Open Class vs. Closed Class:

With respect to the first sentence I draw a circle (representing the class of students) and then draw 'x's with arrows taking individuals into the circle, each representing a six year old who enters an

elementary school, and arrows taking individuals out of the circle, each representing twenty-two year old graduate who exits college and takes a job. The class is thus 'open' and the definite article is not needed. But with respect to the second sentence I draw another circle and draw 15 or so 'x's inside it explaining that these are the students in the professor's class. All of the 15 'x's have to be in the circle and no other 'x's can be there. The class is thus 'closed' and the definite article must be used.

Class Concept vs. Class Membership:

With respect to the first sentence I draw a circle and point out that we are not concerned with any particular individuals. It is the concept 'student' that is important and the members of the class are whatever individuals happen to fit that concept. In this case the definite article does not have to be used. But with respect to the second sentence I draw a circle and then draw 15 or so 'x's inside it, pointing out that we are concerned with particular individuals. It is the membership of the class that is important and the concept 'student' serves only as a device that helps to deliver the 15 students in the professor's class to us.

Characterization vs. Identification:

Here it is better to use the second sentence: I point out that the sentence, along with contextual information, including the name of the professor, the name of the college and the course title, number and section, provide us with enough information to identify 15 or so individuals, to distinguish them from all other individuals in the world. But with respect to the first sentence, information sufficient for identification is not only not available as a matter of fact, but also as a matter of semantic principle: while it might be possible to identify all past and present students, it is certainly not possible to identify all future students. Yet the noun 'students', unadorned as it is in the first sentence, has reference to the future as well as to the past and the present.

The articles 'a' and 'an' will be handled in a somewhat similar way, which I shall not elaborate on here. A sentence pair and the characterization vs. identification distinction serve as the basis of the approach. Consider:

A student came by to see you.

The student who needs a change of grade came by to see you.

In the case of the first sentence the information provided is sufficient only for characterization while in the second case the information provided is sufficient for identification - assuming that only one of the professor's students needs a change of grade. Of course the use of 'a' before consonants and 'an' before vowels will be taught as well.

The tasks to be performed by the students in this study, and the ones to be performed in most of the other studies, are of the same basic type. The students will have to study input and output, i.e. they will have to study published texts of good quality, as well as their own writing with respect to the target feature. In the case of the study of articles, the students, with the help of the teacher, will have to analyze each article use in a selected text until they understand that use in terms of one or more of the

three distinctions above, and more broadly in terms of their own intuition with respect to natural language. This is a challenging undertaking but the massive amount of processing that will take place over the course of the term and the collective analytical power of the students and the teacher should yield a deep understanding of article use by the end of the term. The texts will take the form of articles from publications like *The New York Times*, *The Wall Street Journal*, *Time Magazine*, *Newsweek*, *The New Yorker*, *Atlantic Monthly*, *Harper's*, *The Nation*, *The Economist*, and *Forbes Magazine*. The motivation for this selection is twofold. First, the students will probably find selected articles from these sources to be interesting and this will help with getting through the long series of analyses. Second, reading articles in publications like these can develop certain analytical skills, which, hopefully, will make the instruction more effective.

The students will write essays on a variety of subjects in a variety of rhetorical modes – narrative, classification, argument, etc. Each correct article use, incorrect article use, missing article and superfluous article produced by each student will be studied by the class as a whole. This task is the complement to the one above: it concerns the identification of errors and their correction. Since intellectual appreciation of article use is not a sufficient basis for advances in proficiency, the instruction includes also the following elements: (1) the students will be trained in the use of a SMEP, i.e. a specific mechanical editing procedure, for the use of articles (see the detailed description of SMEPs provided below) and (2) they will receive comprehensive and systematic feedback on the use of articles in their essays. It is then expected that the students' command of the use of articles will increase significantly over the period during which the course runs.

The students will be tested four times, as was indicated above. Each test will have two parts. The first part will be the writing of an essay and the second part will be the completion of a four section exercise. Each section of the exercise will contain 10 sentences. In the first section the student will have to choose one of the three articles at various points in the 10 sentences where one of them must be used. In the second section the student will have to indicate at various points in the 10 sentences whether an article must be used and if so which one. In the third section all articles will have been removed and the student will have to put them in where they are needed. And in the fourth section the 10 sentences will contain cases of correct article use, incorrect article use, missing articles and superfluous articles and the student will have to identify the mistaken cases and correct them. The four sections involve a progression in difficulty from the lowest level in the first section to the highest level in the fourth.

