Chapter 9

DISSERTATION

Considering that the approach to defining illocutionary acts in terms of types of elements adopted in the previous chapter contributed significantly to solve the problems identified in the first part of the thesis, it will be followed here in relation to dissertation acts. However, given that the exposition of dissertation elements was already advanced in Chapter 3, each one will be addressed here individually, in discussions different from the ones that identified illocution elements in sets. Moreover, although an examination of Edmonson's critique of Searle's model proved to be very useful, there will be no initial reference to global models here, because there are no global models.

Nevertheless, there will be a prior introduction. Its theme will be the way reference and predication are usually dealt with (without necessarily being identified as forming part of a speech act scheme). It will be followed by expositions of these two elements. Afterwards, force of assertion will be considered.

A discussion of truth value and probability expressions will follow. It has been included because such expressions can be used to convey forces or to realize predications and could, therefore, be problematic for the analyst. The discussion will involve the notions of higher order predication and propositional attitudes.

Definitions of dissertation acts obtained as combinations of a force of assertion, a reference and a predication will then exemplify the schema. This will complete a view that divides speech acts first in two major categories, illocutionary acts and dissertation acts, and then subclassifies each of these according to the acts' defining elements.

The definitions section will be followed by a comparison of such taxonomy and Searle's. This will show both are kindred, but the basis for the former provide a better understanding of speech acts than those for the latter.

A view of dissertation as knowledge processing will emerge. This will suggest new research themes and teaching topics.

The standard approach

Often standard contributions in pragmatics and discourse analysis stem from developments in formal logic, philosophical logic, and semantics. On many occasions, too, they are reactions against these. The reason for the close link is, naturally, that all those disciplines are concerned with the same or related phenomena.

The first elements this chapter is about, reference and predication, are precisely at the heart of philosophical logic (see Strawson 1967), and their two correlates, argument (or subject) and predicate, are the matter of formal logic (see, *eg* the introduction to Strawson 1967). It would, then, seem to be advisable to take into account how the two logics deal with the question, although they have not really focused on it in a way that provides the set of categories we need. An initial development is often a consideration of propositions expressed by sentences such as (1) or (2).

(1) The tree is tall.

(2) John is young.

In each of these sentences, an individual or particular entity is referred to, the tree in (1) and John in (2). Besides, a property is predicated of the entity, tallness and youth, respectively. Thus, (1) can be used to express the proposition that a given tree has the property of tallness. Likewise, (2) can be used to express that John possesses the property of youth.

These simple propositions constitute a basic model used in contrasts that introduce more complex ones. In this way, it can be noted, for instance, that (3) refers not to one but to several individuals.

(3) Those trees are tall.

Another example of the approach could be the introduction of the notion of two-place predicates. Unlike (2), where there is one act of reference, (4) has two references, to John and to Peter. So, 'young' is a predicate that takes one argument, whereas 'younger' is one which takes two.

(4) John is younger than Peter.

Using the type of notation employed in the previous chapter, these differences can be represented as follows:

(5) tall (tree)

(6) tall (trees)

(7) young (John)

(8) younger (John, Peter)

This approach has proved to be fruitful in semantics too (see, *eg* Lyons 1977: 138-167). Therefore, it will be followed here, in discussing reference and in the first part of the treatment of predication.

Reference

The first distinction that is needed has already been introduced, by (5) and (6). It is, of course, the distinction between singular and plural reference. One point which is useful to note is that plural reference is normally taken as a synthetic indication of a conjunction of a number of singular propositions. Using our examples, (6) is equivalent to (9), where subscripts distinguish entities.

(6) tall (trees)

(9) tall ($tree_1$) and tall ($tree_2$) and tall ($tree_3$) and ...

The second distinction we need is between general and generic reference. As Lyons (1977: 193) points out, general reference is a form of plural reference. But generic reference is essentially different.

One could say that to refer in general to the individuals or particulars denoted by a name or a noun phrase is to refer to each one of them. But to refer generically to the set of individuals is to adduce a prototypical representation of them. Hence, if the property predicated of the individuals is not shared by some of them, the general proposition will be false, whereas the generic proposition can still be true. For instance, if (10) is true, then (11) is necessarily false, but (12) can be true, because (11) expresses (13), and (12) does not.

(10) Fido has three legs.

(11) All dogs have four legs.

(12) Dogs have four legs.

(13) have (dog_1, four legs) and have (dog_2, four legs) and have (dog_3, four legs)...

