



A PHILOSOPHICAL INVESTIGATION

OF THE

RELATIVITY THESIS OF LANGUAGE

## ACKNOWLEDGEMENTS

I have numerous people to thank for their help and encouragement in writing this thesis. My concern with some of the problems dates from a very early stage in my philosophical development and certainly before my period of residency at Oxford and I have my teachers during that period to thank. There are also a large number of people to whom I am very grateful for their help since I began the work on this thesis. Earlier versions of some of the chapters were read before various audiences, whose critical remarks I should like to acknowledge. An earlier version of chapter 6 was read at a meeting of the philosophy graduate students of Oxford, Cambridge, and London in the spring of 1965. A rather different version of chapters 7 and 8 was read at The Other Side Coffee House in Chicago in August, 1966. Chapter 11 was read at an earlier stage to a colloquium of the philosophy department of the University of Calgary (Alberta) in February, 1967. All of these meetings were helpful in the development of my views.

There are a number of people who have been particularly helpful by reading and criticizing one or more chapters of this thesis, and I very gratefully acknowledge all of the help of the following people: Marsha Hanen, Brian Loar, David Mouton, Terence Penelhum, Frederick Siegler, Zeno Vendler, and Victor Yngve. I hope the many others who have helped in many ways will forgive my not mentioning them explicitly and recognize my appreciation and gratitude.

There is one person who has been most untiring in his help, patience, and suggestions, and that is the man who has served as my supervisor,

Professor Gilbert Ryle. He has read the whole of this thesis at various stages of its development and has unselfishly given me far more of his time than I deserved. I wish to express here my deepest gratitude for all of his help and encouragement.

Robert X. Ware

June, 1967

## CONTENTS

Title Page	i
Acknowledgements	ii
Table of Contents	iv
Abstract	vii
PART I	
SOME HISTORICAL AND PHILOSOPHICAL CONSIDERATIONS OF THE THESIS	1
1. INTRODUCTION	2
2. VICO AS AN EARLY APOLOGIST	15
i. The New Science of Nations	15
ii. Vico's Three Languages	17
iii. An Ideal History Based on What is Common in Men	22
iv. Necessity and Completeness in Language	25
3. WHORF AND HIS RELATIVITY THESES	29
i. The Emergence of the Thesis in Whorf's Writings	29
ii. The Linguistic Side: Phonology	31
iii. The Linguistic Side: Semantics	34
iv. The Linguistic Side: Syntax	39
v. The Non-linguistic Side: Some Activities	46
vi. The Non-linguistic Side: Dividing up and Observing the World	50
vii. The Relations in the Relativity Thesis	55
viii. Concluding Remarks and Related Views	60
4. SAPIR: A LINGUIST'S REMARKS ON THE THESIS	64
i. Some Differences Between Language and Culture	64
ii. The Identity of Content in All Languages	72
iii. The Development of a Thesis	78
iv. Language and Behaviour	82
v. Relativity and the Importance of an International Language	86
vi. Culture and the Individual	90
5. LENNEBERG AND SOME PSYCHOLOGICAL EXPERIMENTS	94
i. Some Theoretical Considerations	94
ii. Difficulties in Using a Method of Translation	98
iii. Lenneberg's Experiments and His Critics	104

PART II	SOME PHILOSOPHICAL PROBLEMS CONCERNING THE THESIS	113
6.	LANGUAGE AND SPEECH	114
1.	The History of a Distinction	114
ii.	A Linguistic Investigation of the Distinction	118
iii.	A Language as a Collection of Words and Constructions	124
iv.	The Identity of a Language and Additions to a Language	129
v.	The Notion of Speech and Its Importance	134
7.	THOUGHTS AND THEIR EXPRESSION	141
1.	Some Thoughts on Thoughts	141
ii.	Can One Have a Thought Which One Cannot Express?	145
iii.	A Thought Must Have a Complete Expression	150
iv.	Some Reputed Difficulties in Communication	155
8.	ON WHAT CAN BE SAID IN A LANGUAGE	159
1.	Introduction to the Problem	159
ii.	On Not Having a Word for Something	161
iii.	Are There Limits to Our Ability to Describe?	167
iv.	On the Absence of Syntactic Limits	169
v.	There Are No New Meanings	171
vi.	The Nature and Completeness of a Language	172
vii.	Some Final Difficulties	176
9.	THE NATURE OF CONCEPTS	179
1.	A Survey of the Concept of a Concept	179
ii.	On Some Things that Concepts Are Not	185
iii.	On What We Can Have Concepts of	190
iv.	A Few Important Lessons	199
v.	The Comparison of Concepts	201
10.	ON HAVING CONCEPTS AND CONCEPTIONS	206
1.	The Determining Factors for One's Having a Concept	206
ii.	Concepts, Language, and Predicates	212
iii.	Concepts Are Not Abilities, Images, or Ideas	216
iv.	Concepts and Conceptions	220
v.	Concepts and Distinctions in a Language	223
11.	WAYS OF THINKING AND CONCEPTUAL SCHEMES	230
1.	Points of View and Ways of Seeing	230
ii.	Forms of Thought and Ways of Thinking	237
iii.	Changing Concepts and the Effects	241
iv.	Systems of Concepts and Universes of Discourse	249
v.	The Metaphysics of Conceptual Schemes	252
12.	QUINE'S RADICAL THEORY OF TRANSLATION	258
1.	Translation and the Thesis	258
ii.	Quine's Theses and Their Foundations	259

iii.	The Situation in Radical Translation	265
iv.	Some Linguistic Problems	267
v.	Quine on Stimulations	274
vi.	Stimulus Meaning	277
vii.	The Impossibility of Translation à la Quine	284
viii.	Meaning and the Indeterminacy of Terms	287
ix.	Quine's Analytical Hypotheses	291
13.	CONCLUDING REMARKS ABOUT TRANSLATION AND ABOUT THE THESIS	295
i.	The Determinacy of Translation	295
ii.	The "Indeterminacy" of Particular Utterances	299
iii.	Some Concluding Remarks about the Thesis	305
	Bibliography	311

## ABSTRACT

In this thesis, the author considers the nature of the relativity thesis of language and some of the philosophical problems that arise from it. The thesis has probably become best known as the Sapir-Whorf hypothesis of the relativity of language, after two scholars of American Indian languages who supported various forms of the hypothesis. Views similar to theirs have been expressed by a number of different authors both before and after the writings of Sapir and Whorf. The introduction is devoted to a discussion of some of the variety of the formulations of the thesis. There is mention of a few of the many authors who have been thought to be "relativists". Some attempt has been made by others to systematize the various possible theses, and a couple of these attempts are also discussed. It is suggested that the thesis can be best discussed in terms of the very general statement of it as a thesis about a relation between linguistic and non-linguistic factors. The views of particular authors can then be discussed in respect to (1) the linguistic factors, (2) the non-linguistic factors, and (3) the nature of the relation between the factors.

The rest of the first part is then devoted to an interpretive and philosophical study of four authors who have supported a relativity thesis in some form or another. It begins with a discussion of the philosophy of language of Giambattista Vico, an Italian philosopher, who was one of the first to suggest a relativity thesis of language. His main interest was in the origin and development of speech and language. He postulated three eras, those of the gods, of the heroes, and of men, to which correspond three different languages. The languages are said to develop

parallel to the institutions of the eras. The nature of the language is discussed. The chapter ends with a discussion of Vico's notion of an incomplete language and the need for words.

The third chapter is a detailed study of the views of Benjamin Lee Whorf, who has probably been the most prominent in the promotion of the relativity thesis. It is pointed out that there is a great variation of the theses he presents and some of them are quite wild. Linguistic factors, non-linguistic factors, and relations are discussed in turn, giving those aspects of the thesis considered most important by Whorf. It is pointed out that Whorf thought there could be no simple correlations, but there is also discussion of his view about a language embodying and forcing on its speakers a science and metaphysics.

In the fourth chapter an investigation of the views of Edward Sapir is taken up. Sapir, who was an influential American linguist, formulated his views before Whorf, but without the vigour and interest that Whorf had had in the thesis. It is pointed out that there was a radical change in Sapir's views that has gone unexplained. In this chapter, an attempt is made to give at least a partial explanation for this change. Sapir distinguished between the form and the content of the language, and in his earlier writings he maintained that all languages were equal in content (what could be said in them) but different in form. At that time Sapir considered the difference of form irrelevant, and he rejected the relativity thesis without qualification. It is then pointed out that he later accepted a relativity thesis because of a change in his distinction between form and content. The distinction is questioned and is discussed later in chapter 11.

The fifth chapter is a discussion of some of the views and experiments of a contemporary psychologist, Eric Lenneberg. Lenneberg argues that previous formulations of the thesis have been useless because of a lack of precision and the impossibility of experimental confirmation. The various causes of failure and its remedies, according to Lenneberg, are discussed. Lenneberg's criteria for the formulation of a relativity thesis and some possible theses are considered. Finally, there is a discussion of some of the experiments to test a relativity thesis. The experiments have been mainly concerned with the relation between colour terminology and the memory of colour samples. The chapter ends with an indication of how little has actually been shown about a relativity between linguistic and non-linguistic factors.

Part II is concerned with some of the philosophical problems that arise from the thesis and are connected with it. The distinction between language and speech is considered both historically and linguistically in chapter six. It is argued that sentences are not parts of a language and that consequently beliefs and confusions cannot be contained in a language. The identity of a language is then discussed partly in connection with the number of words that can be added to a language without changing its identity. The relation between language and speech is shown to be close, but confusions about the nature of speech are revealed. A resulting indeterminacy of the word 'speech' is discussed, and a distinction between utterances and sentences is shown.

Chapter seven is devoted to some problems connected with non-linguistic factors and thoughts in particular. It is pointed out that there is a sense of the word 'thought' according to which there are "propositional"

thoughts, which appear to be independent from language in a way specified. It is then considered whether one might have a thought which one discovered to be inexpressible in one's language. There are various attempts to make sense of this question, discussing how the having of a thought is related to the specification of the thought. It is then argued that any thought must have a complete specification and that if everything else fails this can always be achieved by using a predicate language.

It might be thought that we can express all of our thoughts but that there are some thoughts that speakers of certain languages cannot think or express. On the other hand, there are many who contend that anything can be said in any language. These views are discussed in the eighth chapter, and it is first considered what it is not to have a word for something in a particular language, and whether this might limit what could be said in the language. It is then argued that where a language does not have a word for something that that something can always be described as one would in introducing a new word. And again one can use a predicate language, if everything else fails, and refer to certain experiences. If one has not had the relevant experiences, the failure is one of experience and not of language. It is also argued that it does not make sense to speak of there being syntactic limitations to what can be said in a language. The notion of a language being complete is then considered in relation to these remarks.

Chapters nine and ten are devoted to the notion of a concept and what it is to have a concept. First, there is a short survey of how the word 'concept' has been used. On the basis of certain linguistic evidence, some arguments are produced to show some of the things that concepts cannot be, including predicates, meanings, and capacities. Before considering some of

the other things that concepts cannot be, there is a discussion of some of the limitations of what one can be said to have a concept of. It is then suggested that there is a concept of something where there is a name or term for that something and that this distinguishes concepts from categories. Some relations between concepts are then discussed.

Chapter ten begins with a consideration of the factors determining whether one has a particular concept. It is pointed out that the factors vary with different concepts and that one can have the factors to varying degrees. The primary factors considered are those of distinguishing, describing, and drawing. It is pointed out that these are closely but not necessarily related to being able to imagine certain things. On the other hand, being able to imagine or conceive is necessarily related to having a conception, and some further distinctions are drawn between concepts and conceptions. It is discussed what it is for a language not to have a concept and argued that this does not limit what the speakers of the language can think or say. Finally, there is some consideration of how a language's not having certain concepts or words might have influences but which could always be overcome.

As was pointed out in the chapter on Sapir, it has been argued that there is no difference in what speakers of different languages can think but only differences in the way of thinking. The nature and importance of this is considered in chapter eleven. First, it is considered what it is to have a different point of view or way of seeing something, and it is argued that the way one sees something can always be interpreted in terms of what one sees. Having a point of view is shown to have a metaphorical sense meaning something similar to having a way of thinking, which in turn is interpreted in terms of what one thinks. Conceptual changes are thought to be important,

particularly by those who write about metaphysics. A change of concepts is considered and found to be unimportant to the thesis. The nature of a conceptual scheme is then considered, and it is argued that whenever we speak of a change of our conceptual scheme we can just as well speak of a change in what we think. The arguments in the previous chapters thus apply to the way we think and our conceptual schemes as well.

One argument that might arise is that it might be found that two languages are untranslatable showing that the same things cannot be said in both languages. Quine argues in Word and Object that there is an indeterminacy of translation in a way that is relevant to the thesis. There is then a close examination of Quine's views about translation and meaning. He tries to show that any translating requires the use of analytical hypotheses which can vary to the extent that they produce incompatible translations. He then argues that languages have empirical meanings which can be compared but conceptual schemes which are in some sense indeterminate. These views are attacked, and it is argued that if there is such a thing as conceptual schemes they will be shown in what people say.

In the last chapter, it is argued, contra Quine, that there is a determinacy of translation about which a bilingual is competent. It is then pointed out that there is a kind of indeterminacy of token utterances which seems to have been ignored but which is suggested by Quine's work. Nevertheless, the important thing in relation to the thesis is that a determinate utterance can always be substituted for one which is indeterminate. Translation does not provide a counterexample to the relativity of what can be said in different languages. Although there is not this kind of relativity, there might be some other kinds which are alluded to in some brief concluding remarks.

PART I

SOME HISTORICAL AND PHILOSOPHICAL  
CONSIDERATIONS OF THE THESIS

## CHAPTER 1

## INTRODUCTION

The only way to begin a discussion of some of the philosophical implications of the relativity thesis of language is to append some rather significant qualifications to the notion of the relativity thesis of language. It should be clear, as the first qualification, that the thesis does not go by any one name. One finds such diverse titles as 'the Whorfian hypothesis', 'the Sapir-Whorf hypothesis', 'the theory of the relativity of language', 'the principle of relativity', 'the linguistic relativity hypothesis', and 'the linguistic Weltanschauung hypothesis'. All are about equally inexplicit or inaccurate, but this is appropriate in view of the second significant qualification.

The second qualification is that there is no such thing as the relativity thesis of language. Most authors have spoken as though there is only one thesis, but as we shall see there is a large number of different theses that both can be advanced and have been advanced in the long history of the study of language. Since I want to make some rather general remarks about the importance of language in relation to a number of other things, I shall generally speak of the relativity thesis of language even where my comments apply to more than one thesis or principle. Even so, this practice is necessitated by the fact that one rarely if ever gets a clear statement of one thesis or even one set of theses to which one can refer. Consequently, the best that one can do in referring to these views is to lump them together but then try to spell out certain similarities

and differences that arise. In any case, my use of the title 'the relativity thesis of language' will not be important, and I think it will be clear to which view (or views) my comments will apply.

In no case shall I try to give an exposition of the history, ancient or recent, of the relativity thesis of language, nor shall I try to give an exegesis of all of the important studies of the thesis. The most that I shall try to do, in this connection, is to give the reader a general idea of the variety of work that has been and is being done in the area as well as some of the possible variations of the thesis itself. Afterwards, I shall make some more lengthy remarks about some of the writers in this area.

Not long ago, while conversing with an anthropologist, I remarked that I was working on the relativity thesis of language, and his response to me was, 'Aren't we all?'. This was interesting, because, in a way, his suggestion was right. Great numbers of anthropologists, sociologists, psychologists, linguists, and various combinations thereof have done or are doing work on what they call the relativity thesis of language or whatever. The extent of the work produced is indicated by the large number of collections with titles like: Language, Culture, and Personality; Language in Culture; and Language in Culture and Society.<sup>1</sup>

The particular man with whom I was conversing is actually doing some kinship studies, which means he is investigating the terminology that is used in referring to one's relatives. Others are investigating or writing

---

1. I particularly recommend the last volume (Hymes, Language in Culture and Society), which is a marvelous reader with excellent notes and bibliographies.

about the importance of knowing a bit about linguistics in order to do work in anthropology or ethnology. Some have been more interested in the development of speech in children, while others have done important work on the effect of certain speech defects on our thinking. There is also important work being done on memory and recognition in relation to languages as well as particular styles in the use of certain languages. Some would think that all of these investigations fall under a study of the relativity thesis of language. Recently, there have also been studies of what are called language universals, those things which are universal to all languages. These studies have also been thought to be relevant to the relativity thesis of language because in showing what is similar they also indicate what is different in various languages.

When we add the work of those in the past who have been said to have worked on the relativity thesis of language, the variety of studies becomes even greater depending on how liberal the inclusion is. Some have mentioned Plato because of his Cratylus; others have mentioned Vico and Herder because of their interest in the origin of language; Humboldt and then Weisgerber and Trier are thought to be 'relativists' because of their views about language as an intermediary between reality and conceptualization; and Cassirer, Croce, and Collingwood are sometimes included because of their views about the expressiveness of language.

So far, of course, this does not tell us very much about the relativity thesis of language except that whatever it is it cannot be very clear and straightforward. However, I should not like to include such vastly different studies under the one rubric of studies on the relativity thesis of language, nor do I think most recent discussants of the thesis

would like to either. Perhaps the variety can be reduced somewhat by saying more straightforwardly what the thesis is supposed to be. This is not an easy task in itself, but I think at least some progress can be made.

We know by now that it is a thesis concerning language, but we know little more than this from what I have said above. As a first and very rough approximation, I shall suggest that the relativity thesis of language is the thesis that our language determines or affects our thinking. This does not cover all formulations of the thesis, but it does cover a large number of formulations, some of which are contrary to others. It is sometimes said that our language determines or affects our behaviour, i.e. what we do and the way we do it. This is very broad, and of course can encompass a number of different views. It is occasionally even added on the side of language that the term 'language' is meant to include speech and thought, as if there were no difference between the three. This might console those who think our language affects our thinking, but it is clearly a very different view. This view could just as well be called the relativity thesis of thought, i.e. that our thinking affects our acting. There are also those who speak of our language affecting our speech, and perhaps the all too frequent identification of language and speech is consoling to them as well.

One source of confusion and variation is the indeterminateness of the notion of language. It is very often not clear whether or not the writer is talking about speech as well when he is talking about language. Very different views can be held depending upon whether one is talking about both speech and language or just language. There are also differences about

whether it is language that is relative to something else or whether it is particular languages that are relative to that something else or both. And sometimes it is suggested that the relativity is only between two languages or between the thinking of two people or the people of two speech communities. And of course the variations go on and on when we come to the things that are said to be affected by language or a language.

As one might expect, there has been some attempt to systematize this great variety of views, although the number of attempts have been meagre considering the demand. One attempt that has been made involves dividing the 'Whorfian hypothesis' into four levels.<sup>1</sup> The four levels represent the four possibilities of combining two factors which are divided into two sets of data. On the one hand, there are the data of language characteristics, which the author divides into lexical or 'semantic' characteristics and grammatical characteristics. On the other hand, there are what he calls 'the data of (cognitive) behavior', which are separated into language data (or 'cultural themes') and non-linguistic data. Those dealing with 'cultural themes' are meant to concern 'large group phenomena', while those dealing with non-linguistic behaviour are roughly meant to concern individual behaviour.<sup>2</sup> The direction of influence is not specified, since, as is pointed out, Whorf at least sometimes thought that language and culture influence each other. It should also be clear

1. See: Fishman, 'A Systematization of the Whorfian Hypothesis'.

2. Ibid., pp.336-337.

that within the levels there are a number of different theses possible depending upon the variables involved.

A brief indication of some of the views that have been held at these different levels will give us a better idea of the nature of the relativity thesis of language. At the first level, there is the relation between the vocabulary and the so-called 'semantic structure' on the one side and language behaviour on the other. Here we find suggestions of a thesis that there is an 'extent to which the semantic structure of one language may be unable to express or express easily, without additions to that structure, a thought content which the semantic structure of another language handled adequately.'<sup>1</sup> The important consideration at this level is how easily or readily something will be said by the speakers of a particular language.

As is pointed out by Fishman, Malinowski was concerned with problems at this first level in his famous writings on language.<sup>2</sup> According to Malinowski, words mean the effects they produce, and thus he says that '[a] word is used when it can produce an action and not to describe one, still less to translate thoughts.'<sup>3</sup> The importance of this for Malinowski is that the effect is different depending upon what he calls the 'context of situation', which in turn depends upon the culture in which the word is

- 
1. Gastil, Raymond P., 'Relative Linguistic Determinism', Anthropological Linguistics, 1 (1959); 24-38. I was led to this article by Fishman's discussion of Gastil.
  2. See particularly: Malinowski, Bronislaw, 'The Problem of Meaning in Primitive Languages' in C.K. Ogden and I.A. Richards, The Meaning of Meaning (London: Routledge and Kegan Paul Ltd., 1949), pp. 296-336 and Malinowski, B., Coral Gardens and Their Magic, vol.II (The Language of Magic and Gardening) (London: Allen and Unwin, 1935).
  3. Malinowski, 'Meaning in Primitive Languages', p.322.

spoken. It is because language can only be considered in its context of situation that there will be a variation of what can readily be said. Whorf, as well, sometimes gives evidence for a relation between the semantics of a language and the uses of the language, but he seems to be more interested in other views.

At the second level of the Whorfian hypothesis, we find a relation between the lexical and 'semantic' characteristics of a language on the one hand and the non-linguistic behaviour of its speakers on the other. This is clearly the level at which the least obscure and most careful studies have been made. In a separate chapter, I discuss the work of Lenneberg, who has done the most significant research on the relativity thesis of language. Work has been done by others on the effect of language on memory and classification. For example, Carroll and Casagrande have found what they consider evidence for the view that speakers of different languages will classify different pictures as belonging together where the languages have verbs with different ranges of application.<sup>1</sup> I am doubtful about some of these experiments, but I shall not discuss those doubts here.

It is at the third level that we find the most startling and the most fanciful views. This level relates the grammatical structure of a language with cultural factors as exhibited in the use of a language. Both Whorf and Sapir in a rather dramatic way discussed the importance of the structure

---

1. See: Carroll, J.B. and J.B. Casagrande, 'The Function of Language Classifications in Behavior' in E.E. Maccoby, T.H. Newcomb, and E.L. Hartley, eds., Readings in Social Psychology (New York: Henry Holt and Co., 1958), pp. 18-31.

of a language, and I devote a separate chapter to each of them. One man who is often believed to be a modern day adherent of the relativity thesis of language is Boas, who was a teacher of Sapir. Probably the only source of this belief is Boas's introduction to the Handbook of American Indian Languages. But the strongest remark that he makes there is that:<sup>1</sup>

It does not seem likely, therefore, that there is any direct relation between the culture of a tribe and the language they speak, except in so far as the form of the language will be moulded by the state of culture, but not in so far as a certain state of culture is conditioned by morphological traits of the language.

I would agree with Kroeber when he says:<sup>2</sup>

I doubt whether Boas can be properly cited as having had even an indirect hand in the development of the theory. He was a relativist [in the sense that he thought different societies have different cultures] and in 1911 [in his introduction] pointed out that linguistic structure was largely used unconsciously; but unconsciousness does not per se establish influence. So far as I know, Boas did not in the 30 remaining years of his life comment on the Whorf theory, and I am confident that his attitude remained critically negative.

Someone who is universally recognized as an apologist for the relativity thesis of language is Dorothy Lee, who shows how the theory can sometimes become quite wild. She says, for example:<sup>3</sup>

To the Wintu, the given is not a series of particulars, to be classed into universals. The given is unpartitioned mass; a part of this the Wintu delimits into a particular individual. The particular then exists, not in nature, but in the consciousness

1. Boas, Franz, 'Introduction' in Boas, ed., Handbook of American Indian Languages (Washington, D.C.: Smithsonian Institution, 1911) as quoted in Hymes, ed., Language in Culture and Society, p.19.
2. Kroeber, A.L., 'Comment', American Anthropologist, 63 (1961), pp. 911-912.
3. Lee, Dorothy, Freedom and Culture (Englewood Cliffs, N.J.: Prentice Hall, Inc., 1959), p.122. In fairness to her, it is important to point out that she is more careful in other sections.

of the speaker. What to us is a class, a plurality of particulars, is to him a mass or a quality or an attribute.

Later she says that unlike the speakers of English the Wintu have an 'attitude of humility and respect toward reality' and adds: 'We are aggressive toward reality. We say, This is bread; we do not say like the Wintu, I call this bread, or I feel or taste or see it to be bread.'<sup>1</sup>

Hoijer, who is another universally acknowledged adherent of the relativity thesis of language, has made an extensive study of Navaho, and, among other things, he argues that 'the relation of subject to verb and verb to goal...is clearly related to the Navaho division of objective reality into a number of sharply defined object classes in motion or at rest.'<sup>2</sup> It is at this level of the relativity thesis that we get comments about world views, the division of reality, new types of logic, and metaphysics. I shall discuss some of these comments below, but others I shall leave to rest in their absurdity.

Finally, there is Fishman's fourth level, which relates the grammatical structure of a language to non-linguistic data and individual behaviour. Fishman himself includes very little in this level. The only study he considers is one by Carroll and Casagrande on the influence of verb forms. But obviously it should include some of the views of Whorf about the structure of our language influencing the way we perceive and think about the world. Some of the things that were said in relation to the previous

1. Ibid., p.129. (Her italics.)

2. Hoijer, Harry, 'Cultural Implications of Some Navaho Linguistic Categories' in Hymes, ed., Language in Culture and Society, p.147.

level would apply to this level as well to the extent that an individual's behaviour is affected by the culture of his society. More will be said about this in the following chapters.

One thing that I hope the above has made clear is that there are a large number of different things that can stand on either side of the relation. The relativity thesis can include a large number of different theses depending upon what the two things are that are said to be related. What Fishman says very little about is the nature and direction of the relation between the two things. There are several different possibilities here as well. Hymes, in a recent article, suggests a systematization of this aspect of the relativity thesis of language. He gives the following 'four major standpoints' concerning 'the nature and direction of dependence':<sup>1</sup>

- (1) language as primary (source, cause, factor, independent variable, etc.);
- (2) the rest of culture as primary;
- (3) neither as primary, the two being seen as jointly determining;
- (4) neither as primary, the two being seen as determined by an underlying factor (such as world-view, Volksgeist, national character, etc.).

He then adds that there are two sets of relationships for each of the four standpoints. 'One set concerns the development of a culture, and another set concerns the development of an individual.'<sup>2</sup> There are then sixteen possible combinations as different views, although it is unlikely that some of them have been held by anyone. To give an example of one of the

1. Hymes, 'Two Types of Linguistic Relativity', p.120.

2. Ibid., p.120. It should also be clear that there will be a variety of theses depending on the nature of the dependence.

combinations, one might hold that the development of a language is determined by the rest of the culture while the language itself determines the development of the individual. Perhaps this was the view that was expressed by the nineteenth century, German precursor of the 'relativist', Wilhelm von Humboldt, when he said that 'I like a true, inexplicable wonder, it language bursts forth from the mouth of a nation, and no less amazingly, though this is repeated every day and indifferently overlooked, it springs from the babble of every child'.<sup>1</sup> Other combinations can be exemplified from various authors.

Actually Hymes presents the above systematization as only part of the preliminaries to his own view that there are two types of linguistic relativity, one having to do with the linguistic structure and the other with the use of language.<sup>2</sup> He is the only one, with whom I am familiar, who talks about the relativity thesis of language in terms of the use of language. It is not, however, that the use of language influences the structure and vocabulary of the language or vice versa. As he puts what he calls his 'main point':<sup>3</sup>

Two sets of data from a language may both lead to an inference as to a distinctive cognitive style. Yet if the data is collected in abstraction from contexts of use, someone might infer a presumptive world view from both, only to find later that one set came from a speaker to whom the language was an argot...I have tried to indicate from ethnographic data that multilingual situations are

- 
1. Wilhelm von Humboldt, 'Über die Verschiedenheit des menschlichen Sprachbaues', as quoted in Ernst Cassirer, The Philosophy of Symbolic Forms, vol. I (Language) (New Haven: Yale University Press, 1953), p.156.
  2. Cf. Hymes, 'Two Types of Linguistic Relativity', p.114.
  3. Ibid., pp.157-158.

but special cases of a general situation; that the patterns and specializations of the use of language in any society must be analyzed, as the indispensable basis for any other inference as to the place of language in personality, society, or culture.

It is clear that any relativity thesis of language must consider the possibility of different influences from a speaker's first and second languages.

I have tried to make some general comments about the relativity thesis of language in order to give a general idea of the varieties and vagaries of the 'thesis'. In my comments below on particular writers, I shall not use any of the systematizations discussed above, nor shall I develop one for my own purposes. The important thing is that we now have a better basis for discussing the thesis. It is now clear that the relativity thesis of language involves linguistic items (perhaps including the use of language and speech) in some kind of relation to non-linguistic items. Keeping this in mind, I shall consider, particularly for Whorf and Sapir, three different things: (1) the nature of the items to be related on the linguistic side; (2) the nature of the items to be related on the non-linguistic side; and (3) the nature of the relation between the items on both sides. Neither Whorf nor Sapir are clear about any of these things, and so I shall continue to speak of the relativity thesis of language.

Most of my comments in this introduction and indeed in the rest of Part I are about non-philosophers. It is probably obvious by now that the thesis has its philosophical implications, but it should also be clear that it is not without its philosophical formulations and related views. Nietzsche, for example, has said that 'by the grammatical structure

of a group of languages everything runs smoothly for one kind of philosophical system, whereas the way is as it were barred for certain other possibilities.<sup>1</sup> Cassirer seems to provide another example when he says that 'the content of the concept merges with the content and function of the word.'<sup>2</sup>

Various forms of the thesis have also been suggested by more contemporary and perhaps more congenial philosophers. For example, John Wisdom speaks of language blinding and distorting while Wittgenstein speaks of language misleading and victimizing. Perhaps one need not take these comments so seriously, although one does often hear of a language containing conceptual confusions and of particular concepts being embedded in particular languages. We also hear much of conceptual schemes and conceptual revisions. These are things that need further investigation, and this will be done primarily in Part II.

I shall devote the rest of Part I to a detailed investigation of four writers whom I consider important to the relativity thesis of language. My remarks will be largely expository but with philosophical comments and criticisms. I discuss Vico because he presented an early discussion suggesting the relativity thesis of language and because of some of his interesting and germinal ideas. The reasons for discussing Whorf and Sapir should be self-evident. Not only are they historically important, but they also discuss the thesis at great length. Lenneberg has been important, as will be seen, because of his careful and precise experiments to test the thesis.

- 
1. Friedrich Nietzsche as quoted in A.G.N. Flew, Logic and Language, Second Series (Oxford: Basil Blackwell, 1966), p.3.
  2. Cassirer, The Philosophy of Symbolic Forms, vol.I, p.278.

## CHAPTER 2

## VICO AS AN EARLY APOLOGIST

i. The New Science of Nations

The Principles of New Science of Giambattista Vico Concerning the Common Nature of the Nations is primarily a development of a systematic approach to the study of society. In particular, the 'New Science studies the common nature of nations in the light of divine providence, discovers the origins of institutions, religious and secular, among the gentile nations, and thereby establishes a system of the natural law of the gentes'.<sup>1</sup> In doing this, it 'comes to describe at the same time an ideal eternal history traversed in time by the history of every nation in its rise, development, maturity, decline, and fall.' (NSV, §349.) There are many subjects in the new science worthy of study, but its importance to us in the study of linguistic relativity is found primarily in the importance given to language in the development of nations and to philosophy in the study of this development. (Cf. NSV, §§ 351-359.) For example, according to Vico, 'the vulgar [languages] should be the most weighty witnesses concerning those ancient customs of the peoples that were in use at the time the languages were formed.' (NSV, §151.) That they should be weighty witnesses arises from his many imaginative comments about the relation between language and important human institutions. I shall first make a

---

1. Vico, The New Science of Vico (henceforth: NSV), § 31. The last phrase can be understood as the natural law of nations or of peoples. Cf. the introduction by Fisch, NSV, pp. xxx-xxxv.

few remarks about Vico's ideal eternal history and then turn to a discussion of what he regards the relations to be between speaking (and the language used) and other human activities.

Vico's science is meant to deal with the course of nations as well as their recourse, for according to Vico every nation returns to the three kinds of nature (in different forms) found in their rise according to the spiraling development in the ideal eternal history. (Cf. NSV, §§1047-1056, 1108) However, almost all of his discussion is concentrated upon the history and its principles of the rise of nations. For Vico, there are three kinds of nature and government, and in harmony with these are three kinds of language, 'which compose the vocabulary' of his science, depending as it does largely upon the evidence of language. (Cf. NSV, §32.) The three languages are:

(1)...a mute language of signs and physical objects having natural relations to the ideas they wished to express. (2) That spoken by means of heroic emblems, or similitudes, comparisons, images, metaphors, and natural descriptions...(3) Human language using words agreed upon by the people, a language of which they are absolute lords. (NSV, §32.)