In order to make the scoring principle clear to the students all scores will be on a scale of 100. In order to achieve this I will use a modification of a formula I use in determining my final grades as follows:

(100 ÷ the number of responses that have to be made) x the number of the student's correct responses

It should be noted that where I refer above to the scoring of tests I am including the essay the student will write, with respect to which the number of responses that have to be made = the number of uses of articles that the essay calls for.

Concerning the other four target features, I shall indicate here only the essential elements without going into all the details.

2. the six basic tenses of English: the past, the present, the future, the past perfect, the present perfect and the future perfect

The key concepts here are that (1) there are three time 'zones', the past zone, the present zone and the future zone, and (2) the basic difference between the simple tenses (the past, the present and the future), and the complex tenses (the past perfect, the present perfect and the future perfect) is that the former involve one main action in a specified time zone whereas the latter involve two main actions in a specified time zone, where the time of the one is identified relative the time of the other:

	The Past Zone	The Present Zone	The Future Zone
The Simple Tenses	action	action	action
The Complex Tenses	action 1 → action 2	action → exact now	action 1 → action 2

A simple example related to the past tense and the past perfect tense will serve to bring out the structure of the six tenses: in a married couple the wife, who has been at her job for some time and is well established there, usually comes home at five. The husband however is fairly new at his job and typically has to work late. He likes nothing more than having dinner and a glass of wine with her in the evening. But she, being the more pragmatic one, will go ahead and eat dinner if she is hungry, without waiting for him. The husband's colleagues know this, and one of them, speaking of a certain day last week when the husband had to stay later than usual, says:

Poor guy, by the time he arrived home, she had already eaten dinner.

The tense of this sentence is the past perfect, as signified by the verb phrase 'had eaten' – the adverb 'already' is optional. We have two actions, the action of her eating dinner and the action of his arriving home. Both occurred in the past zone, but her eating dinner is the main action (referred to by the verb-phrase of the sentence) and its time is described relative the other action: his arriving home. Thus in the box for the past perfect, her eating dinner is action 1, his arriving home is action 2 and the arrow shows that the action of her eating dinner took place before his arriving home. So the action of his arriving home 'locates' the action of her eating dinner at a more specific point. This example with the help of the diagram, makes the difference between the past perfect and past pretty obvious, when the latter is exemplified by the sentence:

She ate diner.

The future perfect tense and the future tense can be illustrated in a similar way by:

By the time he arrives home, she will already have eaten dinner.

She will eat dinner.

The present perfect is a bit different in that an action's time is stated not in relation to another action in the same zone but in relation to the present i.e. the exact 'now'. The action has occurred before the present, meaning that its completion took place in the time stretch from its starting point to the present:

She has already eaten lunch.

The action of her eating lunch is classified in present zone, but at a point prior to the exact now of that present zone. Moreover, what counts as 'present' is flexible and context dependent: it can be this second, this minute, this hour, this afternoon, today, this week and so on.

The students' tasks with respect to tense will be to analyze the tenses of the sentences in articles drawn from the sources listed above and from the essays that they write. And they will be tested by having them write essays and complete exercises on the four sections of 10 sentences model established above.

3. the prepositions of English, with a concentration on the 'big 10': 'of', 'to', 'for', 'with', 'by', 'in', 'on', 'at', 'from', 'about'

The situation here is quite different due to the following issue: should verb-preposition associations be taught as 'formal' arbitrary associations or as meaning based associations? Consider the sentence:

I will vote for the most qualified candidate.

How does the ESL student know to use the preposition 'for' with the verb 'vote' here? The students and the teacher will study the verb-preposition associations found in articles drawn from the sources listed above and from the essays the students write in order to try to determine what the most effective learning strategy is. The arbitrary association strategy will be advanced by (1) making a list of the associations encountered and (2) learning to use *Longman's Advanced Learner's Dictionary*, which, for example, gives '[+ for]' as one of the options in its definition of the verb 'vote'. The meaning based association strategy will be advanced by (1') using a good regular dictionary, which lists many specific uses for a given preposition (the tenth edition of *Merriam-Webster's Collegiate Dictionary* lists 24 specific uses of 'for' as a function word) and (2') trying to establish intuitive concepts for at least the main uses of prepositions – 'on' is related to surfaces, 'in' is related to containers, etc. The restriction to the 'big 10' prepositions should help greatly with this (there are about 70 prepositions in English). Here The students won't be tested so much as they will be surveyed. Each student will write a short piece at the end of the course in which they describe the strategy for learning verb-preposition associations that they find to be most effective.