The difference between individual (singular, plural or general) reference, on the one hand, and generic reference, on the other, is fundamental for a theory of dissertation. It accounts for the distinction between the acts realized by (14) and (15), which we could label as 'nucleus of definition' and 'nucleus of naming' (although, if seen as compounds of the paralinguistic, sentential, propositional and act features mentioned in Chapter 3, these utterances could not be identified as performing the functions normally called defining and naming).

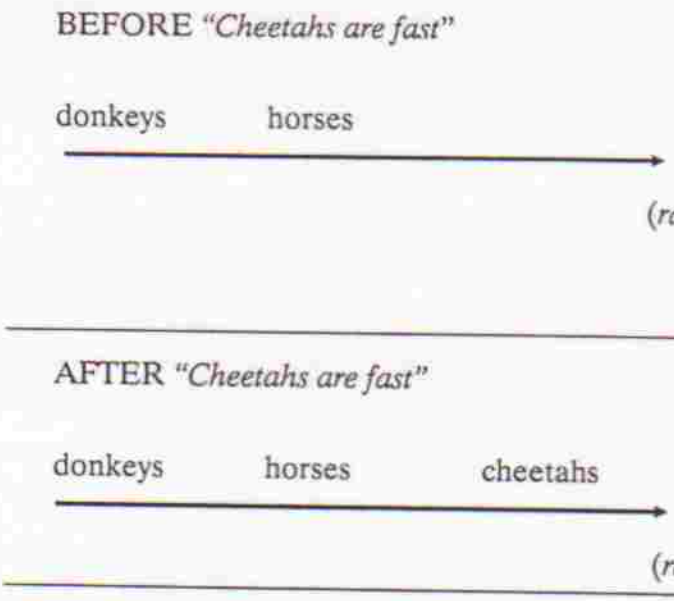
(14) The president is the head of government.

(15) The president is Bill Clinton.

The difference also allows us to envisage bridges between studies of text and studies of discourse processing. Individual references are part of propositions about states of affair. For the sake of clarity, at this stage we could say that they are about the world; they provide data. Generic references are best seen as pointing to parts of language systems or conceptual frameworks. The distinction between individual and generic thus parallels the distinction between empirical and theoretical. It is a linguistic point of entry to the understanding of knowledge creation.

When we say that all of George's horses are fast, we are saying that any one we choose will be fast. The proposition can, so, be verified directly by observation: we take one of George's horses and see whether or not it is fast. And we can take another and another; that is precisely the point of the general "all". But when we say that cheetahs are fast, what is important is that we are attaching 'fast' to the meaning of 'cheetah'. We are placing our prototype of cheetah in relation to other prototypes, on some rapidity scale. If we already know that horses are fast and donkeys slow, we will relate the three in a way that can be represented by Figure 4:

Figure 4. *Effect of generic reference.*



In connection with the issues that started the deliberation in the first part of this thesis, particular and generic reference will distinguish acts like the observa-

tion in (16) from acts like the generalization in (17) (for practical convenience the words "nucleus of" will, from now on, be left out from expressions that refer to acts).

(16) The man had a positive opinion about it.

(17) Young, urban Mexicans have modern attitudes.

The two types of references will also separate descriptions, like that in (18), from characterizations, like that in (19), or general statements, such as (20), from classifications, such as (21).

(18) The speech began with a request and ended with a promise.

(19) Modern citizens are individualistic.

(20) They all voted in favour.

(21) A trade union is a corporate subject.

Looking at the matter from this angle, we can note a peculiar act, which has both an individual and a generic reference. In (22) the entity is assigned to a class (or genre). This type of act, which tends to be referred to as "identification" by some scientists (like biologists), is, so to speak, the link between the empirical and the theoretical. It tells us that an individual is to be associated to a prototype.

(22) She is a postmodern person.

The distinction of individual and generic reference is comprehensive at the first level of delicacy, *ie* any reference is either individual or generic. At other levels, various complex subdivisions would be required. For example, as already indicated, an individual reference would have to be subclassified as singular, plural or general. Further on, this subclassification would have to be combined with specifications of definiteness and quantification. But, for the purposes of this thesis, we can remain at the first level. Let us, now, consider predication.

Predication

One way to begin the discussion of this element is to examine the different uses of the verb 'to be'. The function we have been dealing with, namely, the association of a property to an individual is often called 'ascriptive'; according to this usage, one says that in (1) "is" ascribes tallness. It is also common to say that here the verb is a copula because it links the individual and the property. This second way of talking about the function of the verb reflects the idea that, strictly speaking, in ascriptive predication the predicate is expressed by the adjective, rather than the verb.

The association of a property contrasts sharply with the 'existential' use of 'be', which is exemplified in (23):

(23) "Let light be", and light was.