Here, I shall follow Vico in devoting most of my attention to the mute language, which was spoken in the age of the gods.<sup>1</sup>

In this first age of the gods, men were like children who have a 'most vigorous' memory (NSV, §211), 'excel in imitation' (NSV, §215), and consequently have a weak power of reasoning. (NSV, §185.) The mute speech arose from the first men's inability 'to form intelligible class concepts of things'. (NSV, §209). The first men 'had a natural need to

---

1. Much of Vico's discussion is enshrouded in fantasy and allegory, and his discussion can only be given its true importance if this is recognized. According to Vico, there were three ages to which the three languages correspond: the age of gods, the age of heroes, and the age of men. (See NSV, §31.)

create poetic characters; that is, imaginative class concepts or universals, to which, as to certain models or ideal portraits, to reduce all the particular species which resembled them.' (NSV, § 209.) These imaginative class concepts were the poetic genera which were created from the concrete properties of individuals and species. (NSV, § 495.) It can now be seen, according to Vico, that the poetic faculty 'must submerge the whole mind in the senses' and 'plunge deep into particulars.' (NSV, § 821.) Moreover, this faculty is not found in 'men most learned in philosophy' (NSV, § 838), because it is impossible for it to exist at the same time as metaphysics, which 'abstracts the mind from the senses'. (NSV, § 821.)

#### ii. Vico's Three Languages

It would be wrong to think that the poetic characters compose poetic sentences in the ordinary sense. The first speech 'was a fantastic speech making use of physical substances endowed with life and most of them imagined to be divine.' (NSV, § 401.) It existed before a vocal language with articulate sounds and thus existed only as a mental language which was not spoken. (Cf. NSV, § 401.) 'Thus the first language in the first mute times of the nations must have begun with signs, whether gestures or physical objects, which had natural relations to the ideas [to be expressed] .'. (NSV, § 401, the translators' bracketing.) Vico had made the same comment earlier: 'Mutes make themselves understood by gestures or objects that have natural relations with the ideas they wish to signify.' (NSV, § 225.) This shows that the first speech was indeed a fantastic speech. It was not composed of articulate sounds as one would ordinarily think of speech.

Indeed in Book Four, he says that the characters found in the mute language 'were divine, properly called hieroglyphics, [and] used...by all nations in their beginnings.' (NSV, § 933.) When Vico talked about hieroglyphics, he also talked about speaking hieroglyphics: 'For it was by a common natural necessity that all the first nations spoke in hieroglyphics.' (NSV, § 435.) It was 'hieroglyphs by which all nations spoke in the time of their first barbarism.' (NSV, § 226.) He indeed says that 'all nations began to speak by writing, since all were originally mute' (NSV, § 429), but it would be wrong to suggest that a writing system was the first spoken language. A system of writing at most can only depend upon a system of speaking.

It is not accurate to say without qualification that the hieroglyphic characters constitute a written language for Vico. This can be seen partly by his principle of hieroglyphs which is that 'mutes make themselves understood by gestures and objects'. (NSV, § 225.) Idanthyrus, the king of the Scythians, is said to have 'used five real words' as hieroglyphs, those being a frog, a mouse, a bird, a plowshare, and a bow. Vico says of such hieroglyphic speech that it is 'a speech by physical things'. (NSV, § 435.) He also suggests that money, totems, and signs to fix boundaries are hieroglyphs. All of these objects 'carried their meaning in themselves' as hieroglyphs with a natural relation to ideas. It is also clear that Vico thought certain gestures have hieroglyphic significance, but I can only find a few gestures which he definitely presents as hieroglyphs. One of the gestures is that of swinging the scythe three times, which is said to signify three harvests. (NSV, § 484.) Another is the act of cutting off the heads of flowers. (NSV, § 435.) Pointing

can also act as a hieroglyph and often does, according to Vico.

Sometimes, however, Vico recognizes hieroglyphics in a more ordinary sense. Thus he says of the Chinese that they still write in hieroglyphics. (NSV, § 435.) He also points out that writing in hieroglyphics was used in Egypt and even Scotland. He recognizes, however, that these hieroglyphics were rather different and considers them to constitute a 'second group'. They constitute a group of symbols that are between the divine and human symbols, i.e. the significant objects and the vulgar terms. They often signify certain sounds or words. These hieroglyphics can then be seen to be the characters of the second or heroic language. Before turning to this heroic language, something should be said about these sounds and their expressiveness in the mute language.

According to Vico, the true poetic sentences are 'sentiments clothed in the greatest passions and therefore full of sublimity and arousing wonder.' (NSV, § 34.) They are 'formed by feelings of passion and emotion'. (NSV, § 219.) Vico further remarks, '[m]en vent great passions by breaking into song, as we observe in the most grief-stricken and the most joyful.' (NSV, § 229.) Thus, he points out, 'mutes utter formless sounds by singing' (NSV, § 228), while occasionally using monosyllabic (cf. NSV, § 231) and onomatopoeic (cf. NSV, § 447) words. This is said to suggest that articulate languages develop as they might develop in a child. One thing that Vico is certainly trying to point out is that the mute language is closely related to the passions, and particularly the violent passions, of the first men. It is quite reasonable that there would be sounds expressing pain or extreme anger, but of course these would not be 'full of sublimity'.

From this inarticulate speech came the first words of the 'noble'

(NSV, § 437) speech of the heroes. It is difficult to draw the dividing line between this speech and that of the mutes, but the accuracy in drawing it is not important to Vico's thesis.<sup>1</sup>

The nature of the development that resulted in the heroic speech is suggested by some of the remarks above, and it can be looked upon as the speech intermediate to the speech of the mutes and the vulgar speech in the age of men. The heroic language was 'by heroic blazonings, with which arms are made to speak'. (NSV, § 930.) These are among the hieroglyphs which have survived from mute speech and are the signs with natural meanings in which the heroes wrote. (Cf. NSV, §§ 438 and 484.) But these hieroglyphs took on analogical meaning (cf. NSV, § 484), and the language thus became a language 'spoken by symbols'. (NSV, § 438.) 'In consequence [the symbols of the heroic language] must have been metaphors, images, similitudes or comparisons, which, having passed into articulate speech, supplied all the resources of poetic expression.' (NSV, § 438.) This was the time when the nations formed the first poetic language which contained 'the first lights of poetic style, which are vivid representations, images, similes, comparisons, metaphors, circumlocutions, phrases explaining things by their natural properties, descriptions gathered from their minuter or their more sensible effects, and, finally, emphatic and even superfluous adjuncts.' (NSV, § 456.) Like the hieroglyphics in the language of the mutes, the heroic characters were also imaginative universals, but which 'reduced the various species of heroic things'. (NSV, § 934.) This was also the time of the rise of monosyllabic and onomatopoeic

---

1. Vico, Autobiography, p.153.

words.

But still, according to Vico, the reasoning power was weak and the use of abstraction was rare such that digressions 'were born of the grossness of the heroic minds, unable to confine themselves to those essential features of things that were to the purpose in hand'. (NSV, § 457.) This resulted from what Vico considered a poverty of the use of imaginative genera, which, 'as the human mind later learned to abstract forms and properties from subjects, passed over into intelligible genera, which prepared the way for the philosophers' and reasoning. (NSV, § 934.)

With the rise of monosyllabic words and intelligible genera came the birth of the human or epistolary language which was a language 'by articulate speech' (NSV, § 931), 'using words agreed upon by the people, a language of which they are absolute lords'. (NSV, § 32.) This is the language 'which is used by all nations today' (NSV, § 931), and its characters are the words of the modern, vulgar languages. (NSV, § 935.) It is the language which serves 'the common uses of life.' (NSV, § 32.)

Once again the theory, which has given us the order of development in the divine and heroic languages, also gives us 'the order in which the parts of speech arose, and consequently the natural causes of syntax.' (NSV, § 454.) 'Articulate language began to develop by way of onomatopoeia' (NSV, § 447), and then the first words 'were formed...from interjections...under the impetus of violent passions.' (NSV, § 448.) After interjections were formed pronouns, which 'serve in sharing our ideas with others concerning things which we cannot name or whose names another may not understand.' (NSV, § 450.) Next came the particles, which go before nouns and signify modifications. (NSV, §§ 451 and 453.) 'Gradually nouns

were formed.' (NSV, §452.) They 'awaken ideas which leave firm traces'. (NSV, §453.) Last of all came the verbs, signifying 'motions, which involve past and future'. (NSV, §453.) The result is an articulate language which is 'suitable for expressing the needs of common everyday life in communication from a distance'. (NSV, §439.)

iii. An Ideal History Based on What Is Common in Men

So far I have discussed the three kinds of languages, which completely give the kinds of languages in the ideal eternal history as described by Vico's science. It is an ideal history because it is about what would be the case if the allegories were true. That they are not taken to be true is shown by his comment 'that as gods, heroes, and men began at the same time (for they were, after all, men who imagined the gods and believed their own heroic nature to be a mixture of the divine and human natures), so these three languages began at the same time'. (NSV, §446.) Furthermore, there are some things that cannot be taken seriously if nations are said to return to barbarian times and rise again. (Cf. NSV, §1046.) Examples that Vico gives do not show that nations returning to barbarian times have lost articulate speech.

On the other hand, it is an eternal history because it shows what 'the course of the institutions of the nations had to be, must now be, and will have to be'. (NSV, §348.) It shows what is and must be common to all nations, which is determined by 'the necessary harmony of human institutions'. (NSV, §348; cf. §32.) The important thing for Vico is that there is an underlying 'universal etymology'.<sup>1</sup> Through a study of philology

---

1. Vico, Autobiography, p.153.

it can be found that there are ideas and natures which are common to isolated nations. This is significant, since, according to Vico, 'uniform ideas originating among entire peoples unknown to each other must have a common ground of truth.' (NSV, §144.) This is what 'establishes the common sense of the human race as the criterion...to define what is certain in the natural law of the gentes' (NSV, §145) as found in the underlying agreements.

Because of this common nature of the first men, there must, according to Vico, 'in the nature of human institutions be a mental language common to all nations, which uniformly grasps the substance of things feasible in human social life' (NSV, §161.) From this common mental language, 'linguistic scholars will be enabled to construct a mental vocabulary common to all the various articulate languages living and dead.' (NSV, §162.) And from this 'issues the mental dictionary for assigning origins to all the divers articulated languages. It is by means of this dictionary that the ideal eternal history is conceived, which gives us the histories in time of all nations.' (NSV, §145.)

It is important to realize now that the mental dictionary is only a dictionary in a very peculiar sense. It is completely mental and gives a mental vocabulary. I am inclined to think that Vico regards this mental vocabulary as a vocabulary of ideas that is common in all men. At least for him, the mental language is exactly the same in all men, and here he seems to be referring to the common natures and common ideas. This would then mean that the mental dictionary is a collection of ideas and not of words and deals with another language which is universal and composed of ideas. I think it is unfortunate that he postulated this other language,

but what is important in his comments is that he wants to show that there are certain things common to all men and societies.

It is these things which are held in common that tell us the nature of men and confirm the natural law of nations. He continually appeals to what is natural as opposed to what is many and diverse (cf. NSV, § 144) and what is natural as opposed to what is forced. (Cf. NSV, § 1108.) Thus, he speaks of men being 'naturally inclined by the senses to see [the mind] externally in the body' (NSV, § 236) and being 'naturally led to preserve the memories of the institutions and laws that bind them within their societies.' (NSV, § 811.) From this he arrives at the axiom that 'the order of ideas must follow the order of institutions.' (NSV, § 238.)<sup>4</sup> This 'must' seems to be a logical 'must' for Vico and it shows that he thinks ideas are logically related to institutions. Vico also gives an axiom presenting the order of institutions and says of this axiom that it 'is a great principle of etymology, for this sequence of human institutions sets the pattern for the histories of words in the various native languages.' (NSV, § 240.)

The important thing that Vico wanted to point out was a natural connection between the language that men use and the activities in which they participate. It might be suggested that an institution for Vico is a human activity or something which is logically related to a human activity (e.g., laws). The concept of an institution then becomes very

---

1. Fisch points out (in his introduction to NSV, pp.11-1111) that Vico did not use the word 'istituzione' because it had a sense of being created by men, which is just what Vico did not mean. Instead, he uses different words which the translators feel they can now translate as 'institution'. The translation may be too free at times, but I do not think it overly obscures the ideas.

inclusive, but I think that is just the point. The kinds of things with which language is related are very inclusive. The point is that language pervades human actions and human activity, and at the same time these actions and this activity affects the language that is used.

#### iv. Necessity and Completeness in Language

Wherever there are human actions and activity there will also be human necessities and utilities, which are the origin of the mute language, and consequently our present human language. (Cf. NSV, §§ 34 and 216.) This is partly to give the tautology that language can be used wherever it can have a use. But Vico would not allow that it suddenly comes into existence just as it is now. 'Men first feel necessity, then look for utility, next attend to comfort, still later amuse themselves with pleasure'. (NSV, § 241.) First, language arises in connection with the necessities of human life. At first language is crude just as life is at first crude. There are only a few 'real' words and a very few significant sounds. Later, human society develops and men begin to attend to their comforts, and the language develops with society. As human activity spreads to areas of human comfort the language expands along with it, which follows from the realization that the histories of human institutions set 'the pattern for the histories of words'. (NSV, § 240.)

All of this should make it clear why Vico put such a great emphasis upon language and why he thought the study of language was a necessary tool for the study of human society. According to Vico, the 'etymologies of the native languages...agree, which tell us the histories of the institutions signified by the words, beginning with their original and proper meanings

and pursuing the natural progress of their metaphors according to the order of ideas, on which the history of languages must proceed.' (NSV, § 354.)

Once we realize that the changes in language correspond to the changes in society, we can then find out about societies by studying the history of languages. Vico usually makes this point in regard to language and society in general in order to show the common nature of all nations.

But because of this important relation between language and other aspects of society, features of particular languages can also tell us about features of particular societies. Thus, 'a language of an ancient nation, which has maintained itself as the dominant tongue until it was fully developed, should be a great witness to the customs of the early days of the world.' (NSV, § 152.) It is in the many diverse modifications that diverse aspects are expressed. (NSV, § 161; cf. § 355.) Only in this way can philology 'yield many important discoveries concerning antiquity.' (NSV, § 413.) So in spite of the importance he attributes to the common nature of nations, there is also a diversity which similarly depends upon the logical relation between language and human institutions. Thus he says:

as the peoples have certainly by diversity of climates acquired different natures, from which have sprung as many different customs, so from their different natures and customs as many different languages have arisen. For by virtue of the aforesaid diversity of their natures they have regarded the same utilities or necessities of human life from different points of view, and there have thus arisen so many national customs...so and not otherwise there have arisen as many different languages as there are nations. (NSV, § 445.)

Here his views are most suggestive of the views that were later held by Whorf and Sapir. Differences of languages can be revealing of differences in customs. But unfortunately very little is said about the modifications, the diversity, and the different points of view. For various reasons, these

are thought to be far less important than the similarities and common nature of nations.

One of the most important factors for not giving more attention to this diversity than he did is that, unlike Whorf in particular, Vico thought that ideas and languages were logically related and could not be considered apart. In fact, he criticized himself in the First New Science by complaining that he 'treated the origins of ideas apart from the origins of languages, whereas they were by nature united.'<sup>1</sup> It is probably also important that much of his attention was devoted to etymologies as opposed to a synchronic study of languages. This meant that his examples, many of which show similarities to those of Whorf (cf. NSV, § 433), were relevant to the historical development of language rather than to what can be expressed in it.

On the other hand, he did think of some languages as less adequate than others in expressibility. He spoke of the first language as inexpressive, inadequate, and incomplete. On several occasions he tries to show that fables and characters were necessary because 'of the extreme poverty of speech that must have prevailed in the first times, since, copious as our present languages are, even in them the same word often signifies different and sometimes contrary things.' (NSV, § 581.) Notice that he also suggests that our present languages are somehow incomplete because of the ambiguity that is found in them. By 'poverty of speech' Vico seems to mean some sort of poverty of expression. He even speaks of the 'excessive poverty of expression' of the first rustic times. (NSV, § 407.)

---

1. Vico, Autobiography, p.194.

To say that the mute language was incomplete would demand that a standard of completeness be set up, and I think this is just what Vico has done. He has compared the mute language with our present language and found that the mute language has fewer words and names. He seems to think that this shows that the mute language is less complete than our present language. But he does not discuss why he thinks this has been shown, or whether it is indeed even meaningful to speak of completeness in connection with ordinary language. These are both considerations which I discuss below in my general study.

Now, however, I shall turn to the twentieth century and the writings of Sapir and Whorf. Sapir was the first to express views about the thesis, but Whorf's views were more far-reaching and his discussions of the thesis more abundant. Whorf undoubtedly gave the greatest impetus to the relativity thesis of language, so I shall turn first to his work.

## CHAPTER 3

## WHORF AND HIS RELATIVITY THESES

i. The Emergence of the Thesis in Whorf's Writings

Any discussion of the relativity thesis of language demands a close study of the work of Benjamin Lee Whorf if only because of his importance as one of its most recent apologists and his boldness of presentation of the thesis in several forms. No doubt he often overstated his views when his youthful energy and fascination became strong in the face of linguistically and philosophically naive audiences such as the readers of The Theosophist and Technology Review. On the other hand, very similar ideas were presented when he had occasion to present them to or discuss them with linguistically sophisticated audiences.

That he addressed his remarks to a variety of audiences is one of several probable explanations for the significant variations and even inconsistencies in his views. Also responsible for the variations was an unfortunate lack of care in specifying the variables of the thesis with any detail. Thirdly, much of his discussion was of comparisons which seemed to be significant but whose exact significance was far from clear. Finally, I shall mention that there seems to be some development in the thought of Whorf himself about the exact nature of the thesis. All of this must be taken into account in an investigation of what Whorf said about the thesis.

Although Whorf was interested in the relativity thesis right from the beginning of his linguistic studies, Carroll seems to be quite right when he says about Whorf: 'The idea of linguistic relativity did not emerge in

a full-fledged form until after Whorf had started studying with Sapir',<sup>1</sup> which was in 1931. But even then the idea was in its infancy in Whorf's writings, and as late as 1940 he was to say: 'We are thus introduced to a new principle of relativity, which holds that all observers are not led by the same physical evidence to the same picture of the universe, unless their linguistic backgrounds are similar, or can in some way be calibrated.' (LFR, p.214.) He later stated this in 'informal terms' as due to the effect of different grammars. And I think this had a note of revelation for him as well as his readers. He certainly seemed to consider this one of the most precise presentations of his thesis, and he refers to it in future articles. It is indeed at least one view stated by Whorf about the relation between the linguistic and the non-linguistic. As early as 1936, however, it was stated a bit differently as well as a bit more rashly when he wrote: 'Every language contains terms that have come to attain cosmic scope of reference, that crystallize in themselves the basic postulates of an unformulated philosophy, in which is couched the thought of a people, a culture, a civilization, even of an era.' (LFR, p.61.)

Already we can see that there is some radical variation in the nature of the thesis even as presented by Whorf himself. In his paper from 1940, it is grammar which is the important variable in language, while in the earlier paper it is the vocabulary of the language. On the other hand Whorf regards philosophy as the non-linguistic correlate in his early paper, while

---

1. Carroll in his introduction to Language, Thought, and Reality (henceforth: LFR), p.26.

the nature of observation and the picture of the universe is the non-linguistic correlate in the later paper. Another variation which comes out in other statements of the thesis is found in the nature of the relation, i.e., whether it is that of merely parallel structure, causation, or any of a number of others.

This proliferation of differences demands at this point a careful and detailed study of the many possible theses Whorf was considering. This has been attempted in a preliminary way by various other writers,<sup>1</sup> but I do not think any of these attempts have been conclusive enough to show the extent of the variations and similarly the possibilities and confusions of the thesis as presented by Whorf. Consequently, I shall follow the procedure I indicated in the introduction, considering first the nature of the items on the linguistic side, then the nature of the items on the non-linguistic side, and finally the nature of the relation between the items on both sides. I shall end the discussion with some related views of Whorf about the importance of the relativity thesis of language.

#### ii. The Linguistic Side: Phonology

As a linguist, Whorf shows himself to be constantly fascinated by the systematic but unconscious patterns of a language which must be followed or are bound to be followed by any speaker of that language. Thus he speaks of the 'structure and grammar' of language (LFR, p.59), of 'linguistic

---

1. Cf. Fishman, 'A Systematization of the Whorfian Hypothesis'; Black, 'Linguistic Relativity'; Hoijer, 'The Sapir-Whorf Hypothesis' in Hoijer, ed., Language in Culture; and Hymes, 'Two Types of Linguistic Relativity'.

patterns' (LFR, pp. 74, 159, 247, 263), of the 'pattern of using words' (LFR, p.134), of how languages differ in how they build their sentences (LFR, pp.240,253), of the organization in language (LFR, pp.69, 256), etc. The overriding idea throughout his discussion of language is that 'language is a vast pattern-system' (LFR, p.252). Also important is the fact that every language is a pattern-system which is different from other languages, and it is these differences which are said to be relative to similar differences in cultural patterns.

I shall first consider the phonology, or sound patterns, of a language. I have been able to find no strong reason to believe that Whorf thought different sound patterns were in any way relative to different non-linguistic patterns. He says that he is investigating 'grammar' which he takes to mean 'the formalized side of the language' (LFR, p.221), which would certainly include phonology. Nevertheless, he goes on to consider the effect of only the lexical, semantic, and syntactic differences. And he suggests at one point that patterns even of words and phrases are of limited range. Still I do not think this is reason enough for all of the commentators known to me to ignore Whorf's discussion of phonology. For one thing, we must be aware that sound patterns have in the past been thought to be important to other linguistic and to non-linguistic differences. (Cf. Vico.) But more important than that is the fact that Whorf did have long sections about phonology which he seemed to think were important and which do indeed play a significant role in other discussions.

In his discussion of linguistics as an exact science, Whorf maintains that out of the 'relatively simple terms dealing with gross sound patterning

are evolved the higher analytical procedures of the science... [and the facts of sound patterning] illustrate the unconscious, obligatory, background phenomena of talking as nothing else can.' (LFR, p.223.) The importance of this according to Whorf is that 'linguistics, like the physical sciences, confers the power of prediction.' (LFR, p.229.) He then adds that he can predict within limits what a speaker will or will not do. But one must be hesitant about the importance of this 'power'. It hardly seems significant to the thesis being considered that a linguist can know what sounds a man may (although need not) invent or coin in the language and what sounds he will not invent. This will hardly affect what can be said in the language - what sense can be made in the language. Here it seems irrelevant that the sound system of a language completely constrains the individual 'within its unbreakable bonds.' (See LFR, p.256.) It seems to me that the complete lack of examples from phonology for the relativity thesis in Whorf's writings is reason enough for thinking that he also found phonology itself to be lacking in evidence for the relativity thesis.

What is important is that Whorf thinks: 'As below, on the phonological plane of language, significant behavior is ruled by pattern from outside the focus of personal consciousness, so is it on the higher planes of language that we call expression of the thought.' (LFR, p.256.) It is not clear exactly to what he is referring here. One might suppose that the higher planes of language include the semantic and syntactic, but these are hardly what we call the expression of thought. For the time being, I shall disregard this reference to thought and consider what he has said about the higher planes such as the semantic and syntactic. Both of these probably

fall under what he calls 'grammar', to which he often refers and which he takes to mean 'the formalized side of the language'. (LFR, p.221.) There seem to be good technical reasons for speaking of the combined semantic and syntactic properties as the grammar of a language, and if the distinction were important it would involve a long discussion of linguistics. In what follows, however, the distinction will not be important, and I shall use it merely to divide up the considerations of those aspects of language that might be relevant to the relativity thesis of language. On the semantic side, I shall consider morphology and words and their meanings, while on the syntactic side I shall consider such things as tenses, parts of speech, and sentence structure.

### iii. The Linguistic Side: Semantics

When Whorf first began his studies of language that were to lead to the relativity thesis of language, he emphasized the importance of certain individual words whose meaning influenced definite forms of behaviour. As a fire inspector for an insurance company he found, for example, that workers were careless when they were around what were called 'empty gasoline drums'. Whorf attributed this careless behaviour to 'empty' being a virtual synonym for 'negative' or 'inert', both of which suggest a lack of danger from fire. In another case, the '-stone' in 'spun limestone' implied non-combustibility, while chemical changes in the material resulted in flammable acetone. Similarly, the paraffin paper was ignored in a pile of 'scrap lead', which no one thought would burn. (See LFR, pp. 135-137.) It was these kinds of situations that prompted him later to say that 'people act about situations

in ways which are like the ways they talk about them.' (LFR, p.148.)

Similar pressures also seemed to suggest to him that we think in ways like the ways we talk. (Cf. pp.147, 220, and passim.) The significance of these rather vague comments by Whorf should become clearer as my discussion develops.

A kind of relativity on the semantic level that has often been proffered in explanation, defence, and criticism of Whorf is the relativity of colour words and the corresponding relativity in the division of the colour spectrum. The only thing that can be said here in reference to Whorf (although compare my discussion of Lenneberg on this question) is that to the best of my knowledge he never said anything, at least in his written works, about the relativity of colour words. (Compare, however, the rather strange example of the race of people who could see only the colour blue. LFR, p.209.) The only reason for mentioning this here is that I think Whorf's views are more sophisticated than is usually suggested.

There are other variations in words that seem to be much more important for Whorf. Thus he emphasizes that the Eskimo language has three words for snow while English has only the one word, and Aztec is still more impoverished in that it has only one basic word (with different terminations) for the words 'cold', 'ice', and 'snow'. (See LFR, p.216.) Further examples are given from Hopi, which, among other differences from English, 'has one noun that covers every thing or being that flies, with the exception of birds'. (LFR, p.216.) All of these are cases of differences of classification or systematizing, according to Whorf. I shall take this opportunity, however, to differentiate them as semantic rather than syntactic examples. The

examples are not cases of words with different syntactic forms, for example being different parts of speech. The English word 'snow' and the three Eskimo words for snow are all nouns, and there is no suggestion that they have different syntactic roles in their respective languages. The importance of the examples seems to be that some languages have more words for some things than other languages. And this is still short of the stronger claim that some things can be said in some languages that cannot be said in others. To the extent that Whorf explains in English the meaning of Hopi words he shows that the difference can be no more than perhaps that of facility of expression. This interpretation also seems more consistent than others with Whorf's rather strong plea for greater understanding between speakers of different languages.

Sometimes, however, Whorf suggests that there are words or expressions in one language which have no counterpart in another. For example, according to Whorf, 'the Hopi language is seen to contain no words...that refer directly to what we call "time", or to past, present, or future, or to enduring or lasting, or to motion as kinematic rather than dynamic'. (LFR, p.57.) On the other hand, he asserts that the structure of the universe according to the Hopi is 'properly describable only in the Hopi language' and in our own language must be described 'by means of an approximation' which he regards as inadequate. (See LFR, p.58.) Whorf gives 'manifested' and 'manifesting' or 'objective' and 'subjective' as a first approximation of the 'two grand cosmic forms' imposed by Hopi. Whorf does not tell us what is left out by the Hopi who cannot refer to time. At least he does not mean that they cannot talk about temporal things or about something

happening before or after.<sup>1</sup> According to the Voegelins, the Hopi have words for 'yesterday' and 'tomorrow' and can speak of something lasting a long time.<sup>2</sup> What Whorf does mean will be discussed further when I discuss what he means by 'metaphysics'.

Undoubtedly, there are differences in the ways the native speakers of Hopi and of English speak of time, but on this subject Whorf's discussion often does approach the ridiculous. Whorf argues that we have 'linguistically promoted objectification of that datum of consciousness we call "time", [while] the Hopi language has not laid down any pattern that would cloak the subjective "becoming later" that is the essence of time.' (LFR, p.140.) It is hard to believe that he took this seriously, but later examples about what are said to be metaphorical uses of words (LFR, p.146) indicate that he actually did believe that the speakers of Hopi were better equipped to say what the world is really like. Thus, if our thought were without objectification of 'summer' and 'noon', 'it would be a subjective experience of real time'. (LFR, p.142.) Here he seems to have succeeded in the arduous task of 'standing aside from our own language'. (LFR, p.138.) He also advances the uses of cardinals and ordinals in Hopi and English as examples

- 
1. See Black (p.253) for an author who suggests that the Hopi must have some reference (whether explicit or implicit) to time. Contrary to Black, I do not think Whorf was arguing that the Hopi make different ordinary temporal judgments because of their language. It is the way these judgments are expressed that is important for Whorf.
  2. Voegelin, Charles F. and Florence M. Voegelin, Hopi Domains: A Lexical Approach to the Problem of Selection. International Journal of American Linguistics, Memoir 14, 1957.

of relativity. In Hopi, '[p]lurals and cardinals are used only for entities that form or can form an objective group. There are no imaginary plurals, but instead ordinals used with singulars. Such an expression as "ten days" is not used.' (LFR, p.140.) Here again, the evidence seems to be quite unjustified as Harry Hoijer has pointed out.<sup>1</sup> Comparisons of Standard Average European (SAE: Whorf's expression meaning about the same as 'Indo-European') languages shows that a relativity in the use of cardinals and ordinals does not reflect any other kind of relativity, and more importantly, there are many languages like English that use both in the same situations.

Finally, on the semantic side, I shall mention a group of cases which are interesting because of their absence in Whorf's discussion. Obvious differences of vocabulary between languages such as Hopi and English are those that result from a sheer difference of objects around the native speakers of the languages. Thus the Hopi probably do not have a word for reactor or a dvertising just as English does not have the word 'kiva'<sup>2</sup> and probably lacks words for many Hopi ceremonies. The mere difference of plants and wildlife would also affect the relativity of the vocabularies. Neither do the Hopi have words for things like protons and electrons which depend upon rather well-developed theories. Similarly, there are quite likely theories among the Hopi which contain words not found in English. In spite of the fact that these are all obvious examples of differences, Whorf does not try to take advantage of them. Connected with his ignoring these

---

1. Hoijer, Harry, 'Linguistic and Cultural Change', Language, 24 (1948): 335-345.

2. It has now become a part of American English, which previously had no special word for such a building, but it does not appear in at least the Shorter Oxford English Dictionary.

kinds of examples is his belief that there can be nothing so definite as a correlation in his theory. There are only general patterns and connections.<sup>1</sup> (See LFR, pp.138-139, 159.)

iv. The Linguistic Side: Syntax

Above all, Whorf thought that 'the patterns of sentence structure that guide words are more important than the words.' (LFR, p.253.) He considered the material based on single words of limited range, while there is a 'much more far-reaching compulsion from large-scale patterning of grammatical categories, such as plurality, gender and similar classifications (animate, inanimate, etc.), tenses, voices, and other verb forms, classifications of the type of "parts of speech," and the matter of whether a given experience is denoted by a unit morpheme, an inflected word, or a syntactical combination.' (LFR, p.137.) Whorf always emphasized the importance of the pattern of using words - of formulating sentences - in the relativity of language to non-linguistic behaviour. (Cf. LFR, p.134.) But it was not until 1941 that it reached its clearest and most definite formulation. Then he maintained: 'It is the grammatical background of our mother tongue, which includes not only our way of constructing propositions but the way we dissect nature and break up the flux of experience into objects and entities to construct propositions about.' (LFR, p.239.)

This concern for the way propositions are constructed is certainly reflected in the multiplicity of examples showing different syntactic structures

---

1. Whorf does not say why he thinks this is true.

for the expression in different languages of the same proposition. Again as in his discussion of individual words, the examples come from comparisons involving translation. His most picturesque examples (see his diagrams in LFR, pp.208 and 235) come from Shawnee. In one example, he shows that the sentence 'I clean it (gun) with the ramrod.' and the corresponding sentence in Shawnee are made up of linguistic parts which isolate different things from experience. His description and portrayal of the difference, however, seems to show a semantic difference on the sentence level. One part of the Shawnee sentence seems to mean the interior of a hole, while this is not found in the English sentence. On the other hand, the English sentence has a word meaning ramrod, while the Shawnee sentence has nothing except a vague reference to a tool or instrument. One is immediately suspicious that the Shawnee sentence really means 'I clean the inside of it with an instrument.'. But then Whorf would argue that the Shawnee sentence is used in exactly the same situation where we use the sentence 'I clean it with a ramrod.'. But in the same situation we can also say 'I clean the inside of it with an instrument.'. One syntactic difference that might be suggested by Whorf's analysis is that in the English sentence the cleaning is done by an object while in Shawnee it is done by the motion of an object. I doubt that this is a significant difference.