4. the pronouns of English: especially the ones that typically take antecedents: 'he', 'she', 'it' (singular, subjective); 'him', 'her', 'it'(singular, objective); 'they' (plural, subjective); 'them' (plural, objective);

'himself', 'herself', 'itself' (singular, reflexive); 'themselves' (plural, reflexive); and 'it' vs. 'this' used as subjects

The learning goal I will set with respect to this feature is the simplest of the five. The students have to learn (1) to continue the use of a pronoun or pronoun cluster (e.g., 'she', 'her', 'herself') as long as the referent of its antecedent appears in the preceding sentence, and (2) the necessity of distinguishing the use of 'it' from the use of 'this' in referring back to the preceding sentence. Consider the following passage:

> Mr. Obama is a pragmatist on defense strategy. He believes in the use of drones. Many have criticized him for this on grounds of ethics. But he regards himself as a man who is guided by his morals in the effort to formulate and implement the defense strategy that best protects the American people. The defense strategy of a nation is in many ways its most important strategy. Like every other American president, Mr. Obama understands this.

Now consider the passage again where the key terms are underlined and the sentences numbered by superscripts:

> Mr. Obama is a pragmatist on defense strategy.[1] He believes in the use of drones.[2] Many have criticized him for this on grounds of ethics.[3] But he regards himself as a man who is guided by his morals in the effort to formulate and implement the defense strategy that best protects the American people.[4] The defense strategy of a nation is in many ways its most important strategy.[5] Like every other American president, Mr. Obama understands this.[6]

The sentence sequence begins with the term 'Mr. Obama' occurring in sentence 1, and in sentences 2 through 4 a pronoun takes this term as antecedent because its referent, Mr. Obama, appears in the sentences that immediately precede sentences 2 through 4, respectively. The rule then is that if the referent of an established term, like 'Mr. Obama', appears in sentence n and in sentence $n + 1$, then the term used for that referent in sentence $n + 1$ must be a pronoun (or a proper name if special circumstances make this preferable). But in sentence 5, Mr. Obama does not appear as a referent and thus a pronoun cannot be used to refer to him in sentence 6. The chain of reference has been broken so to speak, and the term 'Mr. Obama' must be reestablished in sentence 6.

We can perhaps see better how this works by using the following schema in which a line represents a sentence and 'X' represents the appearance of a referent:

1 _____ X (Mr. Obama) _____

2 _____ X (He) _____

3 _____ X (him) _____

4 _____ X (himself) _____

5 _____

6 _____ X (Mr. Obama) _____

The other pronoun topic to be addressed in the study is rather simple. Students, ESL and native-speaker alike, quite often try to refer back to the whole idea presented in the preceding sentence by using 'it' as the subject of the succeeding sentence while the pronoun that must be used for this purpose is 'this'. The distinction can be brought out by means of the following pair of sentences and some auxiliary bracketing:

I bought [a sports car]. It has a V8 engine.

[I bought a sports car.] This made me very happy.

In the first sentence 'it' is used properly to refer back to a part of the state of affairs given by the preceding sentence while in the second sentence 'this' is used properly to refer back to the whole of the state of affairs given by the preceding sentence. But the student will quite often write:

I bought a sports car. It made me very happy.

meaning

[I bought a sports car.] It made me very happy.

and this is a mistake. The 'it/this' mistake is one of the conceptually simpler ones. Bringing it to the student's attention and following this with simple drills in the two uses should prove effective in eliminating the error.