Here, we can properly say that the verb expresses the predicate, although, as we shall see presently, existence is a special predicate. Other verbs and verb forms that can be used to predicate existence are: 'to exist', "there is", 'to obtain', 'to occur'.

Existential predication has received much attention from philosophers. They now tend to agree that to say that something exists is to say that we can form simple propositions about them, and actually verify (or falsify) these. (The most important paper in the development of this view is probably Pears 1963). So, (24) means that we can go out and see if (25) is true or false, *ie* if snow is white or not. By contrast, (26) means (27) does not really make empirical sense.

(24) Snow exists.

(25) Snow is white.

(26) Unicorns do not exist.

(27) Unicorns are blue.

Probably it is practical to represent existential propositions the same way as other propositions, that is, to represent (24), for example, as (28). However, it should be noted that logic texts represent existence with a special symbol, an inverted "E", and that this tends to be used only when variable referents are involved. In this notation, (29) would be represented as (30).

(28) Exist (snow)

(29) x exists.

(30) $\exists x$

The third use of 'to be' is the equative. It has been mentioned on several occasions in this thesis. Therefore, here it will only be recalled that it is involved in statements of coreferentiality and pointed to (14) and (15) as examples of it. Perhaps convenient representations of the propositions expressed by these are (31) and (32). Their speech act codings could be (33) and (34).

(14) The president is the head of government.

(15) The president is Bill Clinton.

(31) Be (the president, the head of government)

(32) Be (Bill Clinton, the president)

(33) Equative (particular, particular)

(34) Equative (generic, generic)

A fourth use of the verb is to include some entity in a class, as in (35).

(35) This is a cyanophite.

This use seems not to have been recognized explicitly in the literature. In fact, in formal logic, the predicate involved here is commonly held to be of the same type as that in (1). That is, formal logicians tend to treat (35) as predicating

"cyanophiteness" of the entity referred to ("this"). However, there is a distinction of the difference, albeit implicit, in the emergence and development of set theory. This does take inclusion, as opposed to ascription, as its object of study. Unfortunately the distinction is often obscured, for two reasons. One is that both ascription and inclusion are referred to merely as predicates. The other is that, for many purposes, it is possible to posit a logical synonymy between them, by taking sentences like (36) and (37) as equivalent.

(36) The chair is grey.

(37) The chair is a grey object.

Now, although it is true that (36) and (37) imply each other, the normal use of inclusions is different, pragmatically and ontologically. The paradigmatic use of ascriptive predication in simple propositions is to associate one property with the entity referred to. The paradigmatic use of inclusions is to associate a number of properties with it, more precisely, to liken it to the prototype that represents the class. This is reflected in grammar. Ascribed properties are typically expressed by adjectives, whereas including classes are typically signalled by nouns.

What is more important to us, the difference is reflected in spontaneous oppositions like the one between description and classification. Looking at this from a previous angle, ascriptions are empirical, while inclusions are theoretical.

I would propose that the proposition in (35) be represented as (38), instead of (39), which would be the traditional way. Accordingly, I would code the speech act elements as (40).

(38) Be (this, cyanophite)

(39) Cyanophite (this)

(40) Inclusive (particular, generic)

In sum, the above examination of the verb 'to be' reveals four types of predications: ascriptive, existential, equative and inclusive.

Other predications

On purely grammatical grounds, such as subject (or object) verb-agreement and subject position, John Lyons specifies six sentence schemata. These "would appear to be identifiable ...in very many unrelated languages" (Lyons 1977: 469). They are labelled: intransitive, transitive, equative, ascriptive, locative and possessive. As can be seen, two schema labels coincide with our predication names: equative and ascriptive. The former in fact involve the latter, as is evident from Lyons's examples on page 470 (renumbered here according to this chapter's sequence):

(41) The chairman is Paul Jones.

(42) He was intelligent.

It can be argued that the other four schemata also involve distinct predications. They are not normally distinguished in logic, but this is simply because philosophers developing logic have not payed attention to them. They seem to have been mainly concerned with the simplest possible structures of propositions that can be used in the exploration of abstract thought (see, *eg* Whitehead and Russell 1910: 2).

Examples of intransitive and transitive predications are (43) and (44). As in traditional grammar, the point about the former is that it says the referent does something, and the point about the latter is that it says the referent does something to something.

(43) Kathleen works.

(44) That boy plays the piano.

Examples of locative and possessive predications are (45) and (46). One tells us that the referent is in a certain place and the other that it belongs to some other entity.

(45) They were in the attic.

(46) This bicycle is John's.