Another example comes from a comparative analysis. Whorf suggests (LFR, p.235) that the English sentences 'I push his head back.' and 'I drop it in water and it floats.' (notice the strangeness of Whorf's examples) are not alike in structure. The corresponding Shawnee sentences, on the other hand, are very similar and are meant to be evidence for Whorf to say

that the two events are classified 'as like or in the same category'.

(LFR, p.235) The point he is trying to make is that in one language two very different sentences are used for two situations, while in the other language two very similar sentences are used for the same two situations. Speakers of English are then said to find the two situations quite different while speakers of Shawnee are said to find them quite similar.

There are said to be even more radical differences when we come to languages like Nootka, which has no parts of speech at all, the simplest utterance being a sentence. This means that there is nothing like the subject-predicate analysis of an English sentence. The result, according to Whorf, is that sentences and the corresponding situations are divided up in much different ways. An example that is given of this (LFR, p.243) is an attempt to show that the English sentence 'He invites people to a feast.' is divisible into a subject and a predicate, while the corresponding Nootka sentence makes any such division impossible. As Whorf pointed out earlier, there is no division between nouns and verbs in Nootka, in which 'all words seem to us to be verbs'.<sup>1</sup> (LFR, p.215.) There are many such polysynthetic languages for which the terms 'verb' and 'noun' are meaningless. (See LFR, p.99 for a discussion of Nitinat and p.192 for a discussion of Maya, two other polysynthetic languages.) As in Maya, the 'stems are neither nouns nor verbs in the English sense, but a single class delimited on a quite different basis from our parts of speech.' (LFR, p.192.) For Whorf this is further evidence for thinking that speakers of different

---

1. But see my remarks below on Whorf's discussion of this subject.

languages look at and divide up the world in far different ways.

A further comparative example comes from a study of the inflection of verbs, and in particular the comparative tense structure of Hopi and English, again emphasizing the importance of temporal differences. English is said to be 'temporal' in that it has tenses distinguishing the present, past, and future,<sup>1</sup> while Hopi is said to be timeless. In Hopi the verb 'must always indicate what type of validity the speaker intends the statement to have', i.e. whether it is a report of an event, an expectation of an event, or a generalization about events. (LFR, p.217.) It may be interesting that in Hopi the same verb is used for the past and present, but Whorf seems to have forgotten that the same can be true in English. English has its 'historic present', where a verb in the present tense can be used when talking about things in the past. There are no past tenses at all in Guys and Dolls, which a Whorfian might call timeless, but we know when everything happens.<sup>2</sup> Even if these similarities did not exist, it remains to be seen what possible effect a difference in tense structures could have on non-linguistic behaviour.

Sometimes Whorf gives intralinguistic (rather than interlinguistic) evidence for the relativity of language. Here any problems that might arise with translation will not enter in, and comparisons are often made between

1. Noam Chomsky has pointed out that English at least does not have a past-present-future tense system. What we usually call the future is indicated by modal verbs. This point comes from his remarks at the meeting of the American Philosophical Association (Eastern Division) in New York in December, 1962. For Whorf's comment, see LFR, p.217.
2. See Runyon, Damon, Guys and Dolls (London: Jarrolds Publishers, 1932). This example was suggested to me by Professor Ryle.

words of the same language. Thus Whorf argues that it 'will be found that an "event" to us means "what our language classes as a verb" or something analogized therefrom. And it will be found that it is not possible to define "event, thing, object, relationship," and so on, from nature, but that to define them always involves a circuitous return to the grammatical categories of the definer's language.' (LFR, p.215.) On the other hand, he seems to praise Hopi for actually having 'a classification of events (or linguistic isolates) by duration type, something strange to our modes of thought.' (LFR, p.215.) Both English and Hopi are thought to be alike in that the speakers of the languages interpret reality according to the grammatical categories of the languages. But Whorf seems to think that Hopi is superior to English in that its grammatical categories are the same as those that are really out there in the world. One wonders how he knows what the real categories are. But the former point about interpreting reality according to the grammatical categories of one's language would be enough to establish the relativity theory.

Whorf frequently gives what he considers linguistic evidence for the relativity of what are said to be natural categories to what are actually 'grammatical categories'. He seems to find the evidence strong enough to maintain: 'The relativity of all conceptual systems, ours included, and their dependence upon language stand revealed.' (LFR, pp.214-215.) Thus he says, 'The Hopi aspect-contrast [between vibratile and non-vibratile phenomena] ...being obligatory upon their verb forms, practically forces the Hopi to notice and observe vibratory phenomena'. (LFR, pp.55-56.) Whorf also maintains that in Hopi 'all phase terms, like "summer, morning," etc., are

not nouns but a kind of adverb' although different from all other parts of speech in Hopi including other adverbs. (LFR, p.143.) On the other hand, English is said to objectify such words, because they 'are pluralized and numerated like nouns of physical objects'. (LFR, p.142.) Similarly, the division in English between count and mass nouns is said to assist us in imagining 'that "a summer" actually contains or consists of such-and-such a quantity of "time".' (LFR, p.143.) Hopi, however, is free of this 'objectification, as a region, an extent, a quantity, of the subjective duration-feeling.' (LFR, p.143.)

According to Whorf, English is also plagued by the fact that there are more verbs like 'strike' than like 'hold', and 'following majority rule, we therefore read action into every sentence, even into "I hold it".' (LFR, p.243.) Similarly, 'we are constantly reading into nature fictional acting entities, simply because our verbs must have substantives in front of them.' (LFR, p.243.) This is another place where Hopi and even more completely polysynthetic languages are said to be superior in not having an unbridgeable gap between subject and predicate. Sometimes Whorf's argument reaches the ethereal, and he maintains that 'a word like "sky", which in English can be treated like "board"...leads us to think of a mere optical apparition in ways appropriate only to relatively isolated solid bodies.' And then he adds: "'Hill" and "swamp" persuade us to regard local variations in altitude or soil composition of the ground as distinct things almost like tables and chairs.' (LFR, p.253.) One sometimes wonders how Whorf could say anything in English!

Inflectional differences also play a role in Whorf's relativity theory.

For example, 'a category such as number (singular vs. plural) is an attempted interpretation of a whole large order of experience, virtually of the world or of nature; it attempts to say how experience is to be segmented, what experience is to be called "one" and what "several."' (LFR, p.137.) A category like number is a phenotype (a term introduced by Whorf) because it is a 'linguistic category with a clearly apparent class meaning and a formal mark or morpheme which accompanies it'. (LFR, p.72.) But there are also cryptotypes which 'have no overt mark other than certain distinctive "reactances" ', and yet they also have a very subtle meaning. (LFR, p.70.) English gender seems to be an example of a cryptotype for Whorf. Another example is that of 'the transitive verbs of a covering, enclosing, and surface-attaching meaning' which are those words to which the particle 'un-' may be prefixed. (LFR, p.71.)

It is not clear how much Whorf wants to maintain about cryptotypes and the awareness that speakers have of them.<sup>1</sup> I think Whorf's most prominent view is that cryptotypes are 'sensed rather than comprehended.' (LFR, p.70.) As Whorf says later, cryptotypes 'easily escape notice and may be hard to define, and yet may have profound influence on linguistic behavior.' (LFR, p.92.) Whether he is right about the effect on linguistic behaviour, he is certainly right in one sense about the 'ability to speak a language fluently.. ..not necessarily confer [ring] a linguistic knowledge of it'. (LFR, p.211.) Here he compares knowing how to speak a language with knowing how to play

---

1. Black seems to argue that Whorf thought speakers are conscious of cryptotypes, but I think Black is wrong about this as I try to show in the text immediately following. Cf. Black, 'Linguistic Relativity', p.247.

billiards where one does not know 'the laws of mechanics that operate the billiard table.' But then a knowledge of these laws does not change one's ability to play billiards. One wonders if the analogy does not apply at this stage as well.

v. The Non-linguistic Side: Some Activities

Many of Whorf's examples seem far too contrived and unconvincing, but it is difficult to know how much weight can be put on criticisms of particular examples. This, of course, depends upon how much weight Whorf wants to put upon the particular examples as evidence for the relativity theory. He clearly does not think that his theory stands or falls on any one example. The theory does not, or is not meant to, hang upon any correlations. For Whorf, the 'idea of "correlation" between language and culture, in the generally accepted sense of correlation, is certainly a mistaken one.'

(LFR, p.139n.) Whorf claims that he would be 'the last to pretend that there is anything so definite as "a correlation" between culture and language, and especially between ethnological rubrics such as "agricultural", "hunting", etc., and linguistic ones like "inflected", "synthetic", or "isolating".' (LFR, p.139.) 'There are connections but not correlations'.

(LFR, p.159.) Something will have to be said about these connections below.

But according to Whorf, the concepts of time and matter

'do not depend so much upon any one system (e.g., tense, or nouns) within the grammar as upon the ways of analyzing and reporting experience which have become fixed in the language as integrated "fashions of speaking" and which cut across the typical grammatical classifications, so that such a "fashion" may include lexical, morphological, syntactic, and otherwise systematically diverse means coordinated in a certain frame of consistency.' (LFR, p.158.)

This brings me to a long-postponed consideration of a distinction which seems to be important to Whorf's thesis but of which he does not make use. In the quotation that I have given above, Whorf writes of concepts depending upon ways of analyzing and reporting - activities for which there are fashions of speaking. The question immediately arises whether the patterns are fixed in the language or in the speech. Whorf sometimes uses the word 'language' and sometimes the word 'speech' without seeming to take notice of any distinction. Below, I try to make some comments of my own about the distinction, but here I shall merely try to show how the distinction arises and is often confused in Whorf's writings.

In what I have said above, I have suggested that Whorf's thesis was a thesis about a relation between language and non-linguistic behaviour. This is the way it is generally put, but even in his main introduction of the principle of relativity he speaks of 'linguistic backgrounds' rather than language. (See LTR, p.214; cf. LTR, pp.83-84.) This expression is ambiguous between a language as a set of words and speech as a set of things said. This is the difference between using particular words and talking about particular things. Occasionally, Whorf actually speaks of non-linguistic behaviour (acting and thinking) being relative to the activity of talking. (See for example, LTR, pp.148, 207, and 220.)

Often there just seems to be a confusion about what a language is. Usually by a language he seems to mean a system of words and constructions which is formalized by the phonology and the grammar. (Cf. LTR, p.221.) Often, however, he speaks of a language as if it were a system of sentences. Only in this way could he speak of language doing 'the same thing that

'science does.' (LTR, p.55.) It also allows him to speak of language containing postulates (LTR, p.61), 'operating with relationships' (LTR, pp. 83-84), 'arranging data' (LTR, p.135), analyzing and classifying data (LTR, p.137), and being consistent (LTR, p.158). Once these things are said of language, then one can also speak of a language showing a 'plane of thinking', as Whorf does. (LTR, p.85.) At least he shows the restraint not to say that a language speaks or says things. But he attributes things to language which would normally be attributed to speech, and this will have to be considered more fully.

Occasionally, however, he seems to use the distinction between language and speech, however uncertain and vague it might be for him. One form of the relativity thesis that will have to be investigated is that language affects (or is relative to) speech. This is a formulation of the thesis that he has suggested. He speaks of users of different grammars being 'pointed by their grammars toward different types of observations and different evaluations'. (LTR, p.221.) He also speaks of patterns of our language affecting our 'speech community'. (LTR, p.214.) There is a frequent but vague suggestion that among the activities affected by the grammar of our language is that of speaking or talking. (Cf. LTR, p.257.)

Now it is time to turn to some of the other activities which were among the non-linguistic aspects of the relativity theory. Whorf's prevalent view seems to be that thinking is most importantly relative to linguistic patterns. (See e.g., LTR, pp.65, 73, 134, and 207.) Sometimes, however, the non-linguistic item includes as much as 'culture as a whole' (LTR, p.147; see also pp.59, 73, 134) and occasionally merely behaviour

or both (see LFR, pp.59, 134, 148). Usually, however, the non-linguistic item seems to be somewhat more restricted even though still frighteningly general. Among other examples of the non-linguistic item are methods of reasoning (LFR, pp.73 and 252), recognizing and operating with relationships (LFR, p.83), cultural norms (LFR, p.156), perseverance, and collaboration (LFR, p.157).

So far I have only discussed those parts of Whorf's theory which suggest that language affects the way we act - thinking being included among those activities affected. More often, however, Whorf seems to suggest that the results of these activities are more fundamentally affected. This seems to be a more radical view involving a thesis about language concealing a certain set of beliefs. Languages cannot have beliefs, but presumably they can be responsible for men having the beliefs that they do have. Thus, Whorf speaks of language doing what science does (LFR, p.55). This seems to be the more important idea behind the view that language is a system. (Cf. LFR, p.138.) The view lying behind Whorf's theory seems to be that any discussion of metaphysics must be in a certain language, and every language is a theory which conceals a metaphysics of its own. In respect of being a theory, there is no difference between the Hopi language and Einstein's relativity theory.<sup>1</sup> Using either one demands an adherence to a particular set of beliefs.<sup>2</sup>

What this usually means is that there is a classification and arrangement

---

1. Whorf speaks of language and culture concealing a metaphysics (LFR, p.58), but to add culture to the linguistic side leaves nothing for the non-linguistic side. In any case, the notion of culture is no longer decisive when it is brought into the account that the culture is shaped by the language. (Cf. LFR, pp.65, 147, and 156.)

2. For a short discussion of this point, see the discussion comment by Greenberg in Hoijer, ed., Language in Culture, p.134.

of data which involves a certain ordering of experience in the sense that science orders experience. (Cf. LTR, pp.55, 135, 214, and ad passim.) This is by far the most important aspect for Whorf on the non-linguistic side. From the organization of raw experience comes 'a consistent and readily communicable universe of ideas through the medium of linguistic patterns.' (LTR, p.102.) This raw experience, which is more basic than language, (LTR, p.149), comes to us as a 'flux of experience' (LTR, p.239) -- 'a kaleidoscopic flux of impressions' (LTR, p.213). It is nothing more than 'the spread and flow of events' (LTR, p.240) -- 'the stream of sensory experience' (LTR, p.55). As Black has suggested, Whorf's 'insistence upon the continuity and flow of experience is unexceptionable but empty, since nothing imaginable is being denied'.<sup>1</sup> One might add that there is nothing imaginable being asserted.

vi. The Non-linguistic Side: Dividing up and Observing the World

Nevertheless, Whorf's notion of a flux of experience is important to his theory as a whole. The flux, which is the same when presented to all, is differently divided (cf. LTR, p.163), segmented (cf. LTR, p.137), dissected (cf. LTR, p.214), cut up (cf. LTR, p.240), etc. According to Whorf, 'we dissect nature along lines laid down by our native languages. The categories and types that we isolate from the world of phenomena we do not find there because they stare every observer in the face'. (LTR, p.213.)

---

1. Black, 'Linguistic Relativity', p.255.

The 'grammatical background of our mother tongue...includes...the way we dissect nature and break up the flux of experience into objects and entities to construct propositions about.' (LTR, p.239.) Whorf suggests that experience can be differently classified, as for example in Hopi which stresses events rather than objects. This is to suggest that we as speakers of English tear experience apart and organize it into objects, while the speakers of Hopi tear it apart and organize it into events.<sup>1</sup> But as Black says on this point, 'the vocabulary of the operating theatre...is out of place; to speak is not to butcher'.<sup>2</sup> The way Whorf talked about experience, it does not even make sense to speak of changing experience, let alone dividing it up into parts. Even if words were scalpels, they could do nothing more than be a part of experience themselves.

One suggestion that has been made is that language dissects experience but leaves it as it is. The analogy that suggests itself is that of a picture puzzle which has been put together but still reveals the lines which divide it into pieces. A corollary to this is that where some languages find one object other languages might find many objects.<sup>3</sup> One might think

- 
1. Whorf sometimes suggests that there really are objects and also events in the world. The first is suggested by his discussion of items being classified differently where the items concerned are what would normally be called objects. (See LTR, p.210.) He just as strongly suggests that a language of events is better equipped to deal with parts of reality. (See LTR, p.55.) He also suggests that states are part of reality by saying that there are places 'where it sometimes might be better to see states.' (LTR, p.244.)
  2. Black, 'Linguistic Relativity', p.248.
  3. One example for this might be a rabbit (in English) and undetached parts of a rabbit ('gavagai' under one of the translations suggested by Quine). For this example, see Quine, Word and Object, p.52. See also my discussion of Quine below.

that the 'given' (I am not suggesting that this word has a clear meaning) can be divided up any way that one wants. Thus, some people, but certainly not Whorf, have thought that the colour spectrum provides an example. The idea behind this example is that different languages divide the spectrum into different parts. Where speakers of English have blue and green, speakers of Navaho group them into one colour. Some African languages are said to dissect the rainbow into no more than two colours, while we speakers of English are said to find seven there. Again Black has the apt comment when he says: '[t]o dissect a frog is to destroy it, but talk about the rainbow leaves it unchanged.'<sup>1</sup> People who see seven main colours in the rainbow and those who see two still both see the same rainbow.

The nice thing about the example of the rainbow is that it gives force to the existence of different categories. Different languages do have different secondary categories under the primary category of colour. The misfortune of the rainbow example is that it cannot be properly generalized over other categories. There is no similarly neat spectrum of shapes or kinds of material. There are no rainbows of shapes exhibited in the world. Nevertheless, it is completely possible that there are languages that have words for triangles and quadrilaterals but not for pentagons and higher n-sided figures. Similarly, speakers of some languages may have terms for metal objects but not for steel or aluminium fixtures, let alone for plastics.

The suggestion here is that different languages have different means of categorizing or classifying the same objects or the same properties. This

---

1. Black, 'Linguistic Relativity', p.248.

is certainly the view that Whorf most frequently held. It involves the idea that language is responsible for (or parallels) the way we classify, organise, arrange and analyze data. Thus 'new order systems' are developed (cf. LTR, p.245), and items are classified according to the elements of our language (cf. LTR, p.210). Objects, events, states, etc. are said to be alike according to the categories that our language provides to talk about them. According to Whorf, we do not isolate bits from our experience but 'categories and types'. (LTR, p.213.) (Certainly the notion of isolating is unfortunate here.) This does not mean that we cannot make further distinctions, categories, or classifications using our language. That Whorf thought we can understand the concepts of other languages shows that we are not completely bound to the main concepts of our own language. But he thought it is by the words of our language that we categorize items in our experience, and colour words offer him a simple example of how objects are differently classified. Whorf also talks of ascribing different significances to items in our experience. (LTR, p.215.) This seems to suggest that among other things we give a different value to certain items from that given to them by the speakers of different languages, but Whorf never says anything further about this.<sup>1</sup> What he does emphasize is that we organise nature into concepts according to the patterns of our language. (Cf. LTR, p.213.)

---

1. Others have advanced such a position. See, for example, my discussion of Sapir. The view is also suggested by Gerard A. Radnitzky in 'Some Remarks on the Whorfian Hypothesis', Behavioral Science, 6 (1961): 153-157.

Other writers have said that what Whorf was doing was to exhibit the 'ideational field of a language' or to give 'a map or plan of an actual realm of ideas',<sup>1</sup> and Chomsky has suggested in the spirit of Whorf that the 'grammar of a language can be regarded as a tightly woven system of concepts'.<sup>2</sup> I doubt that Whorf developed his views far enough to attribute this kind of interpretation to him, but it is an interpretation that is certainly sympathetic to his views and it will have to be considered more fully.<sup>3</sup>

An important view related to the notion of a linguistic division of nature is the view that speakers of different languages have different outlooks (cf. LFR, pp.73 and 158) and different conceptions of experience (cf. LFR, pp.104 and 158). Sometimes he actually suggests that for speakers of different languages the world appears different (cf. LFR, pp.221 and 250) or they have different pictures of the universe (cf. LFR, p.214). More often his position seems to be that speakers of different languages have different perspectives (cf. LFR, p.218) and different points of view (cf. LFR, p.247). Unfortunately, Whorf was not very clear about exactly what he meant, and there is much to be said in expansion of this idea. It has certain affinities to the notion of 'seeing as' in Wittgenstein's Investigations and the views about the relation between language and recognition in Lenneberg's work, both of which will have to be discussed further. In an examination of

1. Carroll in his introduction to LFR, p.25.

2. Chomsky in his remarks at the American Philosophical Association (New York, 1962).

3. Whorf does at one point speak of 'conceptual systems' (LFR, p.214), but he does not develop this theme.

Whorf's views little more can be said than that he believed that different languages crystallize different sets of concepts which leads speakers of these languages to conceive the world differently, and this is far more vague than it should be.

vii. The Relations in the Relativity Thesis

So far I have discussed most of the items on the linguistic and on the non-linguistic side of the relation in Whorf's relativity theory. One can now see that there is a large number of possible theories -- for each variation of an item on either side there is another variation of the theory.

There is still another variable to be considered in the theory, however, and that is the variable of the relation itself. Even less can be said about the relation than what has been said about the items related. Just what the relation will be depends upon what the items being related are. It is not at all clear that Whorf recognized this, although he did recognize that 'the problem was by no means...clearly formulated'. (LPR, p.139.) Nevertheless, the statement of the problem is given many different formulations according to the relation between the items.

Occasionally the relation is said to be one of parallel patterns with the influence coming from both sides. Thus, Whorf writes: 'In main they [language patterns and cultural norms] have grown up together, constantly influencing each other.' (LPR, p.156. See also LPR, pp. 157-158.) More commonly, however, the influence is on one side or the other, and usually on the side of language. Only once does he assert the contrary: 'My own studies suggest, to me, that language, for all its kingly role, is in some

sense a superficial embroidery upon deeper processes of consciousness, which are necessary before any communication, signaling, or symbolism whatsoever can occur....' (LFR, p.239.) Usually the non-linguistic 'shows the shaping influence of language.' (LFR, p.147.) The linguistic side is the more important of the two (cf. LFR, p.156), and 'an accepted pattern of using words is often prior to certain lines of thinking and forms of behavior'. (LFR, p.134.)

It is generally language that influences (cf. LFR, pp. 92 and 134), persuades (cf. LFR, p.253), encourages (LFR, p.56), leads (LFR, p.214), practically forces (LFR, p.56) and even imposes (LFR, p.59) something upon the non-linguistic side. And even though the linguistic patterns are often important, they are just as often 'submerged, subtle, and elusive'. (LFR, p.70.) Language 'conceals' (LFR, p.58) a metaphysics within the linguistic patterns which have become 'unconscious and automatic'. (LFR, p.207.) But this concealed influence is only a beginning, and it does not tell us very much about the nature and degree of the relation. For example, is it a cause or merely a resistance? Are there correlations or just tendencies? It is hard to believe that Whorf conceived a causal relation between persistence and repetition in the Hopi language and the perseverance in the Hopi agriculture. (Cf. LFR, p.157.) Indeed, Whorf's considered comment about that is that he would 'be the last to pretend that there is anything so definite as "a correlation" between culture and language, and especially between ethnological rubrics such as "agricultural", "hunting", etc., and linguistic ones like "inflected", "synthetic", or "isolating".' (LFR, pp. 138-139.) He would agree that there 'are connections but not correlations

or diagnostic correspondences between cultural norms and linguistic patterns. (LFR, p.159.) This is probably the source of his comment that 'science... was not caused by...grammar; it was simply colored by it.' (LFR, p.221.) But these comments are made mainly about large-scale cultural norms and activities, where it would indeed be difficult to assert that there are correlations.

Elsewhere it is difficult not to believe that Whorf thought the relation was something more than just a mere connection.<sup>1</sup> He speaks of the possibilities open to thinking being 'inescapably bound up with systems of linguistic expression' (LFR, p.84), of the phenomena of language being 'outside the...control of the speaker' (LFR, p.211), and of an agreement 'codified in the patterns of our language' which decrees a classification of data in terms that are 'absolutely obligatory'. (LFR, pp.213-214.) In matters of sentence structure, thought, and classification of data we are controlled (LFR, p.252) and completely constrained (LFR, p.256) until we become 'a mere puppet whose linguistic maneuverings are held in unsensed and unbreakable bonds of pattern.' (LFR, p.257.)

In these and many other passages, there seems to be no question that the bond of linguistic patterns is unchangeable and obligatory. He seems to think that it is necessary to speak in the way we do and at the same time that it is impossible to speak in certain ways which are not allowed in our language. But there is an ambiguity underlying this which must at least be

---

1. See Black, 'Linguistic Relativity', p.254 for the source of the suggestion that there is an ambiguity in Whorf's discussion of the influence.

briefly noted. The thesis could be that we must say (i.e., assert, ask, exclaim, etc.) the things we do because of the syntactical and/or semantical patterns of our language. This interpretation is suggested by Whorf's belief that the way languages 'build their sentences' corresponds to the way they 'break down nature', which involves the muddled notion of 'breaking' down nature (see my discussion above). (LFR, p.240; cf. p.252.) This interpretation would certainly involve a most thoroughgoing relativity, which as I have indicated above would be difficult to support.

The other interpretation would be that language keeps its speakers within certain bounds within which they are allowed freedom. According to this thesis, the speakers of a language must say what they say according to various rigid patterns of the language. These patterns determine among other things whether an adjective or adverb should be used. We cannot -- with all the obligatoriness that Whorf would want -- say 'The man is very.'. Our language decrees this in a way that it is outside the control of the speaker. (To be completely satisfactory, this would have to be expanded, but the view should be understandable.) On the other hand, the language does not prevent the speaker from saying that a pilot is like an airplane or that an ocean is not like a glass of water. (Cf. LFR, p.210.) This interpretation is suggested by the lack of a promise of prediction, by the similarity of other examples (cf. LFR, p.229 on phonology), and by comments about language as 'the factor that limits free plasticity.' (LFR, p.156.) (This might be said to have connections with Wittgenstein's statement: 'The limits of my language mean the limits of my world.'<sup>1</sup>) This interpret-

---

1. Wittgenstein, Ludwig, Tractatus Logico-Philosophicus (D.F. Pears and B.F. McGuinness, trans.) (London: Routledge and Kegan Paul, 1961), sect. 5.6.

ation is more defensible than the former, but it is far less spectacular. Both interpretations suggest an absolute obligatoriness, but the way it would have its effect would be very different, and I do not think that Whorf considered this.

It is not altogether clear, however, that Whorf did think that language makes decrees which are absolutely obligatory and necessitate thinking one thing rather than another. As I have indicated above, he does occasionally speak of non-linguistic behaviour affecting language. (Cf. LFR, pp.156, 157-158, and 239.) He also speaks of the speakers of a language freeing themselves from the bonds of the language. He pleads that 'the road out of illusion for the West lies through a wider understanding of language than western Indo-European alone can give.' (LFR, p.263; cf. p.222.) This suggests that the bonds are breakable and that there is a road out of illusion even though the road may be difficult. (Cf. LFR, p.138.) That Whorf thought that the necessities in the end were only illusory is shown in the last sentence of the collection of his essays: 'Science, if it survives the impending darkness, will next take up the consideration of linguistic principles and divest itself of these illusory linguistic necessities, too long held to be the substance of Reason itself.' (LFR, p.270, my emphasis.) This is probably what he considers the road to an analysis of 'experience' in a way independent of any one language or linguistic stock, a way which will be the same for all observers.' (LFR, p.162; cf. p.250.)

The view which replaced that of necessity and obligatoriness was that some languages are 'better equipped' (LFR, p.55) than others for some things while at the same time they incorporate 'certain patterned resistances (LFR,

p.247) to other things. For this reason, what can be expressed in one language can be expressed in another language only by means of approximation. (Cf. LTR, p.58.) This is why it is said to be difficult to stand 'aside from our own language' and scrutinize it objectively. (LTR, p.138.) This is also why in some cases a speaker of a language 'discriminates... relationships with effortless ease, for the forms of his speech have accustomed him to doing so.' (LTR, p.85.) The language is responsible for its speakers becoming 'habituated to making...distinctions with effortless ease in daily life.' (LTR, p.266.) Whorf's thesis now begins to look like a testable psychological hypothesis and ceases to be the astounding philosophical thesis with which we began. There is still more to be said, however, and I should not want to suggest that in reaching this psychological hypothesis we have failed to touch upon points of philosophical importance. I shall save the further discussion for my general study of the relativity thesis in Part II.

#### viii. Concluding Remarks and Related Views

Right now, before turning to some of the other theorists, I want to make a few general but brief comments about Whorf. In discussing the items on both sides and the nature of the relation between them, I have tried to indicate the large number of variations of the thesis that are possible. I have not said much about the interrelationship between the various factors, but this should obviously be taken into account as well. Some combinations of factors will not have the least plausibility, such as the one suggested by Whorf: a strict correlation of inflection and hunting. (Cf. LTR, pp. 138-139.)

More importantly, the factors which are combined will determine the kind of evidence that will be needed and /or applicable. Frequently for Whorf, the kind of evidence that is used involves translation between two or more languages. The thesis is then necessarily interlinguistic. This is why he often emphasized the study of strange languages. (Cf. LFR, pp.214 and 264.) Frequently, however, intralinguistic evidence may be considered just as good, as, if not better than, interlinguistic evidence.<sup>1</sup> In many of Whorf's examples, he seems to think that intralinguistic evidence is sufficient and maybe even superior to other kinds of evidence. He does not demand interlinguistic evidence to show that speakers of English objectify time because of the patterns of their language. The importance of cryptotypes is also an intralinguistic question. This is why Whorf can speak of general linguistics (rather than comparative linguistics) as the means of revealing the subtle forces of our language. (Cf. LFR, p.73.)

This unacknowledged faith in intralinguistic evidence is reflected in his belief that the grammar of a language corresponds to the analysis of nature within that language. This raises the more serious question of whether Whorf made an adequate distinction between language and the thoughts or set of beliefs that one has. Black has argued that 'Whorf identified the "conceptual system" and the "world view" with the language in which they were expressed, while also confusedly thinking of them as distinct.'<sup>2</sup> There is no doubt that he did want to distinguish the two. (Cf. LFR, pp.239 and 220.) On the other hand, his examples of what we think and how we think

---

1. For the view that intralinguistic evidence is more important, see Black, 'Linguistic Relativity', p.256, and my discussion of Lenneberg below.

2. Black, 'Linguistic Relativity', pp.254-255.

are taken directly from our language. He argues that the speakers of English 'read action' into the sentence 'I hold it.' because most sentences in English of that formulation do 'deal with movements and changes.' (LTR, p.243.) But this is certainly an unsatisfactory argument, which depends upon one form of the thesis in question - that conceptual systems and thinking have exactly the same form as the grammar and morphology of the language used. It is doubtful whether any sense can be given to the notion of action being read into the sentence 'I hold it.' other than the grammatical similarities which are said to be the reason for this. But something can hardly be said to be a reason in the sense intended unless a distinction can be made between the reason and what it is a reason for. That Whorf has not made this distinction indicates that he has not here found satisfactory evidence for his thesis. Its force will have to come from elsewhere, but I shall reserve further comments for the general discussion below.

Finally, I should like to make a few comments that are tangential to Whorf's relativity thesis itself but nonetheless important - particularly in relation to other writers. One thing that I have touched upon above is the great importance that Whorf attached to the study of other languages and linguistics. The importance lies in their being 'the road out of illusion' (LTR, p.263), and the studies are needed 'if we are to think straight and escape the errors which unconscious acceptance of our language background otherwise engenders.' (LTR, p.222.) Moreover, these studies are 'an important field for the working out of new order systems' (LTR, p.245) and of 'understanding many different beautiful systems of logical analysis.' (LTR, p.264.) For Whorf, this understanding was necessary for the realization

of 'the ideal of worldwide fraternity and cooperation'.<sup>1</sup> One admires the concern he shows but doubts his methods.

In a way similar to Vico, he also stresses the importance of the study of language to the study of society in general and its history. Thus he says that the only way we can 'ever hope to understand the history and culture of the Maya' is through philology, which must have linguistics as its base. (LFR, p.198.) Similarly, a liaison between 'ethnology and psychological linguistics would seem to offer the soundest approach' to the study of the nature of rationality in various societies. (LFR, p.81.) This appeal for a liaison between linguistics and related subjects is clearly important to Whorf. He thinks that 'the ethnological and the psychological-linguistic insights...can be reasonably expected to have a very fertilizing effect upon each other.' (LFR, p.78.)

The relation of linguistics to other subjects according to Whorf can be seen in his belief that the real concern of linguistics 'is to light up the thick darkness of the language, and thereby of much of the thought, the culture, and the outlook upon life of a given community'. (LFR, p.73.) It does this because 'the cue to a certain line of behavior is often given by the analogies of the linguistic formula in which the situation is spoken of'. (LFR, p.137.) In a passage very suggestive of Vico, he says that the story of the evolution in man of the possibilities open to thinking 'is the story of man's linguistic development'. (LFR, p.84.) This would naturally come from a view that non-linguistic behaviour in a society is relative to the language that is spoken in that society. The corollary is not emphasized in Whorf's work, but even its brief mention shows the importance of work like that of Vico to Whorf's relativity thesis.