5. clarity: sentences and short sequences of sentences that are unclear due to disarrangement of terms (i.e. the subject phrases, verb phrases, object phrases occurring in them)

All too often ESL students produce unclear sentences, or short sentence sequences, by 'scrambling' the order of the terms involved, which, in the case of single sentences, are the subject phrase, the verb phrase and the object phrases. Note that sentences with no object phrases or with no more than one, are not subject to such scrambling. In addition to the scrambling there can also be missing terms, superfluous terms and improperly formed terms. I have found that the simplest way to deal with this problem is to (1) identify the agent of the sentence, i.e. the performer of the action, (2) produce a term, typically a name or a noun phrase, that refers to the agent and make that term the subject of the sentence, and (3) try to get the sentence to conform to the 'standard' pattern for sentences in English. That pattern is

$$SP + VP + OP^1 + OP^2 \ldots + OP^n$$

where 'SP' = Subject Phrase, 'VP' = Verb Phrase and 'OP' = Object Phrase. Typically prepositions are necessary to connect object phrases beyond the first one back to the verb phrase. Thus in the sentence

The manager taught the new employees about the accounting system by showing them a video.

the prepositions 'about' and 'by' connect the object phrases 'the accounting system' and 'showing them a video', respectively, back to the verb phrase 'taught'.

In this study the source material must be the students' own writing and their task must be to reform any unclear sentences that appear in that material using the approach described above. The product of the study will take the form of pairings of unclear sentences with the student's proposed corrected versions, and it will include also a written explanation by the student and a commentary by the teacher. The point of the commentary will be to say how effective the reform appears to be and what problems remain where the reform is less effective than is desired.

The value of the five studies described above will be enhanced if a description of each study is written up as a report that is made available to other teachers. The format for the report should follow the ten component structure for SLA studies given above just as the studies themselves will. It must be kept in mind that the audience for the report is, first and foremost, the community of ESL teachers and other SLA teachers and not the community of SLA researchers and theorists (although the attention of the latter community to such reports would be certainly desirable). Having teachers as the primary audience means that the writing in the reports should be informal in the proper sense of the term: the statistics that are an essential part of the typical SLA study are very challenging, and some non-technical or semi-technical method of delivering the basic information that they contain to the audience of language teachers must be devised.

Hopefully teachers will find the studies to be interesting because of the potential that the ideas they contain has for improving educational outcomes. None of the studies described incorporates any particular theory or approach in philosophy of language but the thinking that went into them was guided to a meaningful extent by concepts and distinctions that are characteristic of that discipline. This is especially true in the case of the first study whose target features are the articles of English. The proper analysis definite article 'the' and quantifiers and determiners generally has been of particular interest to linguistically oriented philosophers for quite some time. We need only consider the three seminal papers 'On Denoting' by Bertrand Russell, 'The Proper Treatment of Quantification in Ordinary English' by Richard Montague and 'Generalized Quantifiers and Natural Language' by Jon Barwise and Robin Cooper to see that this is so. All of these papers are far too technical to be of direct relevance to ESL teachers or to SLA teachers generally but the concepts that undergird them could be brought out and made useful by someone with the proper preparation who has studied the works closely and has at the same time the ability to explain technical material in an effective way. My personal interest is in developing a treatment of 'the' and determiners generally that is much simpler and much more intuitive than the treatments that receive recognition currently. The three distinctions on which I base the teaching of the use of 'the' are byproducts of the pursuit of this interest.

There are resources in the philosophy of language, with possible relevance, direct or indirect, to the other target features as well. The second study will address the six basic tenses of English, but then there is tense logic. The third study will address the prepositions of English but then, essentially,

prepositions set relations and there is the logic of relations. The fourth study will address the pronouns of English but then there is the theory of anaphora. Finally the fifth study addresses the problem of sentences that are unclear because their terms have in effect been scrambled and here the notion of logical form may perhaps provide guidance. If it is possible to mine these resources by first putting in the work that is necessary to understand them well, and then finding a way to present their essential results and claims in a form that allows the language teacher who is willing to work a bit themselves to grasp them, then any number of possibilities for the advancement of second language pedagogy might open up.

And if there are in fact second language teachers who might want to try to teach the target features using the recommended instructional procedures and perhaps even conduct a study of their own, then they can of course use any variation or any additional devices that come to their minds. The aim of such studies is the local and humble goal of getting better results in ESL teaching.

Teachers display a great variety of teaching styles, which surely affects the efficacy of their teaching. One stands behind a lectern and speaks in a formal way guided by a prepared text. Another paces back and forth right in front of the students and, and while having a clear plan in mind, they improvise in response to the students' questions and mood. Style of teaching will be a key variable in the determination of the outcome of any experiment with a new pedagogical approach. This does not mean however that no truth can emerge from classroom based studies. In particular if a number of teachers have tried a certain approach and all of them have had success with it then this will indicate that the advantages of the approach have dominated the differences in teaching style.