For the purposes of this chapter, informed intuitions about transitive, intransitive, locative and possessive predications are sufficient. Therefore, these shall not be discussed. (The reader interested in deeper considerations about predicative schemata is advised to consult the book by Lyons already mentioned and the works referred to there.)

It should, however, be added that, as with reference, the basic types of reference identified above could be further subclassified at other levels of delicacy. For example, transitive predication could be subdivided into various sorts depending on the roles (recepient, instrument, etc.) of the arguments involved. Here, the discourse analyst would be advised to consider schemata of valency (*eg* Tesniere 1959 or Helbig 1971), case (*eg* Anderson 1977) or thematic roles (*eg* Cowper 1992) as bases for developing her frameworks.

Then, at the first level of delicacy, we have eight types of predication: ascriptive, existential, equative, inclusive, transitive, intransitive, locative and possessive. Using each one will result in different speech acts. Thus (47) is what we might call a 'descriptive statement', whereas (48) and (49) are what we might term a 'narrative statement' and a 'locative report'.

(47) Zeline is beautiful.

(48) Zeline gave a letter to Oscar.

(49) Zeline is by the lake.

We will come back to predication once assertion has been considered, because there is one point where the two themes converge.

Force of assertion

In Chapter 3, besides reference and predication, force of assertion was identified as a defining element of dissertation acts. We can begin considering it by recall-

ing Searle's (1969: 32) distinction between speech act negation and propositional negation (commented in chapters 4 and 5).

Searle shows that, in addition to the usual negations of a statement like (50), namely (51) and (52), a third negation is needed: (53).

(50) There are horses.

(51) There aren't any horses.

(52) There are things that aren't horses.

(53) I don't say there are horses.

The important thing to note here is that the speaker of (50) commits herself to the truth of proposition (54). If a tilde represents negation, the speakers of (51) and (52) commit themselves to the truth of (55) and (56), respectively. However, the speaker of (53) does not commit himself to the truth of any of the three propositions. His commitment is, so to speak, suspended.

(54) $\exists x$ (x is horse)

(55) $\sim\exists x$ (x is horse)

(56) $\exists x$ (x is $\sim$horse)

There is a wide variety of devices to indicate an assertion. Take, for example, "yes", "certainly", "it is known that", "I'm sure". Suspension can also be indicated explicitly, *eg* by "One wonders if". As already suggested in earlier chapters, an assertion and a suspended assertion of the same predication about the same reference are different dissertation acts. The best examples have also been given: a simple assertion and a question, such as (49) and (57).

(49) Zeline is by the lake.

(57) Is Zeline by the lake?

A scale between categorical assertion and suspended assertion is conceivable. It is, for example, possible to utter or write (58) and (59).

(58) I have a vague impression that Zeline is by the lake.

(59) I am almost certain that Zeline is by the lake.

We can refer to the range of non-categorical assertions as 'mitigated' assertions and, if necessary, further subclassify them according to degree. Mitigated assertion has been of interest to philosophers, because it provides insights into the nature of knowledge and belief (see, *eg* Wittgenstein 1953: 190-192). It has also drawn the attention of linguists, because it is not possible to describe the behaviour of certain elements of language systems, such as English 'modal verbs' like 'could' and 'might', without recurring to the notion of speaker certainty (see Quirk *et al* 1985: 219 *ff*). Applied linguists, particularly those interested in specialized language, have also studied mitigated assertion, because academic texts exhibit a range of devices for expressing it; indeed, it can be used as a variable to characterize text types or study their evolution (as shown by Salager 1994).

Mitigated assertion is commonly referred to as 'epistemic modality' by both philosophers and linguists (see, *eg* Lyons 1977: 793). However, this terminology is less explicit about its opposition to the non-modal categorical and suspended assertions. Philosophers also discuss mitigated assertion in terms of 'propositional attitudes' (see, *eg* Quine 1992: 65-71). I find this expression adequate, in so much as it clearly indicates variable speaker involvement; but it might obscure the fact that, as an element of a dissertation act, the force of assertion is alongside the type of reference, rather than the referent, and the type of predication, rather than the predicate. The term applied linguists tend to prefer is 'hedging' (see Salager 1994), but this could be misleading. It could indicate that what a mitigation does is essentially to limit the author's risks, and conceal honest reports of uncertainty. Therefore, I will retain 'mitigated assertion'.