---

1. This quotation comes from Whorf's 'A Brotherhood of Thought' as quoted in Carroll's introduction to LFR, p.21.

## CHAPTER 4

## SAPIR: A LINGUIST'S REMARKS ON THE THESIS

1. Some Differences Between Language and Culture

The relativity thesis of language under investigation has often been called the 'Sapir-Whorf hypothesis' and might even be attributed to Sapir as its modern founder.<sup>1</sup> I have no doubt that most writers on this subject have thought the views of Sapir and Whorf to be essentially identical on the relation between language and thought or culture. Their works are often discussed conjointly, and I am aware of no attempt to distinguish the views of the two men. There is no doubt that Sapir was influential in Whorf's development, but it would be quite wrong to think that he agreed with Whorf's rather radical views.

In spite of Sapir's acknowledged importance, he has received very little attention from the scholars of the relativity thesis. This is understandable in the light of Whorf's more colourful and astounding pronouncements, but it is nevertheless unjustifiable in the light of Sapir's own writings. Sapir says many things that suggest a relativity thesis of language (and even a Whorfian thesis), although there are at least as many references which suggest quite the opposite. He is sometimes very adamant about there being no correlation at all or even affinity between language and thought or culture.

I think this variation corresponds to a particular change in his views rather than an erratic variation from time to time. But as Hymes has said,

---

1. Cf. Hoijer, 'The Sapir-Whorf Hypothesis' in Hoijer, ed., Language in Culture and Black, 'Linguistic Relativity'.

'[o]ne puzzle in the history of the Sapir-Whorf hypothesis has to do with Sapir's own apparent change of view'.<sup>1</sup> I do not have a solution to this puzzle, but I shall try to give some indication of how the change is understandable in the light of certain confusions about content and form. In any case, I feel quite sure that Sapir's own views, having been developed much earlier than Whorf's, were quite independent of Whorf's and should be discussed independently.

In this section then, I shall try to bring some coherence to Sapir's views showing first their development and then their importance to the relativity thesis of language. In the process of doing this, I shall also indicate the ways in which Sapir's views differ from those of Whorf and at the same time are much more cautious. My terms of analysis will generally be the same as those I have used in my study of Whorf, i.e. phonetic, semantic, and syntactic on the side of language and including thought, science, and perception on the side of the non-linguistic. This is far easier to do in the case of Sapir since he was far more explicit about the variables he was considering for a possible correlation.

Sapir began with what seemed to be a rather strong attack on any relativity thesis of language. In an early paper (1912), he maintains that it is 'practically impossible to detect the relationship' between the forms of language and the forms of culture.<sup>2</sup> He even gives as his 'main thesis' that 'the forms of language will in course of time cease to symbolize those of

1. Hymes, 'Two Types of Linguistic Relativity', p.118.

2. Sapir (Mandelbaum, ed.), Selected Writings (henceforth: SW), p.102.

culture'. (SW, p.102.) This view is mainly dependent upon a theory (somewhat reminiscent of Vico's) about the origin and development of language and culture in society, a theory which is not discussed in any later writings. According to Sapir, the beginnings of culture and language follow a 'fairly definite group psychology' so that at first 'the forms of cultural activity will be reflected in the grammatical system of the language'. (SW, p.101.) He even thinks that culture and language may 'be conceived of as in a constant state of interaction and definite association for a considerable lapse of time. This state of correlation, however, can not continue indefinitely.' (SW, p.101.) This suggestion that originally there was a correlation between language and culture seems to be prompted by a vague belief that there is nonetheless some connection, however small, between culture and language. He suggests, for example, without further consideration that 'it is doubtless true that an unusual rate of cultural change is accompanied by a corresponding accelerated rate of change in language'. (SW, p.102.) Some weight might be given to this view by his belief that there is a correlation between the vocabulary of a language and the social environment as reflected in the interests of the speakers.

Although he does not argue for the suggested incipient similarity of the forms of language and the forms of culture, he does argue that whatever similarity there is 'can not continue indefinitely.' (SW, p.101.)<sup>1</sup> He uses both a theoretical and a factual argument. The theoretical argument is based upon his belief that 'cultural change and linguistic change do not

---

1. For other statements of this view, see Sapir, Language (henceforth: L), p.116 and Sapir (Mandelbaum, ed.), Culture, Language, and Personality (henceforth: CLP), p.35.

move along parallel lines'. (SW, p.100.) He argues that 'changes in culture are the result, to at least a considerable extent, of conscious processes or of processes more easily made conscious, whereas those of language are to be explained, if explained at all, as due to the more minute action of psychological factors beyond the control of will or reflection.' (SW, p.100.) He then argues that the forms of language change more slowly because we are not conscious of them. Factual evidence is given to this 'by instances of morphologic differences found in neighboring languages in use among peoples subjected to practically the same set of environmental influences, physical and social.' (SW, p.98.) Such factual differences supported by the argument that the rates of change are independent are a strong reason to believe that the forms of culture and the forms of language themselves will be independent of each other at any time other than a possible origin.

It is important that these arguments apply to the form of language and not to the content of that form. This distinction allows Sapir to disregard a correlation between certain variables. Thus, he argues that there is 'an absolute lack of correlation between physical and social environment and phonetic systems, either in their general acoustic aspect or in regard to the distribution of particular phonetic elements.' (SW, p.97.) He also denies that there is any correlation between culture and the morphological syntactic aspects of language.<sup>1</sup> (Cf. SW, p.95.) This lack of correlation

---

1. It is important to realize here that Sapir distinguishes between morphological aspects and lexical or semantic aspects of language. The former involves the study of phonemic distribution (which is formal) while the latter involve the words and their meaning including their reference. Sapir is one of the few who make this important distinction, and even then it is only implicit in what he says.

may be attributed to the 'comparatively accidental character' of such systems (phonetic, morphologic, and syntactic) which 'may be thought to have a quasi-mechanical growth, at no stage subject to conscious reflection'. (SW, p.97.)

What has been said so far, however, does not rule out a correlation with the vocabulary of a language. Sapir does argue in this early paper, as well as later, that if by 'complexity of language is meant the range of interests implied in its vocabulary, it goes without saying that there is a constant correlation between complexity of language and culture.' (SW, p.95.) The reason for this, according to Sapir, is that we operate with the content of the form and not the form itself. (Cf. SW, p.100.) And because of this, 'the presence or absence of general terms is to a large extent dependent on the negative or positive character of the interest in the elements of environment involved.' (SW, p.92.) Thus, the vocabulary of a language 'reflects the physical and social environment of its speakers. The complete vocabulary of a language may indeed be looked upon as a complex inventory of all the ideas, interests, and occupations that take up the attention of the community'. (SW, pp.90-91.) This gives the vocabulary historical and sociological importance, but Sapir does not elaborate on the nature of any influence or interaction between linguistic and non-linguistic factors. There is absolutely no suggestion of any restraint or limitation by language upon the culture or thought of the speakers. This early work is marked by a complete absence of a relativity thesis at least in any bold sense.

The importance of this correlation between vocabulary and social environment can easily be seen in some of the later work of Sapir where he

puts it to good use. The correlation plays an important part in the method which Sapir describes for the study of another culture.<sup>1</sup> There he speaks of language mirroring culture in its vocabulary and thus being of 'great assistance in the securing of a perspective for the culture itself.' (SW, p.432.) According to Sapir, language gives the anthropologist 'a sort of stratified matrix to work in for the purpose of unravelling culture sequences'. (SW, p.432.) Thus, 'the vocabularies of peoples that differ widely in character or degree of culture share this wide difference.' (SW, p.94.) He uses this method to show such things as the importance of the sea to the Kwakiutl and the Nootka (cf. SW, p.99), the earlier development among the Kwakiutl than among the Nootka of the ceremonial aspect of feasting (cf. SW, p.436), and the importance of the levirate among certain American Indian tribes.<sup>2</sup> Sometimes the correlation is important in the other direction, i.e., where anthropological facts give evidence for linguistic relationships. This method was used by Sapir to give evidence for the northern origin of Navaho.<sup>3</sup> There are numerous other examples of the method depending upon the accepted correlation between vocabularies and social environments.<sup>4</sup> This leads Sapir, in a way similar to Vico, to 'go so far as to say that no study of a culture complex is historically complete without a thorough investigation of the range and nature of its vocabulary.' (SW, p.441.)

- 
1. This is found in the important article: Sapir, 'Time Perspective in Aboriginal American Culture: A Study in Method' (1916), SW, pp. 389-462.
  2. See: Sapir, Edward, 'Terms of Relationship and the Levirate', American Anthropologist, 18 (1916): 327-337. The levirate is a practice of an unmarried sibling of a deceased person marrying the spouse of the deceased.
  3. Sapir, Edward, 'Internal Linguistic Evidence Suggestive of the Northern Origin of the Navaho', American Anthropologist, 38 (1936): 224-235.
  4. For other examples see: Harris, 'Review of Sapir's Selected Writings', p.299.

Several years later, but still before there was any contact between Sapir and Whorf, Sapir reaffirmed his position in opposition to a relativity thesis of language in a mainly negative section of his book Language. In this book, he makes a classic study of pattern and form in language, but he still considers the differences of form in languages 'non-significant differences'. (L, p.100.) This is one reason for his very explicit statement 'that all attempts to connect particular types of linguistic morphology with certain correlated stages of cultural development are vain. Rightly understood such correlations are rubbish.' (L, p.219.) This is about as strong a rejection of the relativity thesis of language as any that I know of.

One reason for discounting any attempt at the correlation of language and culture was that the nature of culture is too vague and imprecise even to establish any variables on that side. Sapir maintained that 'until such purely formal patterns of culture are discovered and laid bare, we shall do well to hold the drifts of language and of culture to be non-comparable and un-related processes.' (L, pp. 218-219.) At this time, Sapir suggested that it would be unlikely that anyone would find 'purely formal patterns' of culture anything like the patterns of language. Shortly afterwards, he seemed to be confident that 'all normal forms of human speech...have the appearance of systems of behavior that are rather definitely marked off from all other organizations within the general range of conduct. While when we deal with such flexible categories of socialized behavior as religion or art or government or education, it is difficult to draw convincing lines.'<sup>1</sup>

---

1. Sapir, 'Language as a Form of Human Behavior', p.422.

After several years of very perceptive study of the nature of culture, Sapir never attempted to present anything that might be called forms of culture and which could be differentiated. As Harris has said, 'he had too much experience with the intricate and demonstrable patterns of linguistics, and with the great difference between a pattern within a language and the structure of a whole language, to speak of a whole culture as constituting a unified pattern.'<sup>1</sup>

Sapir did, nonetheless, recognise a difference in the forms of languages, although he did not find these differences so astounding as did Whorf, for example. Unlike Whorf (cf. chap. 3, iv above), Sapir argued that 'no language wholly fails to distinguish noun and verb, though in particular cases the nature of the distinction may be an elusive one.' (L, p.119.) In a footnote, he asserts that Yana, a polysynthetic language which might be given as an example of a language with no parts of speech, has both nouns and verbs as distinct parts of speech, 'though there are certain features that they hold in common which tend to draw them nearer to each other than we feel to be possible.' (L, p.119n.) It is not always true that the other parts of speech are distinguished (Yana is a language which does not distinguish them), but according to Sapir, 'not one of them is imperatively required for the life of language.' (L, p.119.)

This distinguishes the essential or unavoidable concepts from the dispensable ones. 'The former are universally expressed, the latter are but

---

1. Harris, 'Review of Sapir's Selected Writings', p.310. On the same page, Harris says, in agreement with Sapir, that 'the actual patterns within culture are far less easily describable in terms of intricate combinatorial relations than is the case for linguistic patterns.'

sparsely developed in some languages, elaborated with a bewildering exuberance in others.' (L, p.94.) All languages are alike in their need for a basic stock of what Sapir calls radical concepts: basic nouns and verbs. (Cf. L, p.88.) 'We must have objects, actions, qualities to talk about, and these must have their corresponding symbols in independent words or in radical elements. No proposition, however abstract its intent, is humanly possible without a tying on at one or more points to the concrete world of sense.' (L, p.93.) It is these universal similarities which are important, because they are basic to language itself, the ability to say things and to converse. The dispensable forms of language which determine the particular way something is said are not completely shared between any languages but neither do they affect the actual saying itself.

#### ii. The Identity of Content in All Languages

According to Sapir, 'the latent content of all languages is the same - the intuitive science of experience. It is the manifest form that is never twice the same, for this form, which we call linguistic morphology, is nothing more nor less than a collective art of thought'. (L, p.218.) In this sense language can be thought of as the 'mold of thought' (L, p.22), but this only shows that changes in form do not affect the 'inner actuality in the least'. (L, p.218.) And it is this inner actuality or the content of the language that is important, but it is only the formal expression and not the content that shows variations in languages. This view was held by Sapir in an earlier paper where he said that we 'find that it is not, after all, the grammatical form as such with which we operate, but merely the content of that form'. (LW, p.100.) If we then agree with Sapir that

'culture may be defined as what a society does and thinks' while 'language is a particular how of thought', we will also be prepared to disbelieve (with Sapir) 'that culture and language are in any true sense causally related.' (L, p.210.)

It is because of this sameness of the content of all languages that Sapir says, 'A scientific truth is impersonal, in its essence it is untinged by the particular linguistic medium in which it finds expression' (L, p.223.) Scientific truths can be as readily given in one language as another. For Sapir, 'To pass from one language to another is psychologically parallel to passing from one geometrical system of reference to another. The environing world which is referred to is the same for either language; the world of points is the same in either frame of reference.' (S<sup>W</sup>, p.153.) To this extent, Sapir is diametrically opposed to Whorf, who thought that every language embodies a distinctive science or metaphysics. (Cf. chap. 3, v above.)

For Sapir, science is part of the 'truly deep symbolism' which 'does not depend on the verbal associations of a particular language but rests securely on an intuitive basis that underlies all linguistic expression.' (L, p.224.) This intuitive basis is what he sometimes calls a 'generalized language'.<sup>1</sup> Thus, the 'proper medium of scientific expression is...a generalized language that may be defined as a symbolic algebra of which all known languages are translations. One can adequately translate scientific literature because the original scientific expression is itself a translation'

---

1. Sapir's generalized language might be compared to Vico's mental language. See chapter 2, iii above.

from the generalized language. (L. pp.223-224.) 'The thought relations in this deeper level have no specific linguistic vesture'. (L, p.224.) Languages give a form to thoughts, but this form is constituted only of esthetic factors such as the phonology and morphology which are peculiar to each language.

There seems to be another view tied up with this view about the independence of science that every language is adequate to the demands that are likely to be made upon it. As Sapir said in a later work, 'language is felt to be a perfect symbolic system, in a perfectly homogeneous medium, for the handling of all references and meanings that a given culture is capable of'. (CLR, p.6.) This seems to me the importance of Sapir postulating a generalised language as the 'intuitive basis that underlies all linguistic expression.' (L, p.224.) This is what is essential (the 'inner actuality') to every language and is not changed by a change of the mere form of the language. 'It is possible, in thought, to change every sound, word, and concrete concept of a language without changing its inner actuality in the least'. (L, p.216.) And more importantly, every language can expand its vocabulary without any effect on the form of the language itself. (Cf. L, p.154.)

Thus all scientific truths, according to Sapir, can be stated in any language as long as that language 'is careful to provide itself with the necessary scientific vocabulary', which it can do 'without serious difficulty if the need arises.' (L, p.223f.) Shortly afterwards, Sapir was even prepared to say that 'a language is so constructed that no matter what any speaker of it may desire to communicate, no matter how original or bizarre

his idea or his fancy, the language is prepared to do his work.' (SW, p.153.) This is far from Whorf's view that every language embodies a distinctive science or metaphysics.

Sapir would not even go so far as to say that every language embodies the same science or metaphysics. Sapir was always careful to speak of truths or propositions finding their expression in a language (cf. L, p.223; Sw, p.154; and CLP, p.69) and never of their being embodied within a language as Whorf did. Throughout most of his work, Sapir seemed to be working with a distinction between speech and language, although he was never very clear about the nature of the distinction or about its importance to the issues he was discussing. In his book, he does speak of language as a 'system of symbolism', the essence of which 'consists in the assigning of conventional voluntarily articulated, sounds, or of their equivalents, to the diverse elements of experience.' (L, p.11.) An important part of his concept of language (and particularly of the indispensable part of language) is its basic, extendable vocabulary. Every language has a stock of words which symbolize the basic, radical concepts. There are also certain forms described in the phonology, morphology, and grammar that are universal traits of a language. (Cf. L, pp.38 and 225.) All of these factors make up the pattern or symbolic system of the language. On the other hand, by 'speech' Sapir means 'the auditory system of speech symbolism, the flow of spoken words'. (L, p.24.) This is not particularly helpful, although it is clear that he reserves the word 'speech' for things closely related to the actual activity of speaking, while 'language' seems to be more closely related to the system that is used in speaking. Using this rather vague distinction,<sup>1</sup>

---

1. For a further discussion of this distinction, see my study of it in chapter 6 below.

one can see that sentences will not be part of the language because they cannot be considered part of the total pattern or symbolic system that we use in speaking. This then means that it is wrong to speak of a language embodying a science, if a science is thought to be anything like a set of propositions.<sup>1</sup>

To the extent that Sapir holds a relativity theory of language at all in his book, Language, it is dependent upon the vocabulary. He believes, 'It goes without saying that the mere content of language is intimately related to culture...In the sense that the vocabulary of a language more or less faithfully reflects the culture whose purposes it serves it is perfectly true that the history of language and the history of culture move along parallel lines.' (L, p.219.) Thus he argues that with 'cultural borrowing there is always the likelihood that the associated words may be borrowed too.' (L, p.193.)

One problem that arises here is the ambiguity between word-types and word-tokens. When Sapir speaks of the vocabulary of a language he clearly means the set of word-types that constitute the language. Of course one must distinguish between the vocabulary of a language, which may be as large as

---

1. At one point, when talking about differences of forms, he does say something rather contrary to this, but it is difficult to take it seriously when he says immediately afterwards that the differences are non-significant. He says, 'It is almost as though at some period in the past the unconscious mind of the race had made a hasty inventory of experience, committed itself to a premature classification that allowed of no revision, and saddled the inheritors of its language with a science that they no longer quite believed in nor had the strength to overthrow. Dogma, rigidly prescribed by tradition, stiffened into formalism. Linguistic categories make up a system of surviving dogma - dogma of the unconscious.' (L, p.100.) The import of this seems to be that the earlier classifications survive unconsciously in the form but not in the content of the language.

a million, and the vocabulary of an individual speaker of the language, which may be no more than about fifty thousand. But a language might have a word-type that is obsolete or rarely used, and this might show very little about the accompanying culture. It may have some historical significance, although it also may never have been much used. The frequency of use of a comparable word in another language may be far more important. This would suggest that the correlation should be based upon words of the language that have a certain high frequency of use generally or perhaps within a certain group such as that of women or of doctors. On one occasion Sapir said that an important task would be to 'attempt to work out the relation between logic and usage', (CLP, p.61) but this is the only place that I have found where he has indicated that usage would be the relevant factor. Another suggestion would be to base it upon words which are found in the vocabulary of most or many individual speakers. At least the statement of the correlation would have to be more explicit than Sapir has made it.

Independent of how the relevant factor in relation to the vocabulary is determined, there is a confusion that arises at this point and is most important to Sapir's views. In the same place in his book, Language, he speaks of the 'latent content' of all languages being science and then suggests that the 'mere content' of a language is its vocabulary. Of course in the one case he would be talking about propositions or sentences and in the other case about words, and I think he is just often unclear about what he means. When he talks about the 'inner actuality' of a thought, he seems to be talking about content. But the same could be said about his remarks that the vocabulary reflects the culture. One wonders here whether he is

working with form or content. The distinction is not a clear one, but it is downright confused in Sapir's discussion. In any case, it is clear that at this point his view is that there is no difference in what can be said -- only a difference in how it can be said, and that is not important.

One can see, however, the historical and anthropological importance that Sapir attributes to language. The vocabulary of a language can tell us a lot about the 'development and spread of cultural ideas'. (L, p.194.) This, however, is irrelevant to the interests of the linguist. The parallelism between the history of language and the history of culture is 'superficial and extraneous' and 'of no real interest to the linguist except in so far as the growth or borrowing of new words incidentally throws light on the formal trends of the language.' (L, p.219.) As in his earlier work, he discounts any reason to believe that either language or culture have any kind of important influence on the other. Or as Sapir puts it, 'language and culture are not intrinsically associated. Totally unrelated languages share in one culture, closely related languages -- even a single language -- belong to distinct culture spheres.' (L, p.213.) The facts go against a relativity thesis of language, and Sapir spurns any correlation as either 'rubbish' or 'extraneous'.

### iii. The Development of a Thesis

Three years later (in 1924), one begins to see the development of Sapir's views.<sup>1</sup> Although he remarks that drastic changes can be made in

---

1. Here I am referring to his article 'The Grammarian and His Language'. See esp. SW, pp.157-159.

our 'form of expression without materially altering our report of the physical fact' (SW, p.158), he introduces what he calls 'the relativity of the form of thought'. (SW, p.159.) In introducing it, he says,

It would be possible to go on indefinitely with...examples of incommensurable analyses of experience in different languages. The upshot of it all would be to make very real to us a kind of relativity that is generally hidden from us by our naive acceptance of fixed habits of speech as guides to an objective understanding of the nature of experience. This is the relativity of concepts or, as it might be called, the relativity of the form of thought. (SW, p.159.)

And here it is clear that the examples he would give would be examples of differences of the forms of expression, which were previously thought to be irrelevant to the content of language. Earlier, he did think that 'language and our thought-grooves are inextricably interrelated, are, in a sense, one and the same,' (L, p.218) but the 'how of thought' was considered independent of 'what a society...thinks.' (L, p.218.)

With some straining, one might fit this later view to the earlier one and suggest that there is a relativity of the form of thought but that this is extraneous to the content of language. This, however, would make it difficult to explain the point of introducing the relativity (with its own name) in the first place.

It also would ignore what seems to be a suggestion that there is a relativity of our understanding of nature. This comes out more explicitly when he says,

To a far greater extent than the philosopher has realized, he is likely to become the dupe of his speech-forms, which is equivalent to saying that the mould of his thought, which is typically a linguistic mould, is apt to be projected into his conception of the world. Thus innocent categories may take on the formidable appearance of cosmic absolutes. If only, therefore, to save himself from philosophic verbalism, it would be well for the philosopher to look critically to the linguistic foundations and limitations of his

thought. He would then be spared the humiliating discovery that many new ideas, many apparently brilliant philosophic conceptions, are little more than rearrangements of familiar words in formally satisfying patterns. (SW, p.157.)

No one with even the best of intentions could save this from being interpreted as an expression of a relativity thesis of language. He clearly speaks of thought being limited and of one being duped by one's language, and although he is not clear he seems to suggest that the agency of this deception is the form itself of the language. At any rate, he is no longer making such a clear distinction between the form of a language and the content. It is a change in itself to speak of the relative limitations of thought.

These limitations, moreover, are not 'purely and simply a matter of vocabulary' nor are they 'of no interest whatever from the standpoint of linguistic form'. (SW, p.154.) They seem to be connected with what Sapir calls 'a vast...network of psychic processes'. (SW, p.156.) This is why there are 'psychological correlates' attached to the 'entirely distinct, or at least measurably distinct, formal adjustments' that have to be made in passing from one language to another. (SW, p.153.) Sapir seems to have thought that we may be duped by our 'speech-forms' because of these psychological correlates.

He continued to hold this view five years later, in 1929, when he wrote of 'the status of linguistics as a science'. There he said,

Human beings do not live in the objective world alone...but are very much at the mercy of the particular language which has become the medium of expression for their society. It is quite an illusion to imagine that one adjusts to reality essentially without the use of language and that language is merely an incidental means of solving specific problems of communication or reflection. The fact of the matter is that the 'real world' is to a large extent unconsciously

built up on the language habits of the group. No two languages are ever sufficiently similar to be considered as representing the same social reality. The worlds in which different societies live are distinct worlds, not merely the same world with different labels attached. (CLP, p.69.)

The way we look at the world is relative to our language habits, and we are at their mercy mainly because they are unconsciously built up and we are unaware of them.

Nevertheless, Sapir seems to think that with an understanding of language one is protected from the forms of one's own language. He does not tell us, however, how one will be protected, although he thinks the linguists are in the best position to make clear the 'implications of our terms and linguistic procedures.' (CLP, p.74.) At any rate, we are not completely at the mercy of our language habits, for otherwise we would not be able to gain the understanding which gives us protection.

Besides not being very clear about the extent to which our language limits us, Sapir is also vague about the nature of the limitation. There is no doubt, however, that the limitation is very basic and far-reaching. Sapir believed that 'even comparatively simple acts of perception are very much more at the mercy of the social patterns called words than we might suppose... We see and hear and otherwise experience very largely as we do because the language habits of our community predispose certain choices of interpretation.' (CLP, p.69.) In an article shortly after this, he claimed that language is 'a self-contained conceptual system which previsages all possible experience in accordance with certain accepted formal limitations... [Categories are] not so much discovered in experience as imposed upon it, because of the tyrannical hold that linguistic form has upon our orientation

in the world.<sup>1</sup> He then returns to geometry as an analogy but with a much different view about the matter. In this later article he says,<sup>2</sup>

'[i]nasmuch as languages differ very widely in their systematization of fundamental concepts, they tend to be only loosely equivalent to each other as symbolic devices and are, as a matter of fact, incommensurable in the sense in which two systems of points in a plane are, on the whole, incommensurable to each other if they are plotted out with reference to differing systems of coordinates.'

He clearly suggests that the geometry we use has a 'tyrannical hold' as well, but this is confused. It is as if the geometry we use provides grooves which limit our thought about that which is geometrically represented. But these are not grooves from which we cannot stray. His position is that there is a significant relativity of form, but again there seems to be a confusion about content and form.

Although it is clear that Sapir thought that language affects our perceptual experience of the world, he was not prepared to suggest how one experience could be relative to another -- much less that the world was divided up by the categories of language. Sapir very rarely even mentioned concepts or categories. When he talked about language affecting our experience, he usually seemed to be referring to the words of language, although he still used the notion of linguistic form. At least it was the terminology that he emphasized.

#### iv. Language and Behaviour

One reason for his inexplicitness was probably that he had more interest

- 
1. Sapir, 'Conceptual Categories in Primitive Languages' in Hymes, ed., Language in Culture and Society, p.128.
  2. Ibid., p.128. Cf. section ii above, where he speaks of the world of points being the same independent of the frame of reference.

in cultural and historical anthropology than in the development of a thesis of the relativity of language. A thesis about relativity would have relevance to his anthropological studies, but the studies were his primary interest. His natural concern with language seems to have been enhanced by his belief that 'an understanding of language mechanisms is necessary for the study of both historical problems and problems of human behavior.'

(CLP, p.75.) According to Sapir, 'it is an illusion to think that we can understand the significant outlines of a culture through sheer observation and without the guide of the linguistic symbolism which makes these outlines significant and intelligible to society.' (CLP, p.68.) Here it begins to look as though language is more important as a way of making human behaviour intelligible than as a system which can be compared to another and logically independent system. I think Sapir is closer to the view of language as a 'cultural or social product' (CLP, p.76) or even as a part of culture. (Cf. CLP, pp.1, 66, and 73.)

The development of such a view is found in his article on language as a form of human behaviour. There he argued that no human act is tied to one particular part of the body alone but 'is always accompanied by other segments of the organism, which lend their consent, as it were, in symbolic form.'<sup>1</sup> This is an important comment in itself. Reactions are not limited to just one part of the body. As Sapir points out, it is wrong to think of the expression of wonder being tied up with the staring eyes alone.<sup>2</sup>

---

1. Sapir, 'Language as a Form of Human Behavior', p.428.

2. Ibid., p.428.

Think of the hands, for example, and this is not just a matter of gesture.

What is important about this sympathetic movement of other parts of the body is that they have a germ of symbolic form which presages and parallels the use of language. According to Sapir,<sup>1</sup>

There is no reason to believe that speech articulations are different from any other expressions of the human body. At moments of intense excitement, when the current patterns of society fall away from us, the articulatory apparatus is very likely to regress into its primitive condition, and we produce all kinds of involuntary sounds that are highly expressive of our emotions or impulses. In ordinary life these emotions and impulses merely color speech....

Thus the use of language is thought to supplement action and even becomes an integral part of it such that 'in the actual context of behavior it cannot be divorced from action'. (CLP, p.11.) This view seems to be tied up in important ways with the intentionality of human action and as seeing human actions as following certain rules or having a point.

More important to Sapir's purposes, however, is the notion of a symbol in language being a 'substitute for some more closely intermediating type of behavior'.<sup>2</sup> As Harris has pointed out, 'language, then, is just an extreme type (and a physiologically and structurally separable portion) of the associations and dissociations that occur in all behavior.'<sup>3</sup> This view might be recognised as having certain affinities to Wittgenstein's discussion of the sentence 'I am in pain.' replacing the old pain behaviour such as wincing and writhing. Or as Sapir puts it, 'these auditory gestures would have arisen, then, as substitutive symbols for activities or other expressions which it was not possible or convenient to effect at the time.'<sup>4</sup>

---

1. Ibid., pp.428-429.

2. SW, p.565, as quoted in Harris, 'Review of Sapir's Selected Writings', p.298.

3. Harris, 'Review of Sapir's Selected Writings', p.298.

4. Sapir, 'Language as a Form of Human Behavior', p.429.

Sapir even thinks that language has an important role 'as a substitutive means of expression for those individuals who have a greater than normal difficulty in adjusting to the environment in terms of primary action patterns.' (CLP, p.20.) In this way speech becomes a human activity which has a role in human behaviour much like that of many other forms of activity. At the same time it goes beyond the primitive forms of behaviour and becomes a complex system of behaviour in itself.

But when Sapir says that speech becomes a substitute for primitive forms of behaviour, it should not be thought that speaking and other human activities can be easily separated from each other. According to Sapir, 'speech and action supplement each other and do each other's work in a web of unbroken pattern.' (CLP, p.9.) In fact, language is 'so deeply rooted in the whole of human behavior that it may be suspected that there is little in the functional side of our conscious behavior in which language does not play its part.' (CLP, p.15.) Part of the reason for this is that language is taught in actual contexts where the use of language is only part of the behaviour in the situation. (Cf. CLP, p.10.) Just as actions are not limited to one part of the body, they are not limited to the use of language either, nor are they divorced from the use of language. Even when our behaviour is silent it is intentional which involves seeing the behaviour in a certain light. This means that language is tied to the behaviour which it accompanies as well as to the behaviour which it describes in the intentional context.

When there is seen to be this kind of interweaving between speech and action, any kind of simple correlation between language and culture begins

to break down. Thus, in his section called 'Language' for the Encyclopaedia of the Social Sciences (1933), Sapir denies

that there is a simple correspondence between the form of a language and the form of the culture of those who speak it. The tendency to see linguistic categories as directly expressive of overt cultural outlines, which seems to have come into fashion among certain sociologists and anthropologists, should be resisted as in no way warranted by the actual facts. There is no general correlation between cultural type and linguistic structure. (GLP, p.34.)

Certainly, as Sapir points out, any attempt to correlate things like grammatical gender with parts of culture like religion or folklore is patently misguided. (Cf. GLP, pp.34-35.) He does suggest, however, that the significance of linguistic form might lie 'on a much more submerged level'. (GLP, p.35.)

The reason that is again proffered for the lack of a simple correspondence is 'the fact that linguistic changes do not proceed at the same rate as most cultural changes, which are on the whole far more rapid.' (GLP, p.35.) Similarly, culture diffuses with great rapidity 'in spite of profound linguistic differences between the borrowing and giving communities' (GLP, p.35), and this would be impossible if there were a simple correspondence between language and culture. Whatever correspondence there is will have to allow for a difference between the rate of change of language and that of culture.

#### v. Relativity and the Importance of an International Language

The one part of language that does change fairly rapidly is the vocabulary. This is partly true because 'changes of the meaning, loss of old words, the creation and borrowing of new ones are all dependent on the history of culture itself.' (GLP, p.36.) In this way, vocabulary 'is a very

sensitive index of the culture of a people'. (CLP, p.36.) And the differences of vocabulary are said to apply to cultural objects as well as to the mental world. (Cf. CLP, p.36.) There is said to be a definite correspondence between the differences of content and the differences of culture. (Sapir returns to the rather tenuous distinction between the content of a language and the form.) This is seen in the fact that 'distinctions which seem inevitable to us may be utterly ignored in languages which reflect an entirely different type of culture, while these in turn insist on distinctions which are all but unintelligible to us.' (CLP, p.36.) Sapir does not tell us the importance or relevance of this correspondence between vocabulary and culture.