The final point to be made here is that technology could play a very large role in ESL and SLA teaching generally. The use of chalk and blackboard (or markers and white board) is in my experience quite efficient and, I think, should be continued. But I also use PowerPoint extensively and I am interested in using Prezi, which I saw a demonstration of at Marymount Manhattan College. Well beyond this, however, the use of sophisticated computer based programs, including simulation and animation systems, may open up an endless array of possibilities whose efficiency may be subject to testing.

Some Critical Reflection on Research

While classroom based research is and should be thought of as supplementary to standard SLA research, and while it lacks the rigor of controlled well defined experiments, subject to statistical methods, I see it as having three distinct advantages. The first is that, while in standard SLA research a simulation of actual learning is studied, in classroom based research, the actual learning phenomenon itself is studied. Thus in Ellis's study the tasks that the students were directed to perform, the ones involving stories and pictures, were not real assignments. Rather they were simulations of real assignments designed to highlight the object of the researchers' interest, viz. the relative effectiveness of implicit and explicit instruction in the form of feedback. The problem with simulations is that an inference has to be made from the simulation to the actual phenomenon. I concede that the inference is often rather direct but it is still an inference and it is not always so direct – it depends on the study. By contrast, no inference of this kind is needed in classroom based research because it is the learning

phenomenon itself that is studied. The second and the third advantages of classroom based research are much simpler. Standard SLA research attempts to isolate a single learning phenomenon whereas classroom based research takes each phenomenon in the context of the complex situation that exists in the classroom. The more the phenomenon is isolated, the more determinate the study results will be, but the more the phenomenon is taken in context the more practically useful the study results will be. As indicated, I am here claiming an advantage for classroom based research with respect to standard SLA research but, clearly as regards isolation vs. context, it is fairer to say that there are offsetting advantages and disadvantages. Finally, standard SLA studies tend to focus on a point in the educational proceedings they select for study while classroom based research can take in the whole arc of such proceedings since the teacher and the students are together for a relatively long period of time. Practical action research thus provides a better basis for longitudinal studies.

Another point which needs to be made here is that, as regards purpose, there is a critical difference between standard SLA research and the classroom based research I want to conduct. SLA research studies often focus on a linguistic feature merely for its instrumental value. Typically the effectiveness of some pedagogical approach is being tested and any number of features would serve as the object of focus. Thus in the study by Ellis and associates past tense '-ed' was chosen because students have some knowledge of it but still have problems using it, but they could just as well have used plural 's' or passive voice '-ed' or 'a' vs. 'an' and so on in their effort to determine whether explicit instruction or implicit instruction in the form of corrective feedback is more effective. By contrast, the studies I am interested in conducting will focus on features whose syntactic and semantic analysis has not been settled and yet one can have ideas about how the analysis should go. More specifically one can have informal explanations of the features. The explanation of each feature would be intended to serve a double purpose. It would serve as the means of instructing the students in the use of the feature and it would also serve as a possible basis for the formal explication of the feature.

<div align="center">Teaching</div>

One of the most important techniques that I use to teach grammar is what I call a SMEP, a specific mechanical editing procedure. If a student applies the SMEP for a type of error to their writing then it should be possible for them to eliminate all errors of that type, provided that they proceed with sufficient care. The best example relates to the most pervasive error type among the ESL students I work with in the Writing Center at Pace University. The error type consists in the use of count nouns both without a plural ending and without a determiner. Thus one should not say:

I like car.

Instead, one must say any of:

I like cars.

I like this car.

I like these cars.

Most ESL students have considerable explicit knowledge of English grammar and they can use this knowledge to eliminate 'naked' count nouns from their writing by going through their essay, word by word, underlining or highlighting every count noun, and determining whether it is naked and, if it is, taking care to 'dress' it with a plural ending or a determiner or both (in this last case the noun is 'all dressed up'). Of course the student cannot randomly add plural endings and determiners. A plural ending is to be added precisely where plurality is intended, and the use of determiners must be guided by the student's knowledge of the 7 classes of determiners and the semantic considerations that dictate their use. Now a SMEP can be developed for every determinate error type, i.e. every type that allows for just one means of correction. Thus, theoretically at least, every student can be put in full command of the determinate aspect of the grammar of their writing, and yet determinate errors are the ones most likely to offend.

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