There is a fourth type of assertion that must be distinguished: hypothetical assertion. Here, for the sake of her argument, the speaker assumes the proposition she expresses is true, even if she does not know whether this is the case or not. Typically, a hypothetical assertion is made when its implications or its relations to other statements are the focus of the argument. In many respects, a

hypothetical assertion is like a categorical assertion, and for the purpose of calculating its implications and verifying its relations to other assertions, we treat it *as* a categorical assertion. But there is a fundamental difference, to which Wittgenstein points clearly, though elliptically. He says that when we ask someone to try to see we say "Look!", but when we ask them to try to imagine we say "close your eyes!". Although the visual image and the visual impression are of the same type, the language game of looking and the language game of imagining are different (Wittgenstein 1967: Z625-Z632).

The character of a hypothetical assertion is well depicted by a form common in mathematics texts which we have exemplified in earlier chapters: "Let x be a y". Other realizations, used in everyday speech, are "supposing...", and, of course, "if". Hypothetical assertion is often studied in grammar, alongside other phenomena, under two headings: "conditional clauses" and "subjunctive mood" (see, for example, Quirk *et al* 1985: 155-158).

There are, then, four forces: assertion, mitigated assertion, hypothetical assertion, suspended assertion. Let us now consider the theme of higher order predications. An awareness of it might be necessary to make coding decisions involving the notions discussed in this section and the previous one, because there are expressions that can function either as predicates or as force-indicating devices.

Higher order predication and probabilistic statements

Existential predicates give rise to the notion of orders of predication. Strictly speaking, rather than being about individuals (or prototypes), existential predicates are about propositions (involving the individuals or prototypes referred to). To capture the difference, propositions like (25) are said to be of first order and those like (24) are said to be of second order.

(24) Snow exists.

(25) Snow is white.

The notion of orders is sometimes associated to the ontological status of entities, and, then, individuals are said to belong in the first order. But, when this approach is followed, more than two orders are postulated. Sometimes events, processes, and states are seen as second order entities and propositions as third order entities (see Lyons 1977: 443).

To avoid confusions and unecessary detail, I will refer to predicates like 'exist' simply as higher order predicates. From the point of view of formal logic, 'true' and 'false' are other higher order predicates. This idea can be exemplified by (60) and represented by (61).

(60) It is true that this horse is fast.

(61) True (fast (this horse))

Now, if propositions are the subject matter of a text, *eg* if it is a logic textbook, and it presents a meta-discussion of the rules for deciding whether a given proposition is true or false, then (61) will probably be the best rendering of (60). The author will have conceived of "true" as a predicate, properly speaking. But if the subject matter is horses, and "it is true that" can be substituted for "certainly" or "I'm sure that", then the author is using "true" as a means of indicating his commitment to the proposition that this horse is fast, *ie* as an expression of force, rather than a predicate. In this case, (60) should be represented as (62), and not (61).

(62) Assertion, fast (this horse)

More complicated even is the case of probability statements. As (62-64) show, probability can be the argument, the predicate or the force of a statement.

(62) The probability of event 3 is 1/6.

(63) It is 33.3% probable that event 3 will occur.

(64) To me, it is probable that event 3 will occur.

Hence, (65) could either be what (66) or what (67) represent.

(65) It is likely that they will vote for Tom.

(66) Assertion, likely (vote(they, Tom))

(67) Mitigated assertion, vote(they, Tom)

The point is, as Wittgenstein (1958: 192) put it, "(not to) regard a hesitant assertion as an assertion of hesitancy".

The distinction might seem to be immaterial, for example, when coding casual conversation, in which case the analyst will probably be dealing with mitigated assertions, rather than assertions of probability proper. But in certain types of discourse, such as academic discourse, knowing that an event has a specific probability of occurring and not knowing whether an event can occur or not may be two very different states of knowledge.

Unfortunately the distinction has often been ignored, partly as a consequence of the inadequacy of the term used to study probabilistic statements, the already criticized 'hedging', and largely as a result of not isolating the three elements of dissertation acts. Among other mistakes with this combined origin, coding systems like those mentioned in Chapter 3 would treat (68) and (69) as if they performed the same speech act, and, depending on the analyst, would call both a 'hedge' or both a 'prediction'.

(68) This is probably a cyanophite.

(69) It is very probable that those cyanophites will survive.

In short, the analyst must carefully decide whether truth value or probability expressions are higher order predicates or force carrying devices.

Applying the schema: some definitions

Let us now see the three element speech act schema in operation. Fourteen elements have been identified: two types of references, eight types of predications and four types of forces. These are listed below.

Reference: particular, generic.

Predication: ascriptive, existential, equative, inclusive, intransitive, transitive, locative, possessive.

Force: assertion, mitigated assertion, hypothetical assertion, suspended assertion.

A combination of an element from each list gives us a dissertation act (and different combinations yield different acts). This can be exemplified with the following definitions, where '*N*' stands for "nucleus of" (see Chapter 3), 'gen' for "generic" and 'part' for "particular". As in Chapter 8, the names employed could or could not have corresponding everyday meanings.