On the 'submerged level', however, the linguistic forms can have a drastic influence, according to Sapir in his later work (1933). He believed that the forms of language 'predetermine for us certain modes of observation and interpretation which means...that as our scientific experience grows we must learn to fight the implications of language.' (CLP, p.7.) And one could not be very hopeful about this if one believed that 'no matter how sophisticated our modes of interpretation become, we never really get beyond the projection and continuous transfer of relations suggested by the forms of our speech.' (CLP, p.8.) Language seems to have the upper hand even though it helps as well as retards us 'in our exploration of experience'. (CLP, p.8.) This is certainly one of the strongest statements of the relativity thesis of language that Sapir gave, although its exact nature is most unclear. Undoubtedly, the thesis itself is connected with Sapir's campaign for an international auxiliary language.

Sapir firmly believed and strongly argued that 'what is needed above all is a language that is as simple, as regular, as logical, as rich, and as creative as possible'. (CLP, p.51.) This he thought would be important and instrumental in improving 'every type of international understanding', which would 'include any and all human interests.' (CLP, p.48.) And it is clear that he thought an international language would promote not only human brotherhood but clear thinking as well. He seemed to think that only an international auxiliary language could divorce itself from all the imperfections and provincialisms of national languages. According to Sapir, 'no national language really corresponds in spirit to the analytic and creative spirit of modern times. National languages are all huge systems of vested interests which sullenly resist critical inquiry.' (CLP, p.60.) Because of this, there is a serious problem of 'adequately symbolizing thought'. (Cf. CLP, p.61.) He seems to have thought of the international auxiliary language as a kind of mathematical system or symbolic logic. He thought of it as being purely denotative, unlike natural languages, and removed of 'every possible nuance of individual or social expressiveness'.<sup>1</sup> But 'a purely denotative language need not and is not in the least likely to supersede the actual languages in use today, with their bewildering flexibility of individual and social expressiveness.'<sup>2</sup> This is why he calls it an 'auxiliary' language, but it is hard to see how such a language would serve as a base for 'every type of expression of the human spirit'. (CLP, p.48.)

---

1. Ibid., p.433.

2. Ibid., p.433.

Moreover, he seems to think that an international language could make every distinction that any speaker of the language would want it to make. This would be unlike the natural languages, which are relative in the distinctions they make according to their vocabulary. (Cf. CLP, p.36.) What this would seem to demand is an increasingly large vocabulary, which would certainly be completely contrary to the demand for simplicity.

Two desirable characteristics for an international language would be to have a very simple grammar and a consistent orthography. Both of these characteristics would make the language easy to learn, which of course is an immediate asset. But to say that it is easy to learn is not to say that it is easy to use. I am not sure what this would mean. The use of a language is tied up with its expressiveness, which seems to me to be independent of the simplicity of grammar. According to Sapir, even in English which has 'a superficial appearance of simplicity there is concealed a perfect hornet's nest of bizarre and arbitrary usages.' (CLP, p.53.) It is difficult to see how the thinking of the speakers of English would improve if 'drowning' did not correspond to both 'help' and 'helping'. (Cf. CLP, p.54.) Sapir does not give us any help along this line. A simpler language would be desirable for teaching purposes (hence: Basic English), but it is difficult to see how a simple international auxiliary language would promote clear thinking. Nonetheless, that Sapir thought it would, shows that he did believe that natural languages might hinder and restrict thought.

Natural languages are also said to have "vague" words like 'to get',<sup>1</sup>

---

1. What he means by 'vagueness' could probably be better termed breadth of meaning.

but this hardly seems to me to be the detriment that Sapir seemed to think it was. (Cf. CLP, p.54.) But more importantly, this "vagueness" seems to me to be something that is inevitable even on Sapir's principles. Sapir seems to have believed that 'the single experiences lodges in an individual consciousness and is, strictly speaking, incommunicable.' (L, p.12.)

Vagueness also arises from the 'rough-and-ready symbolisms of normal speech'. Thus, he argued, 'If words really meant what we say they mean, there should be little room for misunderstandings; but it is of course only too true that they rarely mean quite what in our moments of intellectual isolation we claim as their due significance, but that they convey thousands of connotations over and above this ostensible meaning of theirs.'<sup>1</sup>

#### vi. Culture and the Individual

This brings out the vagueness of language, which Sapir thought was a liability, but at the same time it points to the importance of the individual to the concept of culture - a direction of analysis which Sapir used to good advantage. For Sapir, 'the true psychological locus of a culture is the individual or a specifically enumerated list of individuals, not an economically or politically or socially defined group of individuals.' (CLP, pp.155-156.) It was important for Sapir that the nature of a culture can only be understood in terms of human actions, and it is ultimately individuals, not societies, that act. Thus Sapir found it 'impossible to think of any cultural pattern or set of cultural patterns which can, in the literal sense of the word, be referred to society as such.' (CLP, p.152.)

---

1. Sapir, 'Language as a Form of Human Behavior', p.432.

According to Sapir:

The complete, impersonalized 'culture' of the anthropologist can really be little more than an assembly or mass of loosely overlapping idea and action systems which, through verbal habit, can be made to assume the appearance of a closed system of behavior. What tends to be forgotten is that the functioning of such a system, if it can be said to have any ascertainable function at all, is due to the specific functioning and interplays of the idea and action systems which have actually grown up in the minds of given individuals. (CLP, p.202.)

One consequence of this view is that it reveals the individuality of actions (including speech actions and their meanings) allowing for their differences, which are normally hidden by the attention given to their overall similarities. Also, according to Sapir, 'the application of the personality point of view tends to minimize the bizarre or exotic in alien cultures and to reveal to us more and more clearly the broad human base on which all culture has developed.' (CLP, p.204.) This is a view which is reminiscent of those of Vico, but Sapir does not discuss it further.

A third and important consequence of Sapir's view that the individual is the locus of a culture is that it breaks down the notion of an individual being forced to submit to the patterns of his culture or the forms of his language. Harris nicely supports Sapir on this point. According to Harris:<sup>1</sup>

It is true, of course, that each person is considerably affected by the patterned behavior, demands and expectations, of those around him...However, even here it may be possible to view the acquiescent response of the individual not as submission to control, or as being stamped by a matrix, but as participation in ways (ways of recognizing affection, ways of functioning economically) which are available to him - the compelling character being due precisely to their pervasiveness, i.e. to the fact that the person has at the time no alternative way for recognizing people's affection or for interrelating with them in production.

---

<sup>1</sup> Harris, 'Review of Sapir's Selected Writings', p.323.

It is not that one is limited by the patterns of one's culture or the forms of one's language. There are accepted and standard ways of behaving which depend upon certain general attitudes and areas of agreement within society. This agreement arises out of man's attempt to understand and to be understood. He behaves and speaks in ways that are understandable (in a broad sense of this term), which usually means the ways that have been established as standard. This does not mean, however, that there are no differences in the actions that fall under the standard. It would be hard to imagine what a standard would be that determined every characteristic of an action. Actions can differ in many ways while being alike in certain important respects. Thus, two individuals 'are never absolutely at one in their speech habits.' (L, p.147.)

I think Sapir would also allow that even actions that are performed in non-standard ways can be understood. The limits for Sapir are not absolute barriers that logically restrict behaviour. This is why Sapir could speak of 'an individual's sub-culture'. (CLP, p.161.) That an individual's culture is a sub-culture is determined by those ways in which his actions are non-standard. An individual does not always have to act in those ways which are most frequently followed even though it might be more economical to do so. For Sapir, one valuable consequence of this seems to be the rise of 'very different symbolisms and value emphases' (CLP, p.160), and it is suggested that what is lost in economy is gained in expressiveness.

It is clear that Sapir's view of culture is important to the relativity thesis of language itself. Sapir could not possibly accept a simple correlation when the limits are flexible and the sub-cultures varied. He has

argued that the forms of the actions of individuals are by no means unchangeable, which means that any relativity will certainly not be the result of a logical or causal relation. In relation to this, it is interesting to note that his remarks about culture and the individual post-date all of his published writings about the relativity thesis. His comments supporting the relativity thesis all date from around 1930 when he emphasized a relativity of content because of differences of vocabulary. Here he seems to have confused his distinction between form and content.

It is important to remember that in a great majority of Sapir's writings he either rejects the relativity thesis or ignores it completely. I think that by the time he wrote his section on language in the Encyclopaedia of the Social Sciences, in 1933, he realized that there is no 'simple correspondence between the form of a language and the form of the culture of those who speak it'. (CLP, p.34.) And there seemed to be no non-simple correspondence which suggested itself to Sapir for further study. The relation between language and culture which interested him was something quite different from a correspondence. There was clearly no evidence for the thesis and no correlation to be tested.

## CHAPTER 5

## LENNEBERG AND SOME PSYCHOLOGICAL EXPERIMENTS

i. Some Theoretical Considerations

I shall now turn to the first attempt that I know of to determine and test explicit comparisons which would give some force to a relativity thesis of language. Most of the work in this area has been little more than speculative at best, and it has been difficult to find anything that might be considered evidence. I hope this is clear from what I have said above. The problem, as I have suggested, is to find what kind of evidence would be relevant to a relativity theory of language. This is part of what Eric Lenneberg tries to do in some of his writings.<sup>1</sup> Lenneberg says of Cassirer and Whorf that 'it would be in vain if we were to search their works for practical working hypotheses whose verification requires compilation of clearly circumscribed data and which can be accepted or rejected in the light of objective observations.'<sup>2</sup> What Lenneberg tries to do instead is to develop criteria for the selection of language data which 'may contribute towards verification of a "language-and-cognition" hypothesis.'<sup>3</sup>

Verification is what he demands, but this may be stronger than what is desirable. He wants to eliminate pseudo-hypotheses like: 'There is a

1. See particularly: Lenneberg, 'Cognition in Ethnolinguistics,' and Lenneberg and Roberts, The Language of Experience. In writing about the latter article I shall usually refer to the author as Lenneberg since he was responsible for the theoretical considerations.

2. Lenneberg and Roberts, Language of Experience, p.2.

3. Ibid., p.2.

relationship between language and national character.'<sup>1</sup> According to Lenneberg, there is no basis in this example on which to make a comparison. There is no unit for analysis or parameter for experimentation. Only where there are clear terms for comparison can there be verification, and only where there can be verification can there be an acceptable hypothesis. According to Lenneberg, 'verification requires that we know what we are varying'.<sup>2</sup>

The demand for verification seems too strong, however. I would agree that there is something wrong in suggesting that complicated sentence structure of German corresponds to complicated philosophical thoughts. There is a 'lack of objectivity of the data' if this means that it is not at all clear what the data are. But Lenneberg seems to think that the problem is that of there being nothing in common between complicated sentence structure (of German) and, say, harsh sounds (of Japanese) except their being an aspect of language. Nevertheless, this is a means of comparison, and Lenneberg owes us an account of why it is inadequate, if it is. From the example he has given, there seems to be no reason other than the lack of a clear notion of the data needed for not accepting the hypothesis as a reasonable one. He speaks of the purported correspondence between harsh sounds in Japanese and harsh discipline in Japan as well as the similar correspondence in German as sub-hypotheses which need corroboration in themselves. Supposing that we did have corroboration for them, it would seem that we would also have corroboration for the hypothesis that there is

---

1. Ibid., p.5.

2. Ibid., p.5.

a relationship between language and national character.<sup>1</sup>

Verification that there is a relationship between every language and the national character of its speakers is impossible but also unnecessary. Such an hypothesis can be confirmed without being verified and still be acceptable. The method of verification certainly is not the only way that we establish hypotheses and generalization is not a sine qua non for any hypothesis to be accepted. Sometimes we accept what Lenneberg calls 'working hypotheses'<sup>2</sup> on the basis of one convincing occurrence. This is sometimes all we have in determining particular causes.

One point that might be added here is that there seems to be a confusion about correspondences and causes. There may be a correspondence between linguistic conditions or behaviour and non-linguistic behaviour without there being a causal relation between them. Causation is not the only way that the two can be 'intimately related'.<sup>3</sup> Lenneberg himself suggests that causation is the causal relation of two events, but in his own work he has not delimited two events one of which causes the other. He has investigated the relation between colour words and recognition, and these are not events. In any case, there are certainly things other than events which can be causes and/or effects.

Lenneberg goes on to show the criteria for choosing the correct approach from four alternatives for an investigation of a language-and-cognition

---

1. This would be only corroboration (but more seems unnecessary) if the relationship is said to hold between every language and the national character of its speakers. Otherwise the establishment of a sub-hypothesis would verify the higher level hypothesis.

2. Lenneberg, 'Cognition', pp.464-465.

3. Ibid., p.463.

hypothesis. When there is only a unique instance of a linguistic condition in only one language then, according to Lenneberg, there is no research possible. If that linguistic condition has a great variety of instances but in only one language, then research is possible but it must be intra-cultural. The research must be cross-cultural in the case where there is only one instance of the linguistic condition in any one language but where it is found in several different languages. A large number of investigations, however, concern linguistic conditions which have a variety of instances in any one language and are found in many different languages. Here, either an intra-cultural or a cross-cultural approach may be used. It is to this last situation that most of the relevant investigations by Lenneberg apply. So far this is only a schema and can do nothing more than suggest work for the researcher. There is the whole range of possible cases in between which might affect the type of research in varying ways. Lenneberg suggests that two instances of the condition in any one language or the occurrence of the condition in any two languages is enough to make research possible. On the other hand, although Lenneberg does not make this addition explicit, the number of instances or the number of languages is relevant to the kind of correlation one can find. A small number of cases would be statistically insignificant, and it might be that this would vary with the instances themselves. One general problem is that we have no assurance that the schema would apply in the same way to all kinds of cases. We must also keep in mind that different kinds of practical difficulties are likely to arise for different types of research. I might also suggest that negative evidence might sometimes be of value. This would be important

for showing that there are not other factors involved. Thus, in a case where the linguistic condition has a variety of instances but in only one language, we might show that the same variation of the corresponding non-linguistic condition does not occur. If the variation were to occur in communities speaking the other language, the thesis that there is a correspondence between the linguistic and non-linguistic conditions would be weak.

ii. Difficulties in Using a Method of Translation

Lenneberg also points out that difficulties sometimes arise in connection with the cross-cultural approach. Relativity theses sometimes, and particularly in the case of Whorf, are based upon a method of translation. This is a good place to present some rather far-reaching difficulties, mostly raised by Lenneberg in the use of translation to establish a relativity thesis of language. Lenneberg discusses a case from Whorf where an Apachean sentence is compared to what is said to be the English equivalent, 'It is a dripping spring.'<sup>1</sup> Whorf then suggests that if we look at the segmentation of the Apachean sentence we get something 'utterly unlike our way of thinking'. First of all, there is the rather mystifying problem of how the segmentation of a sentence has any relation to a way of thinking whether the sentence be segmented into morphemes or anything else. And this is further clouded by it being difficult to know what a way of thinking is at all. A way of speaking (the manner is connected with speech

---

1. See Lenneberg, 'Cognition', pp.464-465 and Whorf, Language, Thought, and Reality, p.241.

rather than language) is not a way of thinking. Of the same situation, some might think that it is raining too much, others that the rain is good for the crops, and still others that a change of weather would be a relief. People sometimes think many different things when they say something. And it does not help Whorf here to say that people are usually thinking what they say. There is no reason to think that thought is segmented in any way which can be compared to the way sentences are segmented. It is difficult to know even what it would be for thought to be segmented.

For similar reasons, Lenneberg considers Whorf's method of comparing lexical items illegitimate. Whorf has argued that the world is conceived differently and that different discriminations are made according to the difference of the vocabulary of the languages spoken. Whorf gives as evidence the fact that Eskimo has three words for snow (of different kinds) while English has only one, which is supposed to suggest that in the ability of the Eskimo to respond differently is exhibited the ability to discriminate differently. Lenneberg retorts, however, that a lack of variety of response in the English speaker does not indicate a lack of ability to discriminate. As he, with Brown says:<sup>1</sup>

When different stimuli do not elicit differential responses, the stimuli may or may not be discriminated. A subject may be perfectly able to distinguish two situations and still not care to do anything about it. Consequently the fact that English speakers do not have different names for several kinds of snow cannot be taken to mean that they are unable to see the differences. It would seem, then, that all such comparisons are psychologically inconclusive. The Eskimo and American may or may not see the world differently.

---

1. Brown and Lenneberg, 'A Study in Language and Cognition', p.455.

There may be a difference in efficiency, as for example in memory. In fact this is the focus of concern in Lenneberg's experiments which I discuss briefly below. But differences of efficiency do not seem to be the kind of differences Whorf meant when he talked about differences in the way we see the world or differences in the way we think. He has given us no evidence or even suggestions for finding evidence for these kinds of differences. There is a similar lack of evidence in the case of structural features of which Whorf produces examples.<sup>1</sup> In the first place, it is difficult to know what kind of 'meaning' is being attributed to these structural features, and even if this were clear there is no reason to suppose that this 'meaning' plays a role in the cognition of the speakers of the language.

Lenneberg points out that there are further difficulties which are independent of those I have just discussed. As Lenneberg says, 'Whorf analyzes the Apachean statement by giving the English equivalent for the general meaning of each Apachean element, and then compares the resulting sequence of meanings to the phrase, "it is a dripping spring"... [but then he] does not give the general meaning of the English morphemes.'<sup>2</sup> There is no agreement about what an analysis is in such a case, but at least it must be the same for the two different sentences (in the different languages) in order to expect comparable results. Lenneberg further argues:<sup>3</sup>

To abstract a general meaning of a morpheme or lexeme may occasionally be of some methodological use; but we must not confuse such an abstraction with an isolable segment of an utterance. General meanings lack reality, so to speak. It makes no sense to equate the

---

1. See above, chapter 3, iv, and Brown and Lenneberg, 'Study', pp.456-457.

2. Lenneberg, 'Cognition', pp.464-465.

3. Ibid., p.465.

global meaning of an utterance with the sequence of abstracted, general meanings of the morphemes that occur in that utterance.

What is important to the translation seems to be whether in a particular situation a sentence in one language means the same as a sentence in another language. The fact that one sentence has different morphemes or even more morphemes than the other does not seem to be particularly relevant. Different views about translation might be held, but it must not be assumed a priori that any differences of language shown by translation are differences of anything else.

Lenneberg concludes that the translation method is inadequate because it does not tell us 'what we really want to know [which] is how the Apachean structure of syntactic categories differs from the English one.'<sup>1</sup> The translation method as Whorf uses it certainly does not seem to tell us this, but it is not at all clear to me that a comparison of the structures of syntactic categories is what we do want. The semantic differences would seem to me to be more relevant, but still what we have to look at is the influence of linguistic factors upon non-linguistic factors and the translation method does not allow us to do this.

There are other difficulties that are not inherent in the translation method but certainly arise in connection with it. Lenneberg suggests, for example, that it is not enough to look at just the general meanings of morphemes. For one thing, it is implicit in what Lenneberg says that the meaning of a sentence or an utterance is more than the sum of the meanings of its morphemes. 'Morphemes and their meaning are regarded more approp-

---

1. Ibid., p.465.

riately as mnemotechnical pegs of a whole situation which is brought into consciousness by the statement as a whole.'<sup>1</sup> It is doubtful to me that there is any use in speaking of the meaning of a morpheme, but independently of that I agree with Lenneberg that utterances have more meaning than just that which is accounted for by the morphemes. On the other hand, I would not give so much importance to 'the SUM OF ASSOCIATIONS bound up with the complete utterance'.<sup>2</sup>

Lenneberg also points out that translation tends to give too much significance to the metaphorical and quasi-metaphorical aspects of language as in 'breakfast'. Again this is not inherent in translation. The distorting of such aspects results in wrong translations, but it is a danger to keep in mind. Lenneberg further warns us against using the translation method where the cultures (as well as the environments) of the speakers of the languages are vastly different. Differences will be too great for translation to be easily applicable, and the existence or non-existence of cultural objects will not show a relation between linguistic and non-linguistic conditions. That there are different objects in one's culture does not show a difference in the way of thinking just because one language has a one-word expression for that object and the other language does not. When translation reveals such a contrast, it does not give any solace to the relativist.

A more penetrating criticism is that translation obliterates any possibility of relativity in the first place. As Lenneberg argues:<sup>3</sup>

---

1. Ibid., p.466.

2. Ibid., p.466.

3. Ibid., p.465.

if a language were actually an aspect of a particular psychological make-up or state of mind (or more precisely an aspect of a cognitive process, which is not to be confused with the thought content), then, in the process of translation, we would be substituting the psychological elements characteristic of one make-up for those of another, so that we would finally compare two sets of elements of one and the same psychological structure.

It might be said that a good translation is one which replaces one sentence by another with exactly the same meaning. But if the corresponding sentences have the same meaning, there would seem to be no differentiation on which to base any kind of relativity.

The further point that Lenneberg is making is that two sentences which are translations of each other might have different states of mind attached to them but that the states of mind would be eliminated in the process of translation. However, this point presupposes that a method of translation for establishing a relativity thesis would inevitably involve the comparison of two expressions both in the same language. This was certainly the case in the writings of Whorf and others, but it is not necessarily the case. Translation may be used merely to establish the correspondence of two expressions which would then be compared in their actual use as to the psychological aspect attached to them. On the other hand, there remains the problem of what a good translation would translate and what would be left after the translation to show any kind of relativity at all.<sup>1</sup>

What I have said above does not show that a cross-cultural approach is impossible but only that one particular method (or class of methods) can at best be applied with great difficulty. Indeed, Lenneberg appealed to a cross-cultural approach as sometimes providing confirmation and as sometimes

---

1. For a further discussion of this see below the chapters on translation.

even being necessary.<sup>1</sup> What he was trying to guard against was the postulation of ad hoc hypotheses which could not 'be generalized so as to fit more than a single language.'<sup>2</sup> Without this generalization, the investigations are devoid of any cross-cultural verification. This was Lenneberg's reason for considering criteria for the choice of language data in cross-cultural research. He wanted language data that would be generalizable over more than a single language. But this was a desideratum rather than a necessity, and it is the intra-cultural research that has been most often ignored in the past. Because of this and because Lenneberg did some of his most interesting work in intra-cultural research, I shall consider cross-cultural research only after I have first discussed his comments about intra-cultural research.

### iii. Lenneberg's Experiments and His Critics

Lenneberg seems to accept what he calls 'a basic maxim in linguistics... that anything can be expressed in any language.'<sup>3</sup> All languages are alike in their potentiality of communicating messages. They differ only in the way that they communicate the messages. For this reason, according to Lenneberg, it is the 'HOW' of communication and not the 'WHAT' which is pertinent as linguistic data. He calls the HOW of communication 'codification' and divides it into the process of encoding, the code, and the process of decoding. Thus, it is codification that we must study in its relation to non-linguistic behaviour, but he admits that 'it is not always...easy to decide whether

- 
1. See my discussion above, section i, and Lenneberg, Language of Experience.
  2. Lenneberg, 'Cognition', p.467.
  3. Lenneberg, 'Cognition', p.467. For a further discussion of this see below, chapter 8.

a phenomenon is pertinent to codification or not.'<sup>1</sup>

He begins with the fact, which he considers obvious, 'that a language always selects for codification highly specific aspects from the physical and social environment'.<sup>2</sup> The suggestion is that within any language there is a 'language of experience'<sup>3</sup> which groups different stimuli along a particular parameter (or set of parameters) in particular ways producing a 'grouping arrangement'. This is still rather unclear, however. First of all, we do not know what it is that is being grouped - the notion of a stimulus is far from precise. It is clear that Lenneberg is talking about stimuli-types; e.g., when he is talking about colours, he is talking about the colours that objects have in common. But rather than use this language, which is confusing in itself, it would seem better to talk about the application of language, or the lexical items in the language, to qualities along a certain objective parameter. This is in fact what Lenneberg often does talk about. In connection with this, Lenneberg, (with Roberts) points out:<sup>4</sup>

The choice of any parameter is, of course, always arbitrary, the ultimate criterion for the choice being convenience. At this point we cannot lay down hard and fast rules on which parameters are used. This must be worked out by trial and error and in conformity with the aims of the research.

---

1. Ibid., p.467.

2. Ibid., p.468.

3. Cf. Lenneberg and Roberts, Language of Experience, p.7. The notion of a language of experience as a language within a language seems unnecessarily complicating here. The 'language of experience' is certainly not itself a language, and the notion of codability will apply to the language as a whole just as well. It may be, however, that Lenneberg did not put much weight on the notion of a language of experience in the first place.

4. Lenneberg and Roberts, Language of Experience, p.9.

The qualities that Lenneberg considers are those of colour and the parameters are hue, saturation, and brightness.

Before I discuss his actual experiments I want to consider a second difficulty which is likely to lead to confusion. He speaks of a language grouping things in certain ways. We can group or classify things any way we want independently of the language we speak, and this grouping or classifying is a human phenomenon. A language does not prevent odd classifications when they are called for, nor can it be said to give an alternative classification. We can speak of language grouping or classifying only in a metaphorical sense, and this demands being made precise by explicit criteria. Lenneberg does just this, but the purpose of what I have said above is to caution one about the conclusions one can draw from it concerning a relativity thesis of language. The relativity will look less astounding when we realise that non-linguistic behaviour is not being correlated to a classification of experience by language but to something which is done by humans.

Although a language does not classify experience, it might affect the ease with which a speaker of the language classifies experience. It is here that a variety of criteria for what might be called codification present themselves. I shall limit my discussion to colours since that is the focus of Lenneberg's investigations. First of all, it is easy to see that 'in English...not all colors are named with equal ease and unambiguity'.<sup>1</sup> This suggests the criterion of the ease and unambiguity with which colours are

---

1. Lenneberg, 'Cognition', p.469.

named, but once again we find that rather than one criterion here there are a variety of criteria. Lenneberg bases his study upon the responses of a random group of English speakers and uses five criteria for determining efficiency in responding in the naming of sample colour chips: (1) the average length of the naming response to each colour by counting syllables, (2) the average length in terms of words, (3) the average reaction time of subjects for each colour, (4) the degree to which subjects agreed with one another on each colour, and (5) the degree to which individual subjects agreed with themselves after the lapse of a month.<sup>1</sup> All of these factors were found to be correlated and they were combined to yield 'a single general factor' called codability.<sup>2</sup> It is then assumed that efficiency of communication would correspond to efficiency of naming,<sup>3</sup> although this was not tested directly.

It is clear that each of the five criteria that were used could be changed in various ways and different combinations of them could be considered decisive. In another study 'the mean number of words in the description' was the criterion used.<sup>4</sup> Lantz and Stefflre argue, however, that if

1. Brown and Lenneberg, 'Study', p.459.

2. Ibid., p.462. Brown and Lenneberg point out that in their study the 'measure carrying the largest factor loading was the reliability of naming response between individuals who speak the same language.' (p.462).

3. Lenneberg, 'Cognition', p.469, fn.17.

4. Glanzer, M. and W.H. Clark, 'Accuracy of Perceptual Recall: An Analysis of Organization', Journal of Verbal Learning and Verbal Behavior, 1 (1962): 225-242 as quoted in Lantz and Stefflre, 'Language and Cognition Revisited', p.473.

codability is defined as 'the efficiency with which a color can be transmitted in a given language'<sup>1</sup> then the criteria discussed above provide only indirect measures of codability.

It should be pointed out that Lantz and Stefflre's definition of codability differs significantly from that of Lenneberg. Lenneberg's criteria are direct measures for codability in his sense, although Lantz and Stefflre might argue that more emphasis should be put upon communicability. Certainly the criterion of Lantz and Stefflre seems to be closer to the 'how' of communication with which Lenneberg was concerned. They also point out that there is not a high positive correlation between communality in verbal response (Lenneberg's criterion) and communication accuracy (their criterion) thus showing that the former does not reflect the latter as was assumed by Lenneberg. The criteria will not correlate 'when the appearance of numerous names simply indicates a proliferation of vocabulary for describing the item, or when there are a number of items in the stimulus array that are all named in the same way'.<sup>2</sup>

Lantz and Stefflre use a direct measure of codability in their sense in order to measure directly the efficiency of communication. The accuracy of communication is given 'simply by determining the number of correctly decoded messages regarding each chip or by calculating the mean error score for each chip'.<sup>3</sup> They then assume that the results apply equally well to the individual, since they view memory 'as though it were a situation in

---

1. Lantz and Stefflre, 'Language and Cognition Revisited', p.472.

2. Ibid., p.480.

3. Ibid., p.475.

which an individual communicates to himself through time using the brain as a channel'.<sup>1</sup>

So far I have concentrated upon the linguistic side of the relation, and it should be noticed that all of the criteria I have discussed are concerned directly with linguistic behaviour, or speech rather than language.<sup>2</sup> Each of the criteria is only indirectly related to language and in varying degrees. These relations would have to be made more explicit for comparative studies to be possible, but this is not of immediate interest to us here.

The non-linguistic factor which was found to be related to the linguistic factor which I have been discussing is memory as shown in accuracy of recognition. It has been suggested that high codability is correlated with high recognizability and low codability with low recognizability. There have been many articles written on various particular experiments dealing with the facts of the case,<sup>3</sup> but I shall not attempt to review the literature on this matter since it does not raise any particular philosophical problems. Perhaps it will be enough to say that Lantz and Stefflre claim superiority for their criterion (communication accuracy) for codability

- 
1. *Ibid.*, p.473. The reader misses a justification of this assumption and of the intelligibility of this view. The lack thereof may mar, although it does not negate, their interesting results.
  2. This coincides with Lenneberg's reference to speech behaviour in Lenneberg, 'Cognition', pp.470 and 471. However, Lenneberg does not always clearly distinguish speech and language.
  3. See especially Brown and Lenneberg, 'Study'; R.W. Burnham and J.R. Clark, 'A Test of Hue Memory', *Journal of Applied Psychology*, 39, (1955): 164-172; Lenneberg, 'Color Naming, Color Recognition, Color Discrimination'; and Lantz and Stefflre, 'Language and Cognition Revisited'.

because,<sup>1</sup>

it correlates more highly with recognition results than do the other measures, and it predicts for at least two very different stimulus arrays, which naming agreement and brevity of description [the other measures considered by L. and S.] do not. It thereby brings together what were formerly disparate results.

The important thing is that there is a certain correlation, but so far there is nothing more than a correlation. There is some indication that Lenneberg thinks that a correlation shows causation,<sup>2</sup> but he is not prepared to acknowledge any particular causation. As he (with Brown) says:<sup>3</sup>

Our correlation evidence does not... establish the direction of causality. If we may be permitted a guess it is that in the history of a culture the peculiar features of the language and thought of a people probably develop together.

It probably would have been better left just that there is a correlation. On the other hand, Lantz and Stefflre think that inferences can 'be made about causal relations' from the fact that accuracy of recognition was increased when subjects were taught 'new names for previously poorly communicated chips'.<sup>4</sup> They may be right, but it is certainly not clear what inferences can be made, and still the correlation is the most interesting result.

The kind of case I have been considering so far is one in which there are a great variety of instances in the individual language and an universal occurrence in all languages. This is just the kind of case where both the

1. Lantz and Stefflre, 'Language and Cognition Revisited', p.479.

2. See above, section i.

3. Brown and Lenneberg, 'Study', p.461. Notice that this excerpt suggests that there is causality and that only the direction needs to be established.

4. Lantz and Stefflre, 'Language and Cognition Revisited', p.481.

intra-cultural and cross-cultural approaches are possible. And here the cross-cultural approach gives confirmation to the results of the intra-cultural approach. A study of Zuni shows that the same kind of correlation holds in Zuni between speech behaviour and recognition behaviour.<sup>1</sup> This confirmation is possible because the linguistic data used (that of colours) so nicely fit the three criteria which Lenneberg sets out as guide lines for the selection of data.<sup>2</sup> These criteria (or better: desiderata) are that the features be universal over many languages, that they be variable in these languages and that they be simple. There will be other desiderata depending on the data and the hypothesis, but these are three important ones. They make cross-cultural research useful and confirmation of intra-cultural research possible.

Finally, I shall quote Lenneberg at length giving what he considers to be four tentative conclusions from the recent studies in this area:<sup>3</sup>

First, the semantic structure of a given language only has a mildly biasing effect upon recognition under special circumstances; limitations of vocabulary may be largely overcome by the creative use of descriptive words. Second, a study of the efficiency of communication in a social setting (of healthy individuals) may give clues to intrapersonal processes. Third, efficiency of communication is mostly dependent upon such extra-semantic factors as the number of and perceptual distance between discriminanda. Fourth, the social communication measures become more predictive of the intrapersonal processes as the difficulty of the individual's task increases either by taxing memory or by reduction of cues.