N definition. Assertion: equative (gen, gen).

N nomination. Assertion: equative (part, part).

N identification. Assertion: inclusive (part, gen).

N classification. Assertion: inclusive (gen, gen).

N descriptive observation. Assertion: ascriptive (part).

N descriptive generalization. Assertion: ascriptive (gen).

N narrative observation. Assertion: transitive (part, part, part).

N locative observation. Assertion: locative (part, part).

N uncertain identification. Mitigated assertion: inclusive (part, gen).

N hypothetical nomination. Hypothetical assertion: equative (part, part).

N classification question. Suspended assertion: inclusive (gen, gen).

The system provides the possibility of distinguishing precisely and rigourously a definition from a nomination, and both from an identification or a classification. It also shows clearly what a narrative observation and a locative observation, or a classification and a classification question, have in common, and how they differ. Therefore, it prevents the two types of identification errors Chapter 3 singled out when discussing applied linguistics analytic frameworks of the seventies. If acts are assigned to utterances according to the kind of definitions exemplified above, it is not possible to take relations for acts. It is also impossible to consider textual or paralinguistic features of complex units as determining characteristics of acts.

It is now convenient to consider what has perhaps been the most important basic taxonomy of speech acts, in any area of enquiry, Searle's classification, in relation to the schemata of this and the previous chapters. The discussion will show the potential of the schemata, because they allow us to easily note errors in Searle's taxonomy and provide the basis for more rigorous ones.

How many speech acts?

In 1976, Searle said "There are at least a dozen linguistically significant dimensions of difference between illocutionary acts." On the basis of such dimensions, he proposed a taxonomy consisting of five basic categories: representatives, directives, commissives, expressives and declarations.

Searle constructs his taxonomy as an alternative to Austin's, which divides acts into verdictives, expositives, exercitives, behabitives and commissives: "There is no clear or consistent principle or set of principles on the basis of which [Austin's] taxonomy is constructed" (Searle 1976: 8). Austin's categories overlap and are heterogeneous, Searle points out.

However, Searle's taxonomy is not as systematic as he would wish, which he admits. He states his dimensions are "criss-crossing continua" (1976: 2). He also says:

> It would be very elegant if we could build our taxonomy entirely around this distinction [direction of fit]..., but though it will figure largely in our taxonomy, I am unable to make it the entire basis of the distinction.

It is possible that the basic separation between illocutionary and dissertation acts established in this thesis is the distinction Searle wished (and perhaps envisaged). Looking at the matter from one angle, Searle's first category, representatives, "are assessable on the dimension of assessment which includes *true* and *false*" (Searle 1976: 10), and it is thus opposed to all the other categories, which are not assessable on the said dimension. So, if the opposition were clearly recognized, the other categories would have to be seen as subcategories of one single category, namely, non-representatives. There would then be a parallelism between Searle's taxonomy and my basic separation.

Looking at the matter from the other angle, the activity of dissertation can be seen as fitting words to the world, as mentioned in Chapter 5, whereas illocutionary activity can be seen as fitting the world to words. As put in the present and previous chapters, dissertation constructs knowledge whereas illocution commits action.

The problem, for Searle's taxonomy, is that some individual dissertation acts cannot be seen as fitting the world, and some individual illocutionary acts cannot be seen as modifying the world. Examples are definitions, on the one hand, and greetings, on the other. (It is only when definitions are combined with observations and generalizations that we see clearly dissertation attempts, or may attempt, to "get the words to match the world". And it is only when greetings open the way to other acts, like orders, that we realize they are part of a verbal activity than can have actions as consequential effects.)

Searle's solution is to keep his word-to-world and world-to-word narrow conceptions and set up peculiar categories where acts like greetings and acts like definitions can fit. These are expressives and declarations. But, of course, now the taxonomy misses the point that definitions are made out of the same type of elements as observations and generalizations. It also obscures the fact that greetings obey and create deontic conditions.

Now, if non-representatives were taken as one major category, Searle's directives and commissives would be seen as the subcategories that result from varying one of my illocutionary elements, the subject, and fixing another, the deontic value. But, then, in order to place expressives and declaratives on the same basic level, this classification principle would have to be abandoned. Each of those two

categories is not determined by a different subject from the subjects of directives or commissives; either can involve either the speaker or the hearer (Searle 1976: 13).

Searle's taxonomy has another two defects, which will only be mentioned here. Firstly, the characterization of expressives involves aspects of the perlocutionary domain; in fact, their point is "to express the psychological state specified" (Searle 1976: 12). Secondly, declaratives is a heterogeneous category which includes illocutionary acts such as appointing, as well as dissertation acts like defining.

By contrast, the definitions sections of this and the previous chapters imply that very systematic taxonomies (in a way, akin in spirit to Searle's) can be produced by the schemata on which those definitions are based. Putting it simply, fixing some defining elements and varying others yields homogeneous groupings and comprehensive subgroupings.

New paths

The above discussion on Searle's taxonomy suggests that now empirical studies of acts in discourse can be more comprehensive and more reliable, which was the main concern expressed in Part 1 of the thesis. Precise identification of all the acts in a discourse makes it possible, not only to conceive, but also to verify or falsify the type of contrasts which have been absent from ESP research, such as the one mentioned in Chapter 3:

> Sequences of descriptive observation, descriptive generalization and definition are far more frequent in introductory mechanics texts than in texts for intermediate students. This is consistent with their aims. The former are designed to present the basic principles of physics and establish a link between them and the world. The latter have the objective of developing sophisticated tools and techniques.

Besides, new paths might have been opened here. It would seem the aim of dissertation analysis ought to be to provide a linguistic understanding of knowledge creation. Some directions we might take in searching for this understanding could be indicated by way of commenting on a revealing paragraph, written by a

mathematician and teacher of mathematics, K.O. Friedrichs. In *From Pythagoras to Einstein*, he says:

> The Pythagorean theorem has suffered the same fate that so many basic mathematical facts have suffered in the course of the history of mathematics. At first, these facts were surprising when they were discovered and deep in that they required original inventive proofs. In the course of time such facts were placed into a conceptual framework in which they could be derived by more or less routine deductions; finally, in a new axiomatic arrangement of this framework, these facts were reduced to serve simply as definitions. Still, this need not have meant reduction to insignificance. What had become merely a definition may have been brought alive and made effective as a guiding principle in the development of new branches of mathematics. It is one of our aims to show that just this process describes the life cycle of the Pythagorean theorem.
>
> (Friedrichs 1965)

Friedrichs's discourse frameworks are not strictly technical. Nevertheless, his considerations are very insightful and, if translated adequately to our terminology, they could well yield guiding questions for an ambitious research programme.

The first thing to note is that what Friedrichs calls 'the Pythagorean theorem' is a proposition. With this phrase he refers to the "basic mathematical fact" that the lengths of two sides in a triangle with a right angle determine the length of the third side (and that the relation is expressed in terms of the squares of the three quantities). That is, in spite of his using the word 'theorem', he does not refer to the *proof* of the arithmetical relation. Indeed, in a manner which is perhaps not very exact from a linguist's point of view, but still in a very felicious way, he distinguishes the proposition from various possible proofs, explicitly including inventive ones and routine deductions.

The second point is that Friedrichs also distinguishes the proposition from the acts that, like definitions, may accompany it. A third point is that he opposes both proposition and acts to possible act relations, like derivations, which link the "theorem" to axioms, or the unidentified connections that stem from a definition when it functions as a guiding principle. It is almost as if Friedrichs

had been concerned with the same themes this thesis is about. It could even be adduced that he provides an external confirmation of the thesis's relevance.

Now, perhaps the most important point that should be noted is that Friedrichs relates propositions, acts and act relations, on the one hand, to conceptual developments, on the other. Discourse would seem to operate from frameworks: "in a new axiomatic arrangement...these facts were reduced to serve". But it also operates upon the frameworks: "such facts were placed into a framework", "a guiding principle in the development". Thus, discourse is seen as processes that give life to knowledge, and shape its cycles.

All this would seem to indicate that the study of academic language ought to address questions like the following:

-Which propositions are understandable from a given conceptual framework and which lie outside its scope?

-How is the accessibility of a proposition modified when a framework is restructured? *Ie* which "difficult" propositions become "easy" and which new ones become visible?

-What is the effect of a certain dissertation act on a conceptual framework?

In other words, we should not only pursue Widdowson's objective of bringing the study of text and the study of reading close to each other, but also combine these with the investigation of productive writing.

A second reading of Friedrichs fragment in the light of such questions reveals very important phenomena which have not been studied (and which were first drawn to my attention by Elin Emilsson, a student in a postgraduate research seminar on specialized language). Texts written by different authors at different times form constellations which gravitate around conceptual frameworks. This is now being studied by librarians and is, of course, the material basis for the notion of school of thought. But it lacks a linguistic characterization, because we have been interested in other ways of grouping texts, namely under registers or genres (the study of which would also benefit from the distinctions proposed here).