---

1. See Lenneberg and Roberts, Language of Experience.

2. Ibid., pp.6-7.

3. Lenneberg, Biological Foundations of Language, p.355. Unfortunately, I have not been able to give proper attention to this very interesting book which has only recently been published.

There is obviously a lot of research that needs to be done in this area, and much of Lenneberg's work serves as a guide to this research. The results so far are meagre, but the prospects are interesting. Suffice it to say that I leave the research to others with those interests and intentions. I part with the problem where it becomes psychological rather than philosophical.

However, we are not without philosophical work to be done. There are a number of philosophical problems that have been raised in the historical account, and I shall now turn to some of these. My primary interest will be with limitations and universal generalizations rather than affinities and influences, but I shall make a few remarks about the latter as well.

## PART II

SOME PHILOSOPHICAL PROBLEMS

CONCERNING THE THESIS

## CHAPTER 6

## LANGUAGE AND SPEECH

i. The History of a Distinction

It is now time to turn to some general topics which have been long neglected both by myself and by others. So far I have considered the relativity thesis of language only from an historical point of view, discussing those views that have been held by some of the more important adherents of the thesis. As I have frequently suggested above, part of the problem of the thesis is the vagueness that enshrouds the relevant factors within it. All writers have suggested that there is some kind of relation between certain linguistic factors and certain other factors -- usually cultural or mental. Something like this is necessary for a writer to be said to have a relativity thesis of language. By specifying a bit more about those factors that might be involved, some can be quickly eliminated and others considered more seriously.

I shall begin by evading any kind of specification of cultural or mental factors. I regard the task of such a specification at least too difficult and unrewarding to consider here. It is even doubtful to me that it is possible to find any systematization of cultural and mental factors which would be useful for a general discussion of the relativity thesis of language. This is not to say that there can be no cultural or mental factors involved in formulations of the thesis. Indeed it is necessary to have such factors. My evasion of this topic is dependent only upon the view that there can be no systematization of these factors for a general

discussion.<sup>1</sup> The truth or falsity of this view, however, is not relevant to the truth or falsity of the relativity thesis of language itself.

This chapter will be devoted to an attempt to make certain suggestions for a systematization of linguistic factors. Being linguistic is a rather general property that can be predicated of a large number of things and needs being broken down into somewhat smaller categories. Most importantly, it applies to factors of language as well as those of speech. This is a distinction which has been vaguely current since the time of Saussure<sup>2</sup> and has been more clearly advanced by Gardiner<sup>3</sup> among linguists and by Ryle<sup>4</sup> among philosophers. It is also a distinction which is relevant and important to the relativity thesis of language as I try to show below.

Saussure is explicit about there being a distinction between speech and language. Although language and speech (or speaking)<sup>5</sup> are interdependent ('the former is both the instrument and the product of the latter'), 'their interdependence does not prevent their being two absolutely distinct things.'<sup>6</sup>

1. For a discussion of the contrary view and a proposal for the systematization of cultural factors, see Clyde Kluckhohn, 'Patterning as Exemplified in Navaho Culture', in Spier, Hallowell, and Newman, eds., Language, Culture and Personality (Menasha, Wisconsin: Sapir Memorial Fund, 1941), pp.109-130.
2. See: Saussure, Course in General Linguistics, See esp. pp.18-19.
3. See: Gardiner, Theory of Speech and Language. See esp. pp.62 and 88-89.
4. See: Ryle, 'Use, Usage, and Meaning'.
5. Saussure is most unclear about the distinction between speech and speaking, although he does seem to think there is a distinction. (cf. Saussure, Course in General Linguistics, p.18.) He sometimes speaks of the distinction between language and speech and at other times between language and speaking without suggesting any difference. (Cf. Saussure, Course in General Linguistics, pp. 14-15.)
6. Saussure, Course in General Linguistics, p.19.)

Language 'is not to be confused with human speech'.<sup>1</sup> 'Taken as a whole, speech is many-sided and heterogeneous...it belongs both to the individual and to society...Language, on the contrary, is a self-contained whole and a principle of classification.'<sup>2</sup> It is this aspect of language that makes it 'the social side of speech, outside the individual who can never create nor modify it by himself.'<sup>3</sup> These comments were useful in their time and important in the historical development, but I am afraid that they are not accurate enough to be helpful to us here.

Gardiner is a bit more explicit about the distinction that he is drawing, but what he says often seems inaccurate and sometimes even inconsistent. He also occasionally uses misleading analogies.<sup>4</sup> For example, on the one hand he speaks of language 'as the product of speech'<sup>5</sup> and later asserts that it is 'the mother of all speech'.<sup>6</sup> They are indeed 'intertwined and mutually dependent'<sup>7</sup> but this does not excuse the inaccuracies of his presentation. The distinction itself, however, is frequently discussed. He claims: 'Speech is...a universally exerted activity, having at first definitely utilitarian aims. In describing this activity, we shall discover that it consists in the application of a universally possessed science,

---

1. Ibid., p.9.

2. Ibid., p.9.

3. Ibid., p.14.

4. Cf. the analogy between language and astronomy in Gardiner, Theory of Speech and Language, p.93.

5. Gardiner, Theory of Speech and Language, p.110.

6. Ibid., p.175.

7. Ibid., p.108.

namely the science which we call language.<sup>1</sup> He also speaks of language as a system of signs.<sup>2</sup> Thus language becomes that part of the linguistic world that is learned in order to be able to speak. 'Language is a collective term, and embraces in its compass all those items of knowledge which enable a speaker to make effective use of word-signs.'<sup>3</sup> The most important constituents of language are the words, but the syntactic rules and specific types of intonation are also constituents of language, while 'speech' is 'applied to the products of a speaker's articulations'<sup>4</sup> which are sentences. This yields for Gardiner the dictum: 'The sentence is the unit of speech, and the word is the unit of language.'<sup>5</sup>

Professor Ryle takes up this distinction and expands upon it. He claims that a language is 'a corpus of teachable things'.<sup>6</sup> 'Words, constructions, etc., are the atoms of a Language'<sup>7</sup> and 'the saying something with them is not in its turn an acquired wherewithal to say things.'<sup>8</sup> According to Ryle, "'Speech"...can be conscripted to denote the activity or rather the clan of activities of saying things'<sup>9</sup> while 'Language' is what we can be said to know

- 
1. Ibid., p.62. He later speaks of 'the aspect of linguistics called "speech"', as though it were a science as well. (See: Gardiner, Theory of Speech and Language, p.112.)
  2. Ibid., p.67.
  3. Ibid., p.88.
  4. Ibid., p.89.
  5. Ibid., p.88 (his emphasis). Notice that this involves taking speech as the product of the activity rather than the activity itself. For a discussion of this point, see: Gardiner, Theory of Speech and Language, pp.87 and 328-330.
  6. Ryle, 'Use, Usage, and Meaning', p.223.
  7. Ibid., p.224.
  8. Ibid., p.229.
  9. Ibid., p.223.

in order to participate in that class of activities. For Ryle, this distinction was important in clarifying what sense and nonsense are and in distinguishing solecisms from illogicalities. This is a large and important problem in itself but will not concern me here. What I am concerned with here is the original distinction between speech and language. After some brief semantical comments of my own, I shall return to some of the suggestions by the three writers I have discussed above and especially those by Ryle.

ii. A Linguistic Investigation of the Distinction

In order to have as unprejudiced a view as possible and to discern those distinctions which are immediately expressed in our language (or speech), I shall investigate some of those linguistic contexts in which the words 'speech' and 'language' can meaningfully occur. There are some contexts in which both words are appropriate, although not necessarily with the same meaning. For example, we can speak either of the language of a nation or of the speech of a nation although not of the speaking of a nation.<sup>1</sup> I am inclined to think that the speech of a nation is a bit metaphorical and means something like what most characterizes the speech of the people, which of course would be the language that was used. It is important that we cannot be said to speak in a particular speech; although we do speak in a particular language. Moreover, when we say that the speech of a nation is English we do not imply that there is such a thing as the English speech. Notice also that we can speak of an individual's language being English but

---

1. Unless we think of it in the very different sense in contexts like the speaking of a particular nation being prohibited in polite society.

not of his speech being English.

We can also speak of a use of language or a use of speech. It might be said that it is better to use language than gestures, and the use of speech might be recommended over the use of written material in convincing someone. This shows of course that a use of language is not always a use of speech, and neither is a use of speech always a use of language if we imagine frightening someone by an inarticulate yell. But there is also a use of language where it is a use of a particular language and without a correlated use of speech. One can use a word (but not a construction) in a peculiar way, and we would say of that use that it is a peculiar use of language. Something in speech which vaguely corresponds to this is a figure of speech, which can be found in either speech or writing.

There are also other contexts where 'speech' and 'language' are equally appropriate but where the meanings of the corresponding phrases are clearly different. Bad and strong language are different from bad and strong speech. (In this case, 'speaking' seems mildly inappropriate.) Bad language is not a particular language with its faults but words or constructions which are questionable like 'ain't' or words that are inappropriate like salacious words. We can use bad language in writing, but bad speech cannot be written.<sup>1</sup> Bad speech is pronunciation that involves speech defects or similar temporary or permanent faults like lisping. To say that someone's speech is bad is to say that his manner of speaking is bad. We can say that a person delivered a bad or strong speech to a society,

---

1. This was pointed out to me by Professor Ryle.

but I shall ignore this clearly derivative sense of 'speech'. And if there is such a thing as a language defect, it will be a case of the language not having words or constructions for certain purposes. In a similar way, language habits are different from speech habits. Language habits are the habits of using particular words or constructions, while speech habits are those of saying things in a particular way, such as raising one's voice at the end of every sentence. Finally, I shall mention that we sometimes speak of a word being part of a language, while things like nouns and verbs are parts of speech.

It should now be quite clear that there is a difference between speech and language, although I have discussed only those linguistic contexts where both 'speech' and 'language' are appropriate. There are also many contexts in which only one of the two can meaningfully occur. Consider the following:

speech impediment	<u>but not</u>	language impediment
speechless	<u>but not</u>	languageless
figure of speech	<u>but not</u>	figure of language
and: speak a language	<u>but not</u>	speak a speech
language facility	<u>but not</u>	speech facility
language of numbers	<u>but not</u>	speech of numbers
(nature, bees, etc.)		(nature, bees, etc.)

A speech impediment is something that prevents us from uttering sounds appropriately. We might have a lisp or a stutter, but this does not affect our language or use of language, which may be seen as perfect in written material. Similarly, a person is speechless if he is unable to

produce any articulate sounds. He may be able to grunt or gasp, but he will not be able to utter any words or sentences. On the other hand, to lose one's speech is not to lose one's language. Perhaps we do not speak of someone being "languageless", because there are so few human beings who are without language. I am inclined to think that to speak of a figure of speech is to use a figure of speech i.e. a way of speaking. In any case, it is the result of putting particular words together in a particular way and thus not a part of language but something we produce by using language.

One has language facility if one can use certain words or constructions in a language. It is irrelevant in what language one has the facility, but of course it must be in some language. We do not speak of English facility or proficiency, even though we may have facility or proficiency in English. In order to be said to have language facility, it is necessary to be able to make up sentences and say things with these sentences, i.e. to speak or write, and/or to understand what others say or write. Some might say that a language facility involves a facility to use sentences, but this last expression is at least strained, and there are strong arguments (which I discuss below) for not considering sentences part of a language. If we can be said to have speech facility then I suppose this would be the ability to utter articulate sounds.

There is said to be a language of numbers, I think, because numbers are signs which can be combined together to make equations in much the same way as words are signs which are combined to make sentences. What way this is needs clarifying, but it is not important at this point. Here, I do not think it is so much that numbers have meanings but that they are combined

together in certain predetermined ways. The notion of a sign has also been important for those who have talked about the language of nature. On the other hand, I think the notion of a language of bees comes from an analogy about communication and behaviour. It depends upon the ways in which the bees act, and this instigates the search, which is still going on, for signs. There is sometimes a similar pressure to speak of the language of certain other animals.

We can be said to speak a language but not to speak a speech. I think this is because 'speech' is generally a mass term, as I try to show below. Perhaps it is odd to speak of speaking speech because speech is the only result there is of speaking. We do not speak written material. It is also difficult to account for the phrase 'to speak a language'. One might think it more appropriate to say that we speak in a language or that we use a language. These two phrases would emphasize the importance of words and constructions as parts of a language. I think the reason that we say that we speak a language rather than using one of the other two phrases is that the other two have different meanings of their own and would be rather inaccurate. To say that someone speaks in a language is to suggest that he normally speaks in that language independent of what other languages he speaks. And anyone can use a language without speaking, while some can use a language but cannot speak. In any case, we do not use the phrase 'to speak language'

In the preceding paragraph, I said that 'speech' is generally a mass term, although it would probably be more accurate to say that it generally has some of the main properties of a mass term. A mass term is usually said

to be a term that cannot be preceded by an article or have a plural and can be preceded by words like 'much' and 'more'. 'Sugar' and 'water' are often given as examples. On the other hand, there are count terms which must be preceded by an article or have a plural and can be preceded by 'many' but not by 'much' or 'more'. 'Table' and 'chair' are appropriate examples of count terms. 'Speech' under some senses is a count term. For example, we can speak of an after-dinner speech or the speech of a nation. I have suggested that both of these senses are derivative. A more central sense seems to be that in saying that man has speech, where we do not say that he has speeches or a speech. Nevertheless, it is difficult to understand what it would mean to ask how much speech a person has. We can think of speech as the noise which results from speaking, and then we might consider how much speech can be produced by a certain amount of energy. And in this case, bits of speech are not speeches. It is not clear what should be said about the term when we are speaking of the manner in which one speaks. We might here speak of a speech which is annoying. Yet, even in this sense, we can not speak of how many speeches a person has or how many there are. Perhaps it is only that they are difficult to count like facial expressions.

In many ways, 'speech' seems to be a mass term, but the term 'language' is much clearer and is generally a count term. We count how many languages there are on a continent and often talk about a particular language like English. There is this sense in which it is clearly a count term. There is also the sense in which we use language and a child gains language. Here the term occurs without articles or the plural, and although it is a bit strained it seems to me that we can also speak of how much language was

used or gained.

### iii. A Language As a Collection of Words and Constructions

What I have said so far suggests that a language is something like a collection of words and constructions. To say that a person's use of the language is good is to say that he used good and appropriate words as well as correct constructions. Kyle and Gardiner add intonation patterns as constituents of a language and I think advisedly. Intonation, which is only partially suggested by punctuation in writing, is often important in determining the meaning as well as the force of a sentence. It should be pointed out, however, that part of what we look to when we say that someone's use of language is good is the sentences that he utters or writes. We might compliment a person for using good or interesting sentences or for the size of his paragraphs. This is not a compliment just for words and constructions. Sentences are also involved in a compliment for the use of language as socially correct, but what one is complimenting someone for is what he says and not his sentences. And when one compliments a person for his use of language as grammatically correct, one is complimenting him for his use of words and constructions rather than for his sentences. Words and constructions are clearly predominant as parts of a language.

I think the importance of words and constructions can also be seen by approaching the problem in a different way, and that is to investigate what it is to know a language and among other things what it is we know when we know a language. To become clear about this it is helpful to see what it is that we learn when we learn a language. The usual way of

learning a foreign language in the past has been to memorize vocabulary words and then learn the rudiments of how they are used (put together) in sentences. In learning the language, we learned the basic core of words and constructions, although we learned the two in different ways. For example, we read and then memorized the words we know, but not the constructions. It might be thought that one could memorize all of the necessary syntactic rules and thus learn the constructions in the same way one learns the words.

To see that this is not enough, something more will have to be said about the notion of a construction. A construction is not a syntactic rule, but a particular arrangement of words, which is perhaps but not necessarily determined by a syntactic rule. The passive construction is determined by a particular rule applied to the active construction. There is not a syntactic rule which determines that the active construction is grammatically correct. It is not by a rule that we know 'Hit the men the dog.' is ungrammatical while 'Give the men the dog.' is grammatical. Even if there were a rule to tell us that 'Give the men the dog.' is grammatical and we knew the words of the sentence, we would not yet know the meaning of the sentence. We must also know how to determine the meaning of a sentence from the meaning of the words in that arrangement. Of course, it would be odd to know the meaning of the words and not to know the meaning of that sentence, but the point is that there is something more that we have to know than just the meaning of the words and syntactic rules. I think this is something that is often overlooked by linguists, although they rarely talk about meaning.

We now commonly learn a foreign language in a rather different way than we did in the past, and we often begin learning (memorizing) sentences. This is like learning a sentence from a phrase book that will be useful in particular situations. The important thing about learning a language by learning sentences is that the goal of the process is to be able to make up new sentences with the words and constructions that have been learned in learning the sentences. It has to be something more than just learning sentences as is the case with the phrase book. One could learn sentences without learning any words or constructions, but then one would not be able to understand or use new sentences. There is nothing that could be called a conversation or an argument in any full sense of those terms. Conversations and arguments must involve the productiveness and imaginativeness as well as the randomness and newness of the living language. This comes from being able to say new things by being able to make up new sentences from words and constructions that one already knows. One can only be said to know a language once one can do this in the language. Being able to speak in a conversation, an argument, etc. and understanding those with whom one is speaking is a criterion for being said to know a language. If one is mute and writes the language rather than speaks it, this is also good enough.

We can now see why Gardiner and Ryle emphasized the importance of words and constructions being the constituents of language. We must know words and constructions to be able to converse and argue, and in turn we must be able to do this to be said to know a language. It may still be true of some sentences that we know them, but this could only be said if we know

and use them like the sentences of a phrase book as in certain rigid rules of etiquette or possibly like those from a quotation. By and large our knowledge of a language consists of a knowledge of words and constructions, and here knowing a word is not just knowing that there is such a word but also knowing what the word means.

In order to know a language, it is necessary that one knows words and constructions but only possible and not necessary that one knows a few sentences. If one has not heard a particular sentence before, this alone is not enough to show that one lacks knowledge of a language. Nor does knowing a particular sentence alone get us any closer to knowing a language, for we are no closer to speaking or conversing, except to the extent that knowing a sentence gives us some help in knowing words. Ryle has put it very well: 'If I say something in French, then, even though what I say has never been said before, I do not thereby enlarge the French language, i.e. increase the amount to be learned by a student of the French language.'<sup>1</sup>

A word is in a language in the sense that it is part of the language, but even though a sentence can be said to be in a language it is not part of a language. A sentence is in a language in the sense that a book is in a language. A particular language is used in producing the sentence or book. Even if a sentence is part of my linguistic knowledge, it cannot be said to be part of the language in general.

This is why the relativity theory of language cannot be put in the form

---

1. Ryle, 'Use, Usage, and Meaning', p.224.

of what a language says, because something can only be said in a sentence and a language does not contain sentences. There can be no beliefs in a language because there can be no sentences expressing the beliefs in a language. And even if there were sentences expressing beliefs in a language, the corresponding negative could always be formed by adding 'It is not the case that....'. Any grammatical sentence expressing a statement can be negated by adding the appropriate negative to form the contradictory grammatical sentence. I suppose this is the corollary to the view that any belief that it is possible for one to hold there is a corresponding contradictory belief that it is also possible for one to hold. Even if sentences were part of a language, beliefs could not be necessarily relative to these parts because there would always be corresponding negatives. Atheistic opinions can be perfectly easily expressed in Ecclesiastical Latin.<sup>1</sup> Beliefs about God, metaphysical or otherwise, are not contained in the Latin language.

For similar reasons, I think it is wrong to speak of confusions or conceptual mistakes being contained or embedded in a language. For there to be a confusion in any appropriate sense, there must be a belief confusing two or more things, but beliefs are not the kind of thing that a language can have. Native speakers of many different languages have confusions about freedom of the will, but none of their languages have these confusions. The languages have only the words and constructions, and we compose the sentences which express our beliefs and confusions. Similarly, conceptual mistakes are things that philosophers make when they say things or compose sentences.

---

1. This example was suggested to me by Professor Ryle.

They do not have to make these mistakes because of their language or because of anything else for that matter. And other philosophers can correct them if they notice the mistakes. It is not the language which is at fault but the philosophers who say the things that they do.

iv. The Identity of a Language and Additions to a Language

I have argued that in general sentences are not constituents of a language but that words and constructions are. I have yet to say which words and which constructions as well as how many are constituents of a language. It is not at all clear exactly what constitutes a language. One thing that will have to be true is that words cannot be individuated merely according to their phonetic or orthographic form. The German word 'rot' and the English word 'rot' are clearly different words. For one thing they mean different things, which also makes us want to distinguish the English words 'check' and 'cheque' as well as different words of the form 'bank'. And the German word 'schreiben' certainly is not an English word, nor can it be used in an English sentence except one like this where it is mentioned.

On the other hand, there do seem to be foreign words which are part of another language, although it is difficult to say when they have become a part of the other language. The difficulty is like that of saying when an immigrant has become a native.<sup>1</sup> Examples of such questionable words in English are 'blitzkrieg', 'tête-à-tête', and 'bona fide'. Sometimes new words merely depend upon new objects such as the American English word 'kiva', which comes from the Hopi word meaning a building. It is also difficult to

---

1. This was suggested to me by Professor Ryle.

know whether or not things like proper names can also be considered words of the language. The fact that 'Munich' (in English) is different from 'München' (in German), the fact that words like 'Warsaw' in Polish are declined,<sup>1</sup> and the fact that word counts include proper names are strong reasons for saying that they are words in a language.

Similar and possibly more serious difficulties arise concerning the constructions of a language. In the first place, it is much less determinate what the constructions of a language are. This is not something that is more or less established (as in the case of words) in ordinary language. More importantly, there does not seem to be any basis for accepting any one set of constructions as the constituent constructions of a particular language. It seems far more likely that for any given language there will be more than one adequate grammar. Different sets of constructions could then be given as the constituent constructions of a particular language. The difficulty arises when we try to say which constructions are the constituents we learn when we learn the language. Perhaps there are certain constructions or syntactic rules which are necessary for one to speak the language, but one can say quite a bit with a very minimal knowledge of grammar, i.e. with the use of a very minimal number of constructions and rules.

One can also say a great deal with an extremely small vocabulary. This made it conceivable to develop a whole language like Basic English which was composed of only 800 words. G.A. Miller maintains that the '50 most

---

1. This example comes from Peter Geach, 'The Perils of Pauline', read to the Voltaire Society in Oxford on 18 February, 1965.

commonly used word types make up about 60 per cent of the word tokens we say'.<sup>1</sup> The percentage would be even higher for any individual speaker, although the figures would not be quite as astounding if we included the words that he reads and hears. Still, this indicates that the basic or most commonly used words of a language are going to be a very small core of the total collection of words of the language.

Many things can be said with a very small number of words, such that a child with a small working vocabulary of even a thousand words can be said to speak. He can name and describe many different objects (including new objects, which shows the productivity in his speech), express his feelings, ask questions, give and obey commands, as well as many other things. This is the core of the day to day language, which means that the child will be able to understand as well as to participate in most of the ordinary conversation. Because of this small core of words that are used for most of what we say, there can be revisions in and additions to the vocabulary of the speaker with only a very small effect on his discourse, whether the speaker be a child or an adult with a vocabulary of fifty thousand words where of course the effect would be even smaller and more insignificant. The speech will not change significantly as long as the core remains basically the same, and there are rarely important or sudden changes in the words which belong to the core.

The same thing can be said about a language as a whole whether the vocabulary is as large as 500,000 or as small as 50,000. In any case the addition of one or two words will be unimportant. This is not enough to

---

1. Miller, G.A., Language and Communication (New York: McGraw Hill, 1963), p.89.

make it a different language or even to bring about significant changes in the speech of the speakers. One reason for this is that many of the speakers might not even know of the addition to the vocabulary of their language and yet still be able to speak the language with each other. No one knows all the words of a language, and I should think that one could be said to know a particular language without knowing any of the borrowed words of the kind that I mentioned above. And it seems almost too obvious that any two people who can be said to know a particular language are most unlikely to know exactly the same words of the language. Some people are likely to know vastly different sets of words.

One can imagine a situation where one would say that a change in the vocabulary was drastic enough to say that the language is no longer the same language. Just imagine Bar-Hillel's case of adding the whole vocabulary of English to that of the American Indian language Choctaw.<sup>1</sup> Perhaps a more realistic case would be that of a society of gardeners which suddenly turned to the sea for its livelihood and at the same time borrowed a large number of words from a society with a very different language. One could imagine them borrowing enough such that we would say that they speak a different language than before. Notice, however, that it would be a very different case if they merely added their own words. The nature of a language is not clear enough to determine where one can draw the line between a language remaining the same and its becoming a different language. In any case, we know that a large number of words can be added.

---

1. This example comes from Bar-Hillel, 'Intertranslatability of Natural Language', p.57.

We can see now that the determinants of a language are at best extremely vague. This presents difficulties for certain mechanical resolutions, while at the same time it provides a move for an attack upon one position of the relativity thesis. This simple but obvious position is that some languages have words for objects that are unknown to any of the speakers of other languages. There are languages like Hopi which probably do not have words corresponding to the English words 'reactor' and 'advertising'. Words for wildlife will also differ because of regional differences among other things. Fortunately, these are deficiencies which can be overcome. The word 'television' did not come into the English language until 1909<sup>1</sup> soon after such a machine was invented, and much later the word 'tellywelly' was added to Welsh from the English influence in spite of the great difference between Welsh and English.<sup>2</sup> The important thing about this addition is that those who spoke English and learned the word 'television' or those who spoke Welsh and learned the word 'tellywelly' did not then speak different languages.

The change is even more spectacular in the area of scientific words where new names are given to discoveries and inventions practically every day. It would be absurd to think that each new word creates a new language. I can write or speak English because there are others who understand English and thereby understand most of what I write or say in spite of the fact that their vocabulary is somewhat different from mine. Anyone who holds

---

1. The Shorter Oxford English Dictionary, third edition, p.2143.

2. For a discussion of this and other kinds of influence in linguistic change, see: Sommerfelt, Alf, 'Language, Society and Culture', Norsk Tidsskrift for Sprogvidenskap, 17 (1954): 5-81.

that there is a relativity because some languages have words for objects that are unknown to any of the speakers of other languages will have to take into account the fact that where a language does not have a word for an object the word can always be added without creating a new language.

#### v. The Notion of Speech and Its Importance

This discussion has also brought us to a better perspective about the relation between language and speech. A person is said to know a language if he is able to speak the language and understand what others say and write. His knowledge of the language does not depend upon his knowing or being able to repeat a certain number of words. He certainly will not be able to repeat all the words of the language, even if this were to make sense, and there is no particular collection of words which must be known for one to be said to know the language. One might question whether it is possible for one to be said to know English without knowing or being able to use words like 'red', 'I', 'table', and 'want'. There are many words which can be seen to be important from both a statistical analysis and a phenomenological investigation of language, but it would be absurd to try to determine exactly which words are in this core.

In being said to know a language, it is not the words that are important but that one can and does speak. This comes from the fact that one does not learn a language by just memorizing many words and a few syntactical rules. Knowing a language depends upon speaking the language. When someone learns to speak he learns what can be said; he learns, however fumblingly, what it makes sense to say. He comes to have some sense of how different

remarks have something to do with one another. This is why he can answer you and ask you things, and why he begins to follow a conversation or to carry on a conversation himself.<sup>1</sup> This is something more than just learning a language, which is only part of what is linguistic. In learning a foreign language, for example, we learn new words to say old things. (This is only frequently the case. It is slightly more complicated.) We learn how to say things in a new language. We learn the new words to make remarks, ask questions, express our feelings, etc. But this whole process depends upon our already knowing a language in which we say things and carry on conversations.

When we first acquire our native language, we learn the points of remarks and what it is to say something. What is important is not that we learn a (any particular) language, but that we acquire speech - the capacity to use language. We might say that we learn how to speak, but that suggests really too much. We learn to speak, but this 'is not learning how to speak or how to do anything. And it is not learning the mastery of a technique'.<sup>2</sup> This would be to suggest that language is like a tool for which we are taught the method and technique of its use. As Rhees suggests, only the learning of a foreign language comes close to this. When we learn to speak, we just begin to speak. We begin to say what it is we want and how it is we feel. Beginning to speak is acquiring speech. And when we speak, it is necessarily in some particular language. Our speech is a criterion for

1. Rhees, Rush, 'Wittgenstein's Builders', Aristotelian Society, 60 (1959-60): 180.

2. Ibid., p.183.

our being said to know a language. A language can still be thought of as a 'corpus of teachable things'<sup>1</sup> and these things having been learned are exhibited in the activity that can be called speech.

So far I have paid closest attention to language, although I have tried to show how closely related language is to speech. But now I want to say a bit more about speech itself. At the end of the preceding paragraph, I have used the word 'speech' in three different senses, all of which must be distinguished along with the other senses of the word. I shall pass over the senses of 'speech' as in 'after-dinner speech' and in 'the speech of a nation'. But there is the sense of 'speech' as in 'bad speech' where it means something like the manner of speaking.

This is also closely tied to the sense where it is the result of speaking. Speech is what one produces when one speaks. I suppose this is what Ryle was thinking of when he suggested that speech is the collection of the saying of things, while language is the collection of words and constructions. This might be misleading, however, for it would be wrong to say that speech is the collection of sentences. At best it is only the collection of utterances, but a different kind of collection from the collection of words and constructions that language is. His speech and my speech are all part of the same thing, the result of speaking, although his language and my language might be different things. It should also be clear that if we speak of speech as being the collection of the sayings of things we mean the collection of the token sounds that come out. That it is a collection

---

1. Ryle, 'Use, Usage, and Meaning', p.223.

of sounds can be seen by the fact that we do not find speech in a book. They are token sounds because if someone else says the same thing - whether it is that he asserts the same proposition or utters the same sounds - what he has said (among other things) is not the same speech but some more speech. Each new token utterance is another bit of speech.

Sometimes, however, we are more interested in someone's ability to speak, as when we are speaking of acquiring speech. When I say that someone has speech, I am thinking of his having the ability to speak or the ability to produce speech in another sense. Professor Ryle maintains also that 'speech' can be conscripted to denote the activity or rather the clan of activities of saying things'.<sup>1</sup> This is a sense which I am very unsure of in spite of the fact that it is an accepted listing in the Oxford English Dictionary. I have found very few linguistic contexts in which 'speech' could be replaced by 'the clan of activities of saying things'. We do speak of all men having speech in common which seems to suggest that it is a kind of activity that they have in common, although it could just as well suggest an ability or potentiality that all men have in common. We might also say that to understand a people it is necessary to understand their speech as well as other important kinds of activity, but this seems a bit strained to me. It seems to me that the activity or clan of activities is usually referred to by the word 'speaking' and that speech is the result of this speaking or the ability to speak.

---

1. Ibid., p.223.

To say that an animal does not have speech is to say that it does not have the ability to speak. Of course not having the activity or the result goes along with this, but that is not what is said. Nevertheless, a confusion arises because of the close connection between the ability, the activity, the results, and the nature of the results. No doubt similar confusions arise in connection with other abilities and activities.

Quite often this confusion is unimportant or irrelevant and sometimes even undecidable in a harmless way. When I say speech is common to all men, it seems unimportant to most situations whether I mean that the ability to speak is common to all men, that the activity is common to all men, or that the result of speaking is common to all men. All three meanings have approximately the same logical consequences, e.g. the rational nature of man. And if you want to find out exactly what I mean you can always ask me, but for me to tell you exactly what I mean is not necessarily for me to give you a meaning which is exact. When I say 'Stand over there.' I am not being exact, but it is good enough as it is.<sup>1</sup> It is appropriate for what I want, and of course I can be more exact.

Similarly, when I say that speech is common to all men, it is quite possible that I have something only very general in mind and that even I cannot say more exactly what was meant by my sentence. Of course I can make it more exact if that is necessary, but that may be to add to what was said before. What I am suggesting is that although I have distinguished several senses of the word 'speech' it will sometimes appear in contexts

---

1. Cf. Wittgenstein, Philosophical Investigations, § 88.

where no particular one of the senses is definitely the right one. Sometimes language (or speech) just does not necessitate that kind of exactness or explicitness. This may be similar to the fact that in English it is not necessary to designate whether a brother or sister is younger or older, while this is necessary in Maya.<sup>1</sup> It might be said that English is less precise here than Maya just as 'speech' is less precise in some contexts than in others. But in both cases more precision can be obtained whenever it is necessary. And if this kind of precision has not been often demanded for a word like 'speech', then it is quite possible that the lack of precision will exist in most of the occurrences of the word. This seems to be a lack without a loss. The inexactness is a harmless one.