The dynamic view of discourse and knowledge embodied in the above paragraphs suggests another important topic for applied linguistics research: delayed comprehension. It is not uncommon for undergraduate students to find that a text which is very difficult to understand becomes rather easy after a term or two. When they look back at it, they cannot figure out why it was so hard to read. A plausible hypothesis is that originally its content was outside their conceptual frameworks, and that later, as a consequence of their being modified, it came to be within their reach. The modification is caused in part by the text itself, and probably by many other events. Therefore, we could say that the students' perception that the text has become easy is no more than an indication that it has finally been understood, and that the understanding has involved conceptual restructuring.

This sort of delayed comprehension is rarely a concern of the language teacher, although acquiring the learning capacity of which it is synonymous is often one of the main reasons for studying a foreign language. The student wants to learn the language in order to be able to read, which in turn will allow her to acquire new conceptual frameworks. But the language teacher is typically concerned with immediate comprehension, which usually means the understanding of facts from unchanging frameworks. Applied linguists would do a good service if they clarified the distinction between the two forms of comprehension and showed how the first one operates.

Applications

While research on those topics mentioned above takes place, we can begin experimenting in the English for Academic Purposes classroom with various ideas contained in this chapter. They can be grouped in three areas.

Firstly, we might devise exercises to deal with materials larger than the typical fragment of two or three paragraphs, and even larger than the article or chapter ambitious courses treat. We could consider pairs of articles at key contrasting points in the history of a discipline, for example. We could also think about a series in a development, from the theoretical breakthrough paper to the textbook chapter, including experimental reports, counterproposals and summarizing reviews.

Secondly, we might design activities in which students work in parallel with conceptual frameworks and discourse. They could, for example, identify both the framework a text presupposes and the replacements it proposes or effects. They could, as well, learn to map their own frameworks and to recognize the distance between these and the text's. On these bases, it would be possible to draw their attention to what specific acts do to a given framework. At further stages, they could be assigned the task of producing acts that would modify frameworks in given directions. From here, teaching why and how acts link to form stretches of discourse would be rather natural.

Thirdly, we might present the complexity of sentence, proposition and act relations in a manageable way by focusing on the defining features of acts: force, reference and predication. For example, rather than attempting to show directly that full sentences in the present tense can be used to make generalizations or realize definitions or express characterizations, we could concentrate on the fact that the main difference between an observation and a generalization is the type of reference (particular *vs* generic). We would also locate the contrast between a definition and a characterization on their predications (equative *vs* ascriptive). This would allow us to deal with the grammar of referential expressions (or with verbs that are used to express equation) in isolation, but without loosing a discursive, functional perspective.

Conclusion

This chapter has demonstrated that it is possible and adequate to generate the definitions of dissertation acts we need by varying force of assertion, predication and reference. That is, it has shown dissertation acts have the form the following formula represents.

FORCE: PREDICATION (REFERENCE1,... REFERENCEn).

On the basis of this principle, the chapter has also located the inadequacies Searle regreted in his taxonomy. Furthermore, it has indicated how to produce a better one: by grouping acts according to the values of the three parameters in the formula.

Perhaps the main implication of the theoretical framework developed here is that now detailed empirical studies of acts in academic discourse can be resumed. These studies are probably needed for the theory construction work to continue. This is, then, almost the place to finish this dissertation.

The chapter has opened new perspectives, too. It has suggested that the aim of dissertation research be to explain how conceptual frameworks are created and developed by constellations of texts. Accordingly, it has proposed that: a) ESP courses cover the wide range of discourse levels mentioned, from speech act elements to constellations and b) they include delayed comprehension, as knowledge processing.

Chapter 10 will indicate how further work can begin.

Chapter 9 notes

1. An example of contributions from the rhetorico-grammatical and the genre analysis traditions is the explanation of tense use referred to in Chapter 3. One can also mention the finding that students have particular difficulties with sub-technical vocabulary, "common words that occur with special meanings in scientific and technical fields" (Trimble: 129). A third result is that the methods section of a research articles is less cohesive, and depends more on "inferential bridging" than the introduction or discussion sections (Weissberg 1984; discussed in Swales 1990: 168).

2. Other traces of speech act theory in rhetorico-grammatical studies and genre analyses are the use of phrases like "rhetorical action" and references to the work of authors like Widdowson.

3. The mechanics texts comparison presented in the body of this chapter is similar to one reported in Castaños 1978. The essential difference is that the new formulation is more precise, and results from re-analysing the same data using the definitions in this chapter. The comparison is presented as open to verification because, although the corpus consisted of complete chapters, and all their utterances were act coded for the analysis, only two books were examined.