Finally, I should like to show how linguists have often failed to make the distinction between language and speech and thereby have been misled. Linguists have often done their work by going out to the field and just taking note of what native speakers say in order not to impose any of their own preconceptions. In doing this, it is standardly accepted that a sentence is a complete utterance, which in turn is determined by long pauses. It has been recognized that it is not clear how long the pauses should be, although I do not think it has been recognized that long pauses break up sentences which are sometimes separated by only short pauses. This is just to point out that there are problems about what a complete utterance is, but the relevant point here is that an utterance need not be a sentence. Often I will speak in complete sentences and particularly when I am trying to

---

1. This example comes from Nida, Eugene, 'Linguistics and Ethnology in Translation Problems', Word, 1 (1945): 194-208.

Speak correctly. But many of my utterances are not sentences, and there are some utterances which even the wildest imagination could not construe as a sentence. If I utter the words 'rend being plonk love', the result is an utterance but surely not a sentence. If the distinction between utterances and sentences were clear, perhaps linguists would be less prone to construe the utterances of a child as sentences or even the grunts of agreement or disagreement, whether they be 'Uh huh' or 'Yes', as sentences. What constitutes a sentence will be determined by the words and constructions of the language and not by the utterances in one's speech. Of course the language is often exhibited in the speech of its speakers, but exhibiting is different from being the same as. Utterances and sentences should be distinguished as well. One is a bit of speech, in one sense of 'speech', and the other is determined by the language, i.e. the words and constructions that constitute the language.

## CHAPTER 7

## THOUGHTS AND THEIR EXPRESSION

1. Some Thoughts on Thoughts

In the last chapter, I discussed some linguistic factors and distinctions, but there must also be non-linguistic factors in any hypothesis of the relativity of language. So we must now turn to some of these non-linguistic factors. As I have already said, I shall not attempt a general specification of cultural or mental factors. But there are some things that can be said about thoughts in relation to any theoretical hypothesis of the relativity of language. It is sometimes said that what or how we think depends upon our language or vice versa. Some considerations of thoughts will show how a theoretical hypothesis might arise in this connection.

My comments about thoughts and thinking will be rather cursory, but I hope they will be enough to make it clear what I do and do not want to talk about. My main interest in this chapter will be with thoughts that we can be said to have. I mean this in two senses. Having a thought is like having a child. It can either be something that occurs or happens, or it can be a matter of quasi-possession. I can suddenly have a thought, as indicated by the exclamation 'I just had a thought!', or I can have a thought over a period of time, as in 'John has an interesting thought about this.'. In both cases, we can speak of his thinking that such-and-such is the case, or we can speak of his thought that such-and-such is the case. It is these formulations that lead people to say that thoughts are propositional, although one does not think a proposition.

Sometimes we know that a person thinks that such-and-such is the case by observing his behaviour. In the same way we can speak of a dog thinking that his bone is in a particular place. But the dog does not have thoughts, nor do people in these moments.

Not all thinking or thoughts, however, are propositional in the sense suggested above. Thinking can be a kind of activity where one is contemplating, considering, wondering, etc. While sitting for a written examination, one is indeed thinking, and although one has a number of thoughts during the examination there is not something that one thinks throughout the examination. One can also be thinking when in another sense what one is doing is trying to think of a number but at the time not thinking anything at all or even about anything. Finally, I shall mention a case of thinking about something or someone where I can have a number of thoughts about it or them or just revel in my mental images with no particular thoughts at all. I can be thinking of someone but not be thinking anything about them. In all of these cases I have just considered, the person is thinking, but there is not a thought which corresponds to that thinking. The only exception is where we speak of the mere thought of a person making us angry, but this is not a thought that we can have. Although the person is thinking, he is not thinking that such-and-such is the case nor does he have the thought that such-and-such is the case. In what follows, I shall not be considering these cases of 'non-propositional' thinking since it is trivial that these kinds of thinking can be done independent of whatever language one speaks.

I want to consider now whether or not the other cases of thinking where

one has a thought are also independent of the language one speaks. At the same time I shall investigate whether there might be a relativity of thought between speakers of different languages. I shall introduce these problems by a particular example.<sup>1</sup> Consider the case of suddenly thinking that you have not sent a Christmas card to John. It might be that in your mind you thought out the words 'I have not sent a Christmas card to John.', but this is indeed unusual and certainly unnecessary. Moreover, it is not even enough to give the thought its proper determinacy. The thought, in the case I am imagining, is about a particular John while the mere words are not.

It might have been that the having of the thought had no more content than an image of John (whatever that is), or maybe it involved nothing more than thinking 'The card!'. This is mysterious enough in itself, but it does not change the case that I am considering. More likely, there was nothing of this sort at all. We suddenly have thoughts without images, inward speech, or anything else of this nature. If we were later asked what we had suddenly thought, we could say, with illustrations, what we had thought, but this does not mean that what we say and what we draw are like any mental content at the time of our suddenly thinking something. We sometimes have thoughts and there is no observable (or introspectable) content until we have only later actually expressed the thought.

This makes the having of a thought appear independent of the expressing of a thought. One can avow that one has had a thought without any expression of the thought having been given. The expression (as well as observable

---

1. This example comes from an unpublished manuscript on thoughts by G.E.M. Anscombe.

content) often comes only after the thought. Similarly where the thought is not something that occurs but something that we can have over a period of time, we can still have the thought without ever having expressed it. Before going any further, however, it should be clear what the expression of a thought is. It is not as if there is something and then we express it as in the case of feelings. The expression of a thought is not like the cry of pain.<sup>1</sup> This is why we can say 'A penny for your thoughts.' but not 'A penny for your pains.'. Thoughts are communicable in a way in which feelings are not. When we express a thought, unlike when we express a pain, we tell our thought and our listener hears it. Moreover, my thought is not only expressible by me but also by someone else as well as in other languages. Others can say that I am in pain, but they cannot express my pain. In the case of thoughts, as in the case of opinions and beliefs, expressing them is nothing more than saying what they are. This ties the expression of a thought, but not the thought itself, closely to language.

Now since the thought itself appears to be independent of language or at least the use of language in the expression, it appears that anyone can have a thought independent of the language he speaks. I shall not argue the question here of whether one can have a thought independent of whether one speaks a language at all, although some interesting studies have been made along this line.<sup>2</sup> No particular content, including linguistic content,

---

1. Cf. Wittgenstein, Investigations, §317.

2. In particular, I refer the reader to Eric H. Lenneberg, 'Understanding Language without Ability to Speak: A Case Report', J. of Abnormal and Social Psychology, 65 (1962): 419-425; Furth, Thinking Without Language; and Lenneberg, Biological Foundations of Language.

is necessary for one to have a thought, and this seems to allow that anything is thinkable independent of whatever language one speaks. Of course it must be a thought that such-and-such is the case, i.e. 'propositional', but the proposition does not have to be expressible in the speaker's language. In any case, we have no reason not to believe that if something is thinkable for anyone it is thinkable for everyone. It has been suggested that this is trivially true.<sup>1</sup> I have tried to show only that there is no immediate reason for saying that a language could limit what its speakers could think.

ii. Can One Have a Thought which One Cannot Express?

An interesting problem now arises if we do think of thoughts independent of language in this way. One wants to ask if it might be possible for one to have a thought and then discover that one is not able to give the expression of it. To put this in another way, we might ask if there are inexpressible thoughts, i.e. thoughts which we are unable to express. Moore once indicated that we sometimes do have thoughts without being able to express them.<sup>2</sup>

Let us suppose that one does have a thought which is then found to be inexpressible. First of all, how would we know that he had had the thought in the first place? We might see the person's face light up and hear him say 'Aha'. In many cases this would be sufficient for us to say that he

- 
1. See: Drange, Theodore, Type Crossings: Sentential Meaninglessness in the Border Area of Linguistics and Philosophy (The Hague: Mouton and Co., 1966), p.143n.
  2. See: Moore, Some Main Problems of Philosophy (London: George Allen and Unwin, 1953), p.61. For a similar view, see Hanson, Patterns of Discovery, pp.35-36.

had just had a thought, but this depends upon his not denying that he had had a thought. What the person says, presuming he is sincere, is the determining factor here. (I am assuming that the time lapse has not been long enough for him to have forgotten that he has had a thought.) It would be nonsense for us to argue that a person had had a thought of which he had not been aware. Here there seems to be no room for error.<sup>1</sup>

The important cases then seem to be the first person cases, so I shall turn to an investigation of these. And I shall concentrate on those cases where I suddenly have a thought<sup>2</sup> but where there is nothing like what people have wanted to call mental content. First of all, it can be seen from what I have said above that 'I know that I have just had a thought.' adds nothing to 'I have just had a thought.'. Where there is no room for error, it does not make sense to say that a person does not know something. A person does not have a thought without his knowing it, but then it does not add anything to say that he knows he has just had a thought.

Furthermore, there are certainly no reasons that we can give for saying that we have just had a thought. We do not have criteria for our saying that we have just had a thought. It is not as if there were an experience or feeling of having a thought which was independent of what the thought is. Such an experience or feeling does not exist. For any particular experience or feeling, one could imagine having it without having a thought

1. For a discussion of whether one can be wrong about having a thought, see: Wittgenstein, Investigations, §328.

2. At this point, I shall not consider cases of having a thought where one can have it over a period of time since irrelevant problems of memory would then arise. My interest in cases of suddenly having a thought is not because of their commonness but because of their importance to the problems which I am considering.

or not having it and having a thought. It does not make sense to look and see in our own case. We know that we have had a thought without observation, mental or otherwise.

The question then arises whether it makes sense to say that a person is unable to express the thought which he has just had. Consider first the most radical case of his not being able to say anything at all — not even that it is about something peculiar or about a peculiar experience. In such a case, one would be able to say no more than: 'I have just had a thought, but I do not know what it is or even what it is about.'. I do not know what this would be, unless it were a case of having forgotten the thought. I can remember having had a thought and not remember anything about it, but here I am imagining a case where memory does not enter in and where I have just had the thought.

For us to have had a thought, there must be some thought that we have had.<sup>1</sup> This is just as true if it is a case of having a thought where we can have it over a period of time. The thought which one has is usually determined by its specification. (Whether it is always so determined is one of the questions which I am considering here.) The specification of a thought is the sentence which expresses the thought or possibly the proposition which gives the thought. As I have suggested above, the reference to particulars has to be determined as well. Anything less than this is less than a full specification. The very minimum specification of a thought is a specification of what it is about. For me to say that I have

---

1. Cf. Wittgenstein, Investigations, § 518 and Plato, Theaetetus, 189a.

had a thought, I must have had a thought about something.

It is impossible to have a thought and not be able to say anything about it when one has just had the thought. If there is not at least the minimum specification of the thought, there is no reason to say that one has had a thought at all. We would never be prepared to say that a person had had a thought, if he were not able to tell us anything about it. It would be strange even in the case where he could tell us only what it was about and not what the thought itself was. The possibility of having a thought is logically tied to being able to say at least something about the thought.

I have argued that it is impossible to have a thought about which we could not say anything, but this is quite different from having a thought which we could not express. It might be that we were thinking something about a peculiar object which we find inexpressible in words. (This is different of course from thinking that a peculiar object is indescribable. That thought is expressible.) We can at least say something about this thought, even though it is wrong to say that we can express the thought. The case I am suggesting here is that of a thought of which we are fully aware but for which we lack the language to express it.

This kind of case seems to depend upon a view that 'the thoughts are already there (perhaps were there in advance) and we merely look for their expression.'<sup>1</sup> It seems that in order to express one's thought there must be something which the expression expresses. This then makes it appear that we first look at our thought and then express it, but this is certainly

---

1. Wittgenstein, Investigations, §335.

not what we do at all. It is not as though we were looking at a sentence in a foreign language and then expressing it in our own language. Indeed we cannot even be said to express sentences. It might be that 'a picture occurs to me and I try to describe it. Or an English expression occurs to me and I try to hit on the corresponding German one.'<sup>1</sup> But this is not what the expression of a thought is. In one case, there is a description of a picture, which one might have thought of but it in itself is not a thought. In the other case, the thought is expressed by the English expression, which I then try to translate into German. This is no different from trying to translate anything I say from English into German. It is not as though there is something with meaning that is translated into something else with the same meaning. For one thing, thoughts do not have meanings. More importantly, when we express our thoughts, we do not look at something which might be like a proposition and then read off the expression of the thought. Nor do we even look at something and somehow describe it in the expression of the thought. Putting a thought into words is not like putting a coded message into words. There is nothing from which we can read off the expression of the thought.

Still we sometimes have difficulty in putting our thoughts into words. Often this is because we have difficulty finding the right word. This can happen when we have forgotten what the word was that we wanted to use. This is like having something we wanted to say and then forgetting it. Problems

---

1. Ibid., §335.

of memory do not raise interesting questions here. What can also happen is that we have a thought which we can express only very clumsily but for which we know there is a better expression which we cannot think of. In such a case, someone else is just as qualified as we are to think of a better expression. Sometimes, however, there is a word 'on the tip of our tongue' which we are unable to bring out. Then only we are capable of knowing that a word is the right one and for this there are no criteria. Somehow we know when a word is not the right one and when we have come upon the word that we were trying to think of.

### iii. A Thought Must Have a Complete Expression

So far I have discussed only those cases where we have expressed our thoughts but where the expression of the thought is not the most felicitous or not the one desired. I still have to consider whether there are any cases where there is a thought but where there is no expression of the thought. First of all there seem to be some cases where we have only a sketchy thought which is not actually a thought at all. This is to be distinguished from the suggestion that a thought is a sketch which is filled out by its expression.<sup>1</sup> It is rather like thinking of a proof where it is only a sketch of the proof and sometimes cannot even be filled out. I am inclined to think that it does not make sense to speak of a sketch of a thought which cannot be filled out, but it is important that the sketch of a thought can be filled out in different ways. But of course then it would not be a thought that I had. In any case, a sketch is not

---

1. This suggestion was made by Wittgenstein in his last lectures according to the notes (p.86) by Peter Geach of those lectures.

yet a full thought until it has been filled out, and that is the reason we cannot give a full expression of a thought when what we had was nothing more than a sketch. The expression can only be at best the full expression of a sketch of a thought.

Consider the following case now. I was thinking about a coffee house and wanted to say that people will frequent a spot like that, but I could only think of words like 'populate', 'congregate', etc. None of the words seemed to express quite what I wanted to say, and I could not even think of cumbersome phrases which would give what I wanted to say. Then the right word, 'frequent', finally came to me. It might have been that the right word would never have come to me, in which case I would probably begin to doubt that there was a right word. Certainly before the right word comes to mind I am not able to express a thought fully. And there seems to be no practical way of determining whether there is a right word. Until I came to the right word, I would have not only every word in my vocabulary to check but also every short phrase. If this makes sense, it involves at least a large indefinite number of steps which would make the task impossible practically.

In the case where I did finally find the right word, I am inclined to think that I did not have the thought until the word came to me. Before that it seems to me to have been nothing more than the sketch of a thought. There were the makings of a thought there, but the thought was not complete until I could give a full expression of it. It is true that I was looking for the right word, but this does not mean that there was something already there against which I can measure an expression. It is rather like making up a tune. I can have the idea for a tune, but as long as I am

missing even one note I do not have the tune itself. My idea will only be the sketch of a tune.

In the case of a thought, the thought is not complete until the expression of it is complete or is forthcoming. And sometimes the only way to see whether it is forthcoming is to see whether it will come forth. Sometimes I think I have had a thought about something, and I find that it is not completeable in the way that I had expected. In such a case, I am not prepared to say that there was a thought at all in the first place. I only thought that I had had a thought, but it turns out to be nothing more than a sketch which is not completeable in the way that had been expected. This is not the usual case, but I think the unusual is revealing here. It shows how little there is to the possibility of inexpressible thoughts. If we are not able to give the complete expression of a thought, there seems to be little reason to say that there is a complete thought. Of course some are less good at expressing their thoughts than others, but the concern here is not with facility but with capability, i.e. whether it can be done at all.

A more serious problem is presented by aphasics who are unable to speak coherently. Some of these people play chess and appear to have thoughts about strategy. I would suggest that in these cases it is just very difficult to distinguish between a complete thought and the sketch of a thought. How much can be said about it being a complete thought will depend upon how obvious the strategy is and how much can be expressed in the language or gestures available. Perhaps there is some reason to say that there is a complete thought, but this still depends upon the thought being completely specifiable. If I am unable to express my thoughts

because of a lack of speech, they must at least be expressible by someone with speech and it must in some way be clear that the thoughts that they express are the thoughts that I had.

The necessity of a complete expression of a thought is suggested by what happens when we talk about formulating our thoughts. Sometimes this can be as innocuous as putting our thoughts into words and down on paper, but usually I think it involves quite a bit more. We often formulate our thoughts when they are unclear and not completely thought out. These are the times when thoughts need formulating, because they are not complete. Here, formulating thoughts means coming upon thoughts which are complete where before they were only incomplete, remembering that an incomplete thought is not yet a thought but only the sketch of a thought. Similarly, we sometimes formulate thoughts in the sense of having completely new ones, which is rather like formulating sentences.

I have emphasized the importance of a complete expression of a thought, but I would not want to suggest that to express one's thoughts is always a relatively easy thing to do. Sometimes it can be very difficult. We can imagine the case of a carpenter having a thought about how to do something<sup>1</sup> or even the more difficult case of a painter having a thought about his work.<sup>2</sup> In neither case would the expression of the thought be at all easy, and it might turn out that it was not a complete thought at all but an idea which was to be worked out. Nevertheless, if the person did have a thought,

1. This case was suggested by Hampshire in Thought and Action.

2. This case was suggested to me by Gilbert Ryle.

he can express it whether or not he has the patience to do so. The expression might be a long and complex sentence, but length and complexity are not important here. Perhaps the carpenter will have to describe each piece with which he will be working and each movement that he will make. Whether or not he could have used a simpler sentence, this would be a way of giving a complete expression of his thought. The painter could do something rather similar, even though it would be far more difficult. If a painter does have a thought as opposed to an idea, which is probably somewhat rare, he could describe each part of the canvas as it will appear. I doubt that any painter would be bothered to give such an expression of his thoughts, but as long as we know that he can express his thoughts we need not bother him.

One interesting aspect of the point that I am arguing is the relation that it appears to have with the discussions about a language without particulars. If all else fails in expressing our thoughts, we can always revert to ordinary predicate terms for colours and patterns. The sentence may be terribly difficult and long, but we know there is a sentence which expresses our thought. Notice also that this does not depend upon one's taking a view about the necessity of a language with particulars for one without particulars. The only important thing is that there be predicate terms with which to give the expression of the thought.

It might be argued that it is clear how one might express one's thoughts about visual matters but not so clear how this could be done in connection with other experiences. Perhaps we do not have a word for a particular quality where our thought was that something had that quality. Failing this word, what one might do is to give an example of what one means instead.

Thus one might be trying to express a thought that a particular person is such-and-such and in the end be understood by comparing him to someone else. It might be that there was an appropriate word but which neither the speaker nor the hearer had thought of. I have often been asked if there is a word in English for something and have not been able to think of a word until only much later. On the other hand, there might not be a word - although I do not know how this could be determined decisively - in which case one could easily invent a new word. And if one did not like inventing, one could always point to particular examples either by gestures or by language. After all, this is how we learn what the new words mean anyway.

#### iv. Some Reputed Difficulties in Communication

One area where we are particularly at a loss for words, as we say, is that of tastes and smells. We can have a thought about the taste of our favourite sweet but be hard put to express that thought. This is different from thinking of the taste and trying to describe it. That is another difficult task. The difficulty of expressing the thought about the taste is there, even though we know the taste well and would have no trouble recognizing it. We just do not have the terms to express such thoughts. Some people do, however. Wine tasters and perfume sniffers develop rather large vocabularies for their trade. There are also languages which have several words for tastes and smells in common use. There seems to be a limit to the degree of determinacy of our terms that we find useful to approach, but there seems to be no limit to the degree of determinacy that we can approach. And when we have passed this limit, we can still use examples of what we mean.

Waismann tries to show that there are many feelings and experiences that 'are indefinite and difficult to communicate accurately'.<sup>1</sup> He gives several examples, including the sensation of déjà vu, the sensation 'of having been flung into this world', and the feeling (reported by one of William James's patients) of having two bodies lying in different beds.<sup>2</sup> The suggestion then seems to be that sometimes we just do not have the words for what we want to say and that our language suffers from an impoverishment of what it can express. But Waismann goes even further than this and says that 'the uttermost attainments of language are blurred into indeterminacy',<sup>3</sup> suggesting that there are boundaries to language in general and not just to our own language.

It hardly seems to me, however, that this shows that there are some things which are impossible to say. We may not be very good at describing our feelings and experiences, but this seems to me to be more a problem of imagination and facility with the language than a problem of the language itself. Take, for example, the sensation of déjà vu. I think I know exactly what someone means when he tells me that he has just had the sensation of déjà vu. Of course this is assuming that we both know what it means, but most educated people do. I am not sure I know quite what it is like to have the other two experiences that I mention above. I think both of them would be new experiences for me. Consequently, I do not know the experiences which are being referred to, but this is not a failure of language

1. Waismann, Linguistic Philosophy, p.265.

2. Ibid., pp.266-268.

3. Ibid., p.268.

but if anything a failure of the breadth of my experience.

The only reason 'we cannot appreciate [certain words] as fully as one who has himself experienced the feelings',<sup>1</sup> seems to be that we cannot think of feelings that we have had in the way that the other person can. I do not think it is a logical impossibility for us to think of feelings we have not had. But whatever the reason, it just seems that this is something we cannot do. But language is not supposed to be nor is it the substitute for feelings. It is absurd to suggest that someone who hears about an experience or feeling in some way actually has that experience or feeling, but I think this is the way in which Waismann is being misled. He thinks, for example, that only after we first feel homesick do we 'realize all that that word connotes'.<sup>2</sup> But we certainly do not realize anything more about the connotation that we could not have been told before. We do know about homesickness in a way that we did not know about it before, but that is a matter of acquaintance and not a propositional form of knowledge. Thus, there are no new thoughts that could not have been expressed before.

The problem here does not seem to be one of communication. We can communicate thoughts about such things perfectly well as long as others are acquainted with the experiences which our thoughts are about. Even when they are not acquainted with the experiences, they can often understand because of other experiences with which they are acquainted. And sometimes communication might not be so successful, but this does not seem to be a failure of language. The same kind of thing happens when we try to talk

---

1. Ibid., p.265.

2. Ibid., p.265.

about colours to people who are blind. The blind man is not able to pick out red objects or say what colour an object is, but this is because he is blind and not because of his language.

So far there seems to be no reason to speak of inexpressible thoughts. Anything that first seemed to be an inexpressible thought turns out to be either expressible or not a complete thought at all. More will have to be said in the next chapter when I talk about whether there are things that cannot be said in some languages.

## CHAPTER 8

## ON WHAT CAN BE SAID IN A LANGUAGE

i. Introduction to the Problem

There is a view which is sometimes held that although there are no inexpressible thoughts (or independent of whether there are inexpressible thoughts or not) there are some thoughts which cannot be thought and propositions which cannot be expressed by monolingual speakers of some languages. I have already pointed out that this view is suggested by Whorf. In fact if our language were to limit our thoughts, then there would certainly be some things that are the case but outside the limit which could not be thought. Nor could they be said in the language, assuming that anything which can be said in a language can also be thought. Because of this close connection, we sometimes think of a proposition as a thought or at least something that can be thought, although this is not quite accurate since we do not think propositions. If there is something that could not be said in a particular language, we would then have a thought or at least something that could be thought which was inexpressible in that language. Perhaps it could be expressed in another language, but then there would be a relativity of what can be expressed in different languages and possibly also of what can be thought by the speakers of those languages.

On the other hand, it has sometimes been held that anything can be said in any language. Sapir says that any 'language is so constructed that no matter what any speaker of it may desire to communicate, no matter how original or bizarre his idea or his fancy, the language is prepared to do

his work.<sup>1</sup> Hampshire seems to agree when he says: 'In reporting what we find in the world, the only limit is to be found in resources of our vocabulary; and the only limit to the extension of the vocabulary is the present limit of our interests as co-operating and communicating beings.'<sup>2</sup> Lenneberg even says that it is 'a basic maxim in linguistics...that anything can be expressed in any language.'<sup>3</sup> Although this 'basic maxim' is not often expressed in published writings, it does seem to be fairly widely held among linguists. Sapir seems to have been rather influential here as in other matters. But that it is widely held seems to be a reason for its being critically discussed so rarely. Because of this and because of its importance to the relativity thesis of language as well as the nature of language in general, I shall try to discuss it more fully here. If anything can be expressed in any language, then there will be no variation in the possibility of expressing thoughts or propositions in languages and thus there will be no relativity of languages at least in this regard.

I should make it clear that what I shall be talking about is what can be said in a language. It has often been pointed out that the notion of what can be said is ambiguous, but I shall be talking about it in the sense where one talks about propositions. Unfortunately this latter notion has created even greater disputes in the history of philosophy, and it is probably clearer to explain what a proposition is in terms of what can be said. Perhaps it will be enough if I say that I mean what can be said in the sense

---

1. Sapir, 'The Grammarian and His Language' in Selected Writings, p.153.

2. Hampshire, Thought and Action, p.25.

3. Lenneberg, 'Cognition in Ethnolinguistics', p.467. Jakobson expresses the same view in Brower, ed., On Translation.

in which it need not be put in the oratio recta. I shall be talking about what people say when they say that such-and-such is the case and not about what they say when they say a particular quoted expression.

ii. On Not Having a Word for Something

One reason that might be given for it being impossible for some propositions to be expressed in some languages is that the languages do not have names or terms for certain things. It might then seem that without names or terms to refer to such things we would not be able to express propositions about them. Whether there are terms or names for certain things has another significance according to some, that is that the existence of a term shows an interest in that to which the term refers.

First of all, it should be clear here that I am not talking about proper names, although there are indeed many problems connected with proper names. As far as the expressibility of propositions is concerned, it is not of interest that we name people, ships, mountains, etc. All languages are obviously prepared to name any particulars at all. Even if there were only one name, all named particulars could be named by that name, although it would be a rather useless practice. The only problem here is that of being able to identify something, and that is not relative to a language.

What I am interested in is what are sometimes known as common names (or common nouns). Thus we name new elements, products, and genres in art. We also speak about what something is called. For example, we say that a male goose is called a gander.<sup>1</sup> Similarly, a person from Great Britain is

---

1. This example comes from a lecture given by Roman Jakobson at the University of Chicago on 13 May, 1966.

called a Briton, although of course that is not the name of a particular person, who might be named John. Waismann gives this as one criterion for an expression being a name, that which something is called.<sup>1</sup> Thus, we can speak of 'gander' as a name because a male goose is called a gander, but a gander is not called a male goose. Nor is a Briton called a person from Great Britain. It might be that a Briton is sometimes called a limey, but this is about people's practices and not about a language. A person from Great Britain is called a limey in certain reprehensible communities, but in English he is called a Briton. The important consideration is that whenever something is called an x in a language, then 'x' is a common name in that language.

In spite of some of the remarks that I have made above, it might be said that 'common names' is a misnomer. First of all, they are not names of any particular. Not only are they not the names of any individuals or physical objects, but they are not the names of classes either. 'Pop art' is not the name of the class of all works of art of that kind. Moreover, common names are 'names' of such diverse things as qualities, masses (things referred to by mass terms such as 'water'), and kinds of things. Nor are common names used for calling people or things, sending messengers, or using place cards.<sup>2</sup> A possible exception is found in the use of 'Professor' or 'Steward',<sup>3</sup> although here the words are used more like proper names without preceding articles.

1. Waismann, Linguistic Philosophy, pp.195-196.

2. Cf. Ibid., p.198.

3. This suggestion was made to me by David Mouton.

Whether common names are names or not, we do sometimes want to know what to call a new element or kind of product or we even say that we need a name for the new kind of product. More generally, however, we also speak of needing a word for something.<sup>1</sup> Among other things, we sometimes need words to serve as verbs in certain situations. It might be wrong to say that we need a word for a new element, but we could say that we need a word for a substance with a certain nucleus. We also speak of not having a word for certain things and having words for other things. For example, as far as I know we do not have a word for someone who studies beer, but we do have a word for someone who studies wine, i.e. 'oenologist'.

How do we know what words we have and what words we do not have? A simple test will tell us, to a reasonable degree, whether a particular word is in or is not in our vocabulary, but there seems to be no test to tell us whether (in English) we have or do not have a word for something. We can know that we have a word for something by coming upon that word, but we can never be sure that we do not have a word for something. And who knows what could be found among the 500,000 or so words in the English language? Most of us can have little confidence in the area of names of plants, mathematical terms, and terms in other areas of specialized study. Even in other areas I might say that we do not have a word for something and still be somewhat doubtful. There seems to be no word for that which is translated as opposed to the translation, but I would not be particularly surprised if I were to find such a word in the dictionary.

---

1. The resulting expression might be more than one word, and where this might lead to confusion I shall speak of needing a name, which is not explicit about the number of words.

On the other hand, we can be a bit more confident about whether there are words for things used in ordinary speech, as opposed to their being in the language. Thus, Whorf is able to tell us that we do not have a word for snow on the ground as opposed to falling snow, although in Eskimo there are two different words. As I have suggested above, this does not show that speakers of English cannot discriminate between the two, but we can also express propositions in English about the two and think about them. For example, we can express the proposition that we do not have words in English for snow in the two different states.

There is a vagueness of meaning that might arise in English but not in Eskimo because of this difference. For example, I might say, 'There is always snow in Vermont during the winter months,' and then afterwards say that I do not know whether I meant snow on the ground or falling snow or both. Although I can make that distinction, it might be that I was not making that distinction at all when I said that there is always snow in Vermont. I just meant snow, and I was not thinking of it as either falling or on the ground, although I might be able to be more specific if asked. The distinction would probably be more important to someone who depended upon there being snow on the ground for skiing. If we knew that, then we might instead describe the skiing conditions in Vermont.

The only difference between us and the Eskimos is that we have to describe what the Eskimos have a word for. At least 'snow on the ground' sounds more like a description than a name. It is more like 'male goose' than 'gander'. Thus, one indication (but nothing more) that we have a word or not is found in whether we describe or not. We would describe a gander as a male goose but not vice versa. Describing something is the other side

of calling something such-and-such, and there are comparable borderline cases. We have a name for a parent's sibling's child, i.e. 'cousin', but do we have a name for a grandparent's sibling's child or a parent's sibling's grandchild? Is 'first cousin once removed' a name? There does not seem to be a clear answer here. Similarly, it is not clear whether 'good packing snow' as American boys use it is a name or a description.<sup>1</sup> I am not denying that there is a distinction here, but I would maintain that there is more room than usual for borderline cases.

The important thing, however, is that in the cases that I have given above where we have no name for something we at least have a description for it or some means of referring to it. We can describe snow in different states or refer to new kinds of products. We might not have thought of giving a particular description before we give it, but still the language was there for our use in describing future phenomena. It might also have been more convenient to have had a word or a name for the phenomenon, but the lack thereof does not seem to limit what we can say or what propositions can be expressed in the language.

The introduction of a word is not necessary, but it might have some importance as I try to show below. First, however, there is one remaining question about the introduction of words which I shall try to answer. The question is whether one might try to introduce a word which does not fit in the language because of the syntax. It is not clear to me what this question means, although it does have a prima facie sense. One might think

---

1. This example, comes from Brown and Lenneberg, 'A Study in Language and Cognition', p.455, although they introduced it for a different purpose.

that in introducing a new word as has been suggested above one would be concerned only with the meaning, which would be part of what is sometimes called the semantics of the language, and then the syntax would follow according to the meaning. Suppose then that the resulting syntax were completely new to the language so that any sentence containing the word would be ungrammatical. I think any such suggestion would be misguided, but I must admit that the notions of syntax and structure are so unclear to give one almost no help here.<sup>1</sup>

One possibility that might be suggested is that the new word would be like many words in Nootka which are said to be a combination of a noun and a verb, although there is no distinction between the two in the language.<sup>2</sup> If we came to an actual example, however, I could only imagine it being like 'thunder' and 'shower'. We can say either that there is usually a shower after some thunder or that it usually showers after it thunders. There seems to be no problem here. If it were a matter of a new tense, on the other hand, I should think one could either add a new tense or (what would probably be easier) use other means to give the temporal aspect as in the case of Hopi. It is also important to point out that it would be difficult to know what the syntax of a word would be before it is introduced into a language. It is not clear in what sense a word would have a syntax outside the context of its use in a language. In any case, there seems to be no reason to believe that it would be intelligible to speak of introducing

---

1. To see how inadequate one of the best accounts of these notions is, see: Chomsky, Noam, Aspects of the Theory of Syntax (Cambridge, Mass.: MIT Press, 1965), especially chapter 1.

2. Whorf thought that some languages do not distinguish between nouns and verbs, although Sapir disagreed. See my discussion of them above.

a new word which would be syntactically deviant and therefore would not fit in the language.

iii. Are There Limits to Our Ability to Describe?

I have tried to show that failing the presence of certain words in our language, we can always use appropriate descriptions to communicate anything that we might want to say. It is sometimes said, however, that our ability to describe reaches a limit for which our language is responsible. We can describe objects by saying what their colour is, how they feel, what shape they have, etc. But then it might also seem that we have to describe the colour. We can even do this to some extent. We might describe cream as 'white and a little yellow and a dash of orange'.<sup>1</sup> The task does not seem quite so easy for red, although we can describe particular shades of red if we know our colours well and we can say some things about red. We can say that it is a bright and warm colour, although it is not clear what this means. We can also describe red as the colour that is missing in a spectrum with the red part left out.<sup>2</sup> Whether this is enough to say that red is describable is not at all clear. That seems to depend upon what a description is supposed to do. If a description is supposed to give us the experience, then it does not do this. Nor does it ensure that we can give a description that will make it possible for a man who has never seen any colours to pick out red right away.

What this shows is that we cannot explain the whole meaning of everything we say to someone who has not had any experiences, but this is certainly not

---

1. This comes from Geach's notes on Wittgenstein's lectures, 1946-47, p.28.

2. Cf. Geach's notes on Wittgenstein's lectures, 1946-47, pp.26-27.

a failing of language. Indeed if this were the case, it would be difficult to understand how language could be applied to the world - i.e. how we could say things about the world. There certainly does not seem to be reason to say that there are areas of language in which words are inadequately fitted for purposes of communication.<sup>1</sup> The 'problem' here is not one of words but one of the nature of language and of experience, although it is a confusion to see this as a problem.

Waismann, at one point, tries to show that if we attempt to describe a visual experience we soon find that to describe it exactly is quite impossible. According to Waismann, we can give a certain amount of detail, but eventually if we continue to be questioned we will say, 'That cannot be so exactly described in words.'. He then adds that 'this remark seems in some way to be an indication that we are here approaching the boundary of word language.'<sup>2</sup> He does point out that the notion of being exact is not the same for all phenomena, but this does not prevent him from suggesting that there is a point where we reach the limits of language and where we cannot improve upon the exactness because of those limits.

It does seem wrong to speak of there being 'boundaries of word language' because of some kind of inexactness. But more importantly, it does not seem to be a limitation of our language. There is not a point where description suddenly comes to an end, and in the case of visual experiences we can often describe our experiences exactly. In the case of other experiences, there does not seem to be a limit to our descriptions. We can

1. Cf. Waismann, Linguistic Philosophy, p.268 where he suggests this.

2. Ibid., p.208.

always say more, even though sometimes, as in wine tasting, it is necessary for us to develop our ability to make distinctions. This does not mean, however, that it is necessary for us to develop our language. We might invent new words in the course of our development or use old words in new ways as is ordinarily done in wine tasting, but the important point is that even this is not necessary. We could just as well give examples of the taste that we mean and thereby communicate how the wine tastes. And where the taste is so different from that of anything else that communication becomes difficult, there is nothing better than experience. We should remember, however, that the difficulty of communication does not indicate limits of our language. Instead it indicates a failure of the hearer to understand the experience meant because of a lack of familiarity with the relevant experience or experiences.

What we have seen so far is that there is some vague sense in which a language can be said not to have a word (or name) for something, and yet this does not prevent us from expressing any propositions. What we do not have a word or a name for we can usually describe by the language that we do have. And when we cannot do that, it is because of a lack of imagination or experience rather than a failure of language. And where there is a lack of experience we can always indicate the relevant experience by the use of our language. So we have no reason to believe that there are propositions which are logically inexpressible in some languages.

#### iv. On the Absence of Syntactic Limits

I have discussed whether it is conceivable that there be propositions which cannot be expressed in a language because of a lack of words, and I

have tried to show that it is not. There is one other problem, however, which I shall raise and then dismiss rather quickly. It might be suggested that although no proposition is inexpressible in a language because of the semantics of the language it might be that some propositions are inexpressible in some languages because of the syntax of the languages. It should be clear, of course, that propositions do not have a syntactic structure. Only linguistic entities or bits of speech, such as sentences which can be said to express propositions, have a syntactic structure.

Perhaps there is a proposition which can be expressed only by sentences of one syntactic structure. Even if this were the case, it seems to me unlikely that a sentence of such a structure could not appear in the speech of a language. On the basis of what we know about syntax at the moment, there seems to be no reason to exclude any particular sentence because of its syntax. Furthermore, it seems most unlikely that there is a proposition which can be expressed by sentences of only one syntactic structure. Sapir says that "laughter is pleasurable," "it is pleasant to laugh," "one laughs with pleasure," and so on ad infinitum, are functionally equivalent expressions', although they have entirely distinct syntactic structures.<sup>1</sup> His examples may not be entirely accurate,<sup>2</sup> but his point is well-taken. There is no reason why the same thing cannot be said in many different ways, i.e. in sentences with different syntactic structures. I do not see how it could ever be logically impossible to formulate a sentence expressing the same proposition as another but with a different syntactic structure. Here,

1. Sapir, Selected Writings, p.155.

2. For example, they have different ambiguities.

too, it seems to be inconceivable that there is a proposition that cannot be expressed in a language.

v. There Are No New Meanings

If we were not able to express certain propositions in a language, this would seem to indicate that there were some meanings to which we did not have access. It is as if we invented not only a new word but also a new meaning, but it is hard to imagine what this would be. Meanings are not the kinds of things that we can invent. For one thing, there is no medium for the invention. There is nothing by which we could put forward a suggestion for a new meaning except possibly the language that we had before, in which case the meaning would not be new but just that which is the meaning of the language that is used.

To invent a new word in a way that is being suggested, it would have to be impossible (with all the problems that go along with this) to give an account in the language to replace the word, i.e. it would be impossible to give the meaning of the new word in the language. It then becomes difficult to see how the word would have any meaning at all. And if it does have any meaning, then can we not say what that meaning is? It may be difficult to say what the meaning of a word is, but there seems to be little reason to hold that it is impossible. It is probably true that there is no one formula for giving the meaning of a word, but it does certainly seem that we can communicate, through language, what the meaning of a word is. It might involve saying something like, 'When I say "red" I mean that colour.', but that is enough. As Wittgenstein of the Tractatus would probably say, there can be no surprises in language. Without any more than a bit of added

complexity, there is nothing that could be said now with a word that could not have been said before without it.

vi. The Nature and Completeness of a Language

I have tried to argue that anything can be said in any language, but there is one very serious question that arises and which I have not yet discussed. The crux of the matter is what is meant by 'a language'. I have discussed this to some extent above, but there are borderline issues that now become extremely important. When I have been talking about languages I have been thinking primarily of natural languages like English and Finnish. One might want to ask about certain synthetic languages, however. It will be important whether or not one can say everything in Interlingua or any other language constructed to be used as an international language. It will also be interesting whether everything can be said in Basic English. If we can solve these problems, we might also be able to say more about so-called 'primitive' languages and Vico's notion of the incompleteness of some languages. Independent of these problems, there is another question which is indeed perplexing. I might say that I, with my present vocabulary, can say anything I want. There are no logical barriers to what I can say. On the other hand, before I knew any words at all I was not able to say anything I wanted. In fact, I could not say anything. One then wants to ask when it was that I acquired this ability to say whatever I wanted. How many words do I have to know, or with how much of the syntax must I be familiar?

Bar-Hillel discussed some of these problems in an interesting way.<sup>1</sup> He

---

1. See: Bar-Hillel, Yehoshua, 'Intertranslatability of Natural Languages'.

criticizes the thesis of 'the universality of all natural languages' (that anything can be said in any natural language), arguing that there are really two theses. According to Bar-Hillel, one thesis implies that there is 'a fixed and inextensible vocabulary'. With this assumption, he thinks that the thesis is 'obviously false'. As he says:<sup>1</sup>

Equip somebody with a complete knowledge of the closed language Choctaw (as spoken in) 1953, and he will be unable, even when intelligent to the highest possible degree, to provide a translation of an English treatise on quantum mechanics that would be regarded as satisfactory either by himself or any group of authoritative judges. And you may replace Choctaw 1953, for this purpose, by English 1890.

He then adds that he thinks not only that it could not be done in a reasonable time but also that it is theoretically impossible, although he does not there attempt a defense of the latter assertion.

The second thesis, which Bar-Hillel considers, is the thesis about 'the open language Choctaw that consists of Choctaw 1953 and any additions of vocabulary and rules that are not inconsistent with the rules of Choctaw 1953'.<sup>2</sup> Here he argues that '[w]e only have to add the whole English language, lock, stock, and barrel, to Choctaw 1953, and the translation would be forthcoming immediately', making the task 'utterly and self-defeatingly trivial'.<sup>3</sup> Finally, he asserts that there have been no attempts to specify restrictions to extensions such that one could have a true and non-trivial thesis in relation to a 'semi-open language'. This argument seems to be quite strong against all of those who argued that anything can be said in any language as long as the vocabulary can be extended. And this is the only thesis that I have seen put forward.

1. Ibid., p.56.

2. Ibid., p.57.

3. Ibid., p.57.

What I have been arguing, however, is that it is not logically necessary to extend a language to say anything and thus not theoretically impossible to say anything in any language. It is interesting that Bar-Hillel, later in his article, adds that '[u]nder no restricted extensibility does it seem plausible that, in general, smaller units than sentences will turn out to be uniquely translatable. It is not even clear that sentences are large enough units.'<sup>1</sup> It is not clear to me what he means by unique translation of units smaller than sentences, but this is not something that I should want to dispute with him here. I have been concerned with sentences, i.e. what can be said in a language, and it is interesting to note that Bar-Hillel admits to not being clear about sentences.

I have suggested a way to clear up this problem by arguing that one can say anything in any language. If nothing else works, I can always revert to a predicate language. I can talk about qualities and experiences. And even if we lack a name or a description for a particular quality or experience, we can still talk about the colour of the Mediterranean and the taste of pineapple or just that quality and that experience. Perhaps the resulting sentences will be infelicitous or terribly cumbersome, but length and style are irrelevant here. As Lenneberg has said, '[c]ommunication accuracy or efficiency will depend frequently on individual ingenuity rather than on the language spoken by the communicator',<sup>2</sup> and what can be said will not depend on the language spoken.

1. Ibid., p.57.

2. Lenneberg, Biological Foundations of Language, pp.354-355.

This is a point I want to make about any language. It seems to me true of anything that could be called a language that one could speak in that language of observed qualities and one's experiences. Thus, for example, I would not consider mathematics a language. I would not know what it would be to have a language where one could not talk about or make reference to qualities and experiences. One thing seems clear, and that is that one would not be able to talk in that language.

Something that comes from this is a new sense of productivity of language. Linguists have often said that for anything to be a language it must be productive in the sense that it has the materials for constructing new sentences which have never been constructed before. What I am adding is that not only does a language allow the production of new sentences but it also allows us to say new things, and these are very different. When I utter the sentence 'It is like that.', I can be expressing very different propositions depending on what 'that' is. It is this addition which is important for our being able to say anything at all in any language.

It should also be clear now that there is an important sense in which it is wrong to speak of a language being incomplete. Vico suggests that not as much can be said in some languages as can be said in others. Whorf appears to hold a similar view. If this view were true, then some languages would be incomplete and to a greater extent than others. But it should be clear by now that I see no reason to say that this view is true. If the standard of completeness is that everything can be said in the language, then every language is complete. A mere comparison of the size of vocabularies is not important to what can be said, even if it is shown to be important to some kind of efficiency. For similar reasons, it should be clear that

Vico was misguided in suggesting that the expansion of the vocabulary might be necessary to a language. A language could only "need" new words as a matter of convenience and not as a matter of necessity.

I should also like to point out that what I have said in this chapter gives confirmation to my comments in the previous chapter. If anything can be said in our language, then anything we think can be said in our language. Any thought that we have that something is the case will be expressible in our language. Moreover, it becomes clear that everything is thinkable, assuming that whatever can be said in a language (i.e. everything) can also be thought. Another way of saying this is that for anything a person says is the case he can also think that it is the case.

#### vii. Some Final Difficulties

Finally, I should like to comment on how difficult it would be to contend, contrary to what I have argued, that there is a proposition which is inexpressible in a particular language. How would we ever know that it could not possibly be expressed in our language? Are we to try all possible sentences in our language? The number of sentences at least in English and probably in anything that can be called a language is infinite. There is no way of testing every sentence, and if we were to try to consider only some sentences we would then have to worry that we had failed to find the right sentence only because of a lack of imagination. And not only would we have to consider every sentence but also every proposition expressed by every sentence. As I said earlier, we can say a number of different things by uttering the sentence 'It is like that.'. It would be quite impossible to show that there is an inexpressible proposition. (Similar things are

relevant to the previous chapter on whether there are inexpressible thoughts.)

The only way for the view to get started at all is either by translation or by there being a set of all propositions which is given independent of any language. I discuss the problem in relation to translation below. As for there being an independent set of all propositions, I think this is extremely dubious. For one thing it is questionable whether it makes sense to speak of the set of all propositions. There is certainly no effective way of determining all the propositions there are. It does not seem to make sense to me to say that there could be more propositions than there are. I do not know what it would be to create a new proposition or for a new proposition to come into existence. For one thing, to determine that a proposition was a new proposition would depend upon there being a set of all the propositions that there are, against which one could compare the allegedly new one.

It seems more dubious that even if there were a set of all propositions they could be given independently of any language. Margaret Masterman has suggested that a 'picture language' be used, but this certainly has no more than a practical value if that.<sup>1</sup> The suggestion was that a proposition could be expressed by a picture, and the different propositions could be given by different pictures. But as Elizabeth Anscombe points out: 'A picture is not like a proposition: it doesn't say anything. A picture is not an assertion that something like it is to be found somewhere in the

---

1. Cf. Masterman, Margaret, 'Translation', Proc. of the Aristotelian Society, supp. vol. 35 (1961): 169-216. She makes this suggestion for the purposes of mechanical translation which is irrelevant here.

world, whereas in a proposition something is said to be the case.<sup>1</sup> Besides that, many different descriptions correspond to any one picture such that a picture would not 'express' any one proposition. Any other method of presenting all propositions would seem to fail as well. A proposition can only be expressed by language, or something logically dependent on language, so that the problem of finding an inexpressible proposition becomes one of translation, and so we shall return to this problem. First, however, I shall consider the importance of our having or our language's having or not having certain concepts.

So far anyway, I have found that no sense at all can be given to there being an inexpressible proposition. As Waismann has said in a slightly different context: 'How misleading is the very form of the question, "What is communicable?", which makes us expect an answer of the form: this and this is communicable...in contra-distinction to that and that'.<sup>2</sup> At first it looks as though there might be expressible and inexpressible propositions, but I hope it now begins to look like the bogus suggestion that I think it is.

---

1. Anscombe, G.E.M., An Introduction to Wittgenstein's Tractatus (London: Hutchinson University Library, 1959), pp.64-65 (her emphasis).  
 2. Waismann, Linguistic Philosophy, p.248.

## CHAPTER 9

## THE NATURE OF CONCEPTS

i. A Survey of the Concept of a Concept

According to Whorf, we organise nature into concepts according to the patterns of our language.<sup>1</sup> As he says, some concepts 'are not given in substantially the same form by experience to all men but depend upon the nature of the language or languages through the use of which they have developed.'<sup>2</sup> Black, on the other hand, has said in his discussion of Whorf: 'We must admit that human beings have far more concepts (distinctive cognitive capacities) than words for expressing them'.<sup>3</sup> These two views are not explicitly contradictory, but they represent two groups of views which are clearly at variance with each other and yet both often expounded. The former group suggests that the concepts we have depend upon the language we speak, and the latter group suggests that there are at least many concepts which are independent of the language spoken and cannot in fact be specified in the language at all.

In one of Wittgenstein's last lectures, he said something to the effect that 'the question: Is the difference in concepts or only on language? is vague but very important.'<sup>4</sup> It is certainly important to the problems I am considering here. Among other things I want to investigate the relation

---

1. Cf. Whorf, Language, Thought, and Reality, p.213.

2. Ibid., p.158.

3. Black, 'Linguistic Relativity', p.249.

4. Geach's notes of Wittgenstein's lectures, 1946-47, p.87.

between differences in concepts and differences in language. It would be important if we were to find that all differences in language corresponded to differences in concepts and vice versa.

But the question is also vague. I hope I have already said enough at least to suggest that it is not at all clear what differences between languages would be. I say more about this in the section on translation below. I think it is even more difficult to understand what differences in concepts would be. Here the problem is that it is not at all clear what concepts are at all. The term 'concept' is widely used by philosophers and others, but either the usage is vague or a special definition is stipulated. There are very few explicit accounts of the concept of a concept. Both Kant and Frege are well known as philosophers who have developed their own notions of a concept. For Kant, concepts arise from thought and are that under which representations of objects are subsumed. For Frege, a concept is a function whose value is either the True or the False. There is much more to be said about both these authors on the nature of concepts, but here I am less interested in the specialized notions than in the more general use of the term 'concept'. It is only by understanding what a concept is in general circumstances that we can then understand when differences are differences in concepts or only in language.

In order to show both the diversity and the vagueness in the notion of a concept, I shall begin by presenting briefly some of the views that have been held about the nature of concepts. Stephan Körner, for example, says that a concept is that which is expressed by signs which are used as a predicate and whose use is governed by rules including synonymy rules.<sup>1</sup>

---

1. Körner, Conceptual Thinking, pp.13-15.

He presents this as a semi-technical notion, and it is somewhat reminiscent of Frege's notion. Waismann is much closer in his agreement with Frege. He says, 'Frege was quite right in so far as he said "A concept is a possible predicate".'<sup>1</sup> He then argues that what we call a concept 'comes into existence only by its incorporation in language'.<sup>2</sup> A rather different view which is somewhat reminiscent of Kant is that of Hampshire, who says that concepts 'fix in a stereotype the resemblances in appearance which we suppose at any one time that everyone at any time must always naturally notice.'<sup>3</sup> Hampshire is careful to distinguish concepts from linguistic entities, although he does not say much about what concepts are. Carl Hempel is another philosopher who has been careful to distinguish a concept from its corresponding terminology or the expression naming it.<sup>4</sup> He is a bit more explicit, however, and says that a concept is 'a non-linguistic entity such as a property, a class, a relation, and a function, or the like'.<sup>5</sup>

Usually the distinction between concepts and linguistic entities is not so definitely made, and quite often concepts seem to be identified with linguistic entities. Waismann is a good example of someone who has done the latter, but there are many others as well. Von Wright seems to identify concepts and meanings. He says, for example, that 'the subject-matter of conceptual investigations is the meaning of certain words and expressions'.<sup>6</sup>

---

1. Waismann, Linguistic Philosophy, p.226.

2. Ibid., pp.227-228.

3. Hampshire, Thought and Action, p.33.

4. See: Hempel, Concept Formation, pp.1 and 4.

5. Ibid., p.4.

6. Von Wright, Georg Henrik, The Varieties of Goodness (London: Routledge and Kegan Paul, 1963), p.4 (his emphasis).

A similar view was held by Wittgenstein. It is well known that a simplified statement of his view is that the meaning of a word is its use, but he also says exactly the same thing about concepts - that a concept is the use of a word.<sup>1</sup> Maybe this is why I have always found it so difficult to distinguish between conceptual analysis, semantic analysis, and linguistic analysis, not that it has ever seemed terribly important to distinguish the three. An investigation of concepts can as easily be considered an investigation of the meaning of words as it is usually done in modern philosophy, but this should not be considered a criticism of modern philosophy. To the extent that there is a distinction, it is not particularly relevant to most philosophical investigations. Many could agree with Sidney Zink when he says that in elucidating 'concepts and their relations I shall continually refer to the way we talk about them.'<sup>2</sup> There are some problems, however, for which the distinction is important, and this is why more needs to be said about the nature of concepts.

Peter Geach is one of the most notable examples of someone who has tried to be explicit about the nature of concepts. It is worth quoting him at length:<sup>3</sup>

The ability to express a judgement in words thus presupposes a number of capacities, previously acquired, for intelligently using the several words and phrases that make up the sentence. I shall apply the old term "concepts" to these special capacities...It will be a sufficient condition for James's having the concept of so-and-so that he should have mastered the intelligent use (including the use in make-up sentences) of a word for so-and-so in some language.

- 
1. See Wittgenstein, Philosophical Investigations, §§383, 384, and 532 and Geach's notes of Wittgenstein's last lectures, p.97.
  2. Zink, Sidney, The Concepts of Ethics (New York: St. Martin's Press, 1962), p.ix.
  3. Geach, Mental Acts, p.12.

Geach does not tell us much about these capacities except that they are subjective and mental. Thus, as he puts it, a concept is 'a mental capacity belonging to a particular person.'<sup>1</sup> He also argues that:<sup>2</sup>

The central and typical applications of the term "having a concept" are those in which a man is master of a bit of linguistic usage; we can then reasonably extend the term to cases sufficiently like these, e.g. where the man can play 'intellectual' games like bridge and chess.

He tells us very little about how the term is extended, however, since he thinks it is adequate for his purposes to concentrate on linguistically exercised concepts.

The notion of a concept as a capacity was advanced and discussed earlier by H.H. Price. He, however, argued that concepts are manifested in many different ways. Besides being manifested by the 'production and understanding of non-instantiative symbols, and a fortiori the production and understanding of verbal symbols', they are<sup>3</sup>

manifested also by the recognition of instances; by the production of quasi-instantiative particulars, whether images or physical replicas; by the production (sometimes) of real-life instances; by sign-cognition in its various forms, including secondary recognition; by intelligent action of all kinds, both at sign-cognitive level and above it.'

In fact, he protests against what he calls 'narrow views of conceptual cognition', which maintain that '[t]o possess the concept of  $\phi$ ...consists simply in the capacity to use the word " $\phi$ " with understanding'.<sup>4</sup> Nevertheless he does admit that there are '[v]ery complex concepts, which can only be acquired with the aid of symbols, [although they] may show themselves in action without any present use of symbols.'<sup>5</sup> In spite of the importance of

---

1. Ibid., p.13.

2. Ibid., p.13.

3. Price, Thinking and Experience, pp.344-345.

4. Ibid., p.344.

5. Ibid., p.315.

language, Price maintains that 'the recognition of instances is the primary and fundamental way in which a concept is manifested, and all the other manifestations it has, or may come to have as it develops towards completeness, are dependent upon this one.'<sup>1</sup> The concept is then the recognitional capacity which is manifested in the recognition. This view of concepts has been widely influential, and I discuss it at greater length below.

So far I have discussed several different views about the nature of concepts, and the variety should show not only the disagreements among philosophers but also the vagueness of the notion. Concepts are considered all sorts of things, such as predicates, things like properties, meanings, capacities, conceptions, etc., all of which are very different things. One writer even suggests that concepts may be considered 'language, behaviour, images, logical terms, or the like'<sup>2</sup> whatever the like is. As a result of this, vastly different examples of concepts are given. Price speaks of the concept of Redness, while Geach refers to the concept of red. Hanson presents 'our concepts of accelerating bodies' in thirteen complicated formulae.<sup>3</sup> Čapek includes among several examples the following concept: 'That of space, which, while it contains material corpuscles, remains distinct from them and does not participate in their motion, remaining, in Newton's words, always immovable and self-identical'.<sup>4</sup> Sapir speaks of concepts and images indiscriminately as though they were the same thing.<sup>5</sup>

1. Ibid., p.355.

2. Schon, Donald A., Displacement of Concepts (London: Tavistock Publications, 1963), p.4.

3. Hanson, Patterns of Discovery, p.35.

4. Čapek, Milic, The Philosophical Impact of Contemporary Physics (Princeton, N.J.: D. Van Nostrand Company, Inc. 1961), p.262.

5. Sapir, Language, p.25.

The most careless example comes from Donald Schon, who says:<sup>1</sup>

I want to use the word 'concept' broadly enough to include a child's first notion of his mother, our notion of the cold war, my daughter's concept of a thing-game, Ralph Ellison's idea of the Negro as an invisible man, the Newtonian theory of light, and the idea of a new mechanical fastener.

There is little that this leaves out! No wonder it is not too uncommon to find in ordinary speech people talking about concepts as beliefs. In a New York Times article, for example, a brain operation was said to be important in 'disproving some of the traditional textbook concepts of what the brain can and cannot do.'<sup>2</sup>

ii. On Some Things that Concepts Are Not

Judging from the views and examples that I have given so far, there is little determinateness in our concept of a concept. One might begin to wonder if there is anything definite enough for there to be a concept at all. Although I do think that our concept of a concept is indeterminate, I also think that this has been exaggerated in most previous studies by a lack of care or existence of prejudices. I think at this point it is worth attempting a careful and unprejudiced investigation of what we mean in our ordinary language by the word 'concepts'.

I shall begin by making some straightforward remarks about linguistic items and contexts. Consider first the cognates of the word 'concept': 'conception', 'conceptual', 'conceptually', 'conceivable', 'conceivably', 'conceive', 'conceiver', 'conceit'. It will be useful to keep these in mind

---

1. Schon, Displacement of Concepts, p.4.

2. Brody, Jane E., 'Surgery Revises Idea about Brain', New York Times, 23 July, 1966, p.27.

for application to linguistic contexts. Probably the most important contexts to investigate are those for the word 'concept'. For simplicity (because of the variation of articles in the singular) I consider what we do to concepts and what kind of concepts there are, using the plural. The following is then a partial list of the fillers for the blank in '\_\_\_\_\_ concepts':<sup>1</sup>

have	? coin?	names of
use	introduce	mathematical
apply	? invent?	family of
? accept?	analyse	substitute (noun)
understand	fit	simple
change	boundaries of	exact
simplify	correspondence of	vague
substitute (verb)	structure of	empty
form	scheme of	new
formation of	stratification of	our
creation of	levels of	two
learn	system of	

Some of these expressions are questionable at least to my ear as I have indicated, while the others at least have a usage which is established to varying degrees. I think all of the expressions formed by all of the words above appear occasionally if not frequently in philosophical and technical writings, and I doubt if any of them would be foreign to ordinary speech. Nevertheless, some of them have a clearer and better established usage than others, and some of them correspondingly have a better established meaning

---

1. Those entries which are questionable as fillers are enclosed in question marks.

as well. For example, if there is anything we do with concepts we have them. People and individuals certainly are said to have concepts, and it is sometimes said that languages have concepts, although this is not so clear and can only be true in a secondary sense. This is enough to begin to make some distinctions. Although we do have concepts, we do not have predicates (only sentences have these) nor do we have properties (or relations or classes) in the relevant sense. We might be said to have the properties (This locution is odd but has some prominence in philosophy.) of being tall, healthy, intelligent, etc., but these are not things that we understand or introduce as in the case of concepts.

Neither do we have meanings as would seem to have to be true if concepts were meanings. Nevertheless, there is some temptation to regard concepts as meanings, and I think it is worth investigating this further. There are many expressions which are found in common between the words 'concepts' and 'meanings'. We certainly understand, change, simplify, and substitute meanings of words. It is also often said that we form, introduce, and analyse meanings of words. This would seem to allow us to speak of the formation and creation of meanings. We cannot be said to coin new meanings, but I think it is a bit strained to speak of coining concepts as well. Many of the other expressions are also applicable to 'meanings' in ways parallel to their applicability to 'concepts'; for example, 'boundaries of', 'structure of', 'levels of', 'family of', 'simple', and 'vague'. All of these similarities are reason for Wittgenstein's ignoring the difference between concepts and meanings when he was investigating the meaning of a word or the concept of what the word names. Understanding the one comes to the same thing as understanding the other in the kind of investigations with which

Wittgenstein was mainly concerned.

Nevertheless, there are differences between meanings and concepts that should not be left unnoticed, particularly in an investigation of the relation between language and concepts. I have already pointed out that we do not have meanings, although we do have concepts; and for related reasons we can speak of our concepts but not of our meanings. On the other hand, it is worth pointing out that words have meanings but not concepts. The word 'concept' has a meaning, but it does not have a concept. It has sometimes been suggested that the word is the name of the corresponding concept (in this case the concept of a concept),<sup>1</sup> but I do not think it would ever be suggested now that the word is the name of its meaning.

Another difference between concepts and meanings is that there are concepts of kinds of things but not meanings of kinds of things. We might speak of the (a) concept of mass but we would not speak of the (a) meaning of mass, but only of the meaning of the word 'mass'. There seems to be some acceptability in speaking of using concepts but little acceptability in speaking of using meanings. This may be because there has seemed to be a clearer sense in which there are alternative concepts than in which there are alternative meanings. We speak of mathematical concepts and of the concepts of physics but not of mathematical meanings and the meanings of physics. There are obviously differences between concepts and meanings in spite of their close relationship, which I discuss below.

I should like to make the point, as a tangential remark, that contrary

---

1. Cf. Hempel, Concept Formation, p.4 and Waismann, Linguistic Philosophy, p.226.

to what some have said,<sup>1</sup> concepts are not the kinds of things that have meanings. (This is to be distinguished from the view that concepts are meanings.) We can speak of the meaning of a word to which there is a corresponding concept, but we cannot speak of the meaning of that corresponding concept. A concept is not a linguistic expression nor is it a kind of thing which can be symbolic.

I have mentioned several things which we cannot speak of having and which at least in this respect are different from concepts, but there are also things which we can be said to have and which are sometimes said to be concepts or at least very much like concepts. I have pointed out above that some people regard concepts as capacities and there is some similarity, for among other things we can be said to have capacities. Nevertheless, our capacities are capacities to do something and not capacities of something as in the case of concepts. Moreover, we cannot be said to understand our capacities in the way that we can be said to understand our concepts, and we certainly cannot be said to understand the capacities although we can understand or not understand the concepts of various things. There is also the difference that we do not speak of simple, vague, or empty capacities; and changing and introducing capacities is different from changing and introducing concepts. This is enough to show that there is a difference between concepts and capacities, although it might be that capacities are part of the criterion for concepts. This is a view I discuss below.

---

1. Cf. Zink, The Concepts of Ethics, p.xii and Hempel, Concept Formation, p.80, n.21. I am not at all clear that this would be the considered view of either of these authors.

We also have images, ideas, and notions. The last two are rather vague things, and we usually speak of ideas or notions when we cannot be or do not want to be more explicit. Berkeley, for example, spoke of our notions of God and of the soul rather than using 'ideas', which was a term with a special use for him. We might say that to have a notion of something is to have only an idea of what it is or what it is like. Having a notion of something seems to be less definite than having a concept of something, but this may be clearer after I say something more about concepts. It would seem that ideas cannot be concepts since we cannot have an idea of something in a relevant sense; we can only have an idea of the nature of something. But more on this later too.

One view that might be tempting is that concepts are conceptions. We can indeed be said to have a conception of something, and it might be thought that this is very similar to having a concept of something. This view certainly has been suggested by some. Hempel, for example, remarks indiscriminately about concepts of validity and conceptions of validity.<sup>1</sup> I think there is a difference between concepts and conceptions, but I shall discuss conceptions, notions, etc. more fully in the next chapter. In the rest of this chapter, I want to look at some of the things that we can be said to have concepts of.

### iii. On What We Can Have Concepts of

First of all, it should be clear that we very rarely (except perhaps in

---

1. Hempel, Concept Formation, pp.48-49. Cf. also Hanson, Patterns of Discovery, pp.34-35 and Hampshire, Thought and Action, p.70.

philosophical discussions) speak of someone having a concept, and consequently it is difficult to find good examples of things which we have a concept of. If we are being perfectly fair and unprejudiced in our investigation, we will find that we very rarely say that a person (or even a child) has the concept of red, for example. We might say that the child knows what red is or has learned the word 'red', but we would be unlikely to say that the child has the concept or has learned the concept. It is also odd to say that an adult has a concept of something. Ethicists often speak of the concepts of obligation and duty, but it is unlikely that we would say of a particular person that he has a (the) concept of obligation. However, we have to be careful here to distinguish between what is rarely said or is unlikely to be said and what can be said or is true.<sup>1</sup> What is rarely said is sometimes said, and that is as interesting to us here as what is often said. We are interested here in what makes sense and thus in what is said with a sense. We may rarely say that a person understands the meaning of the word 'red', even though it certainly would often be true to say that a person understands the meaning of the word 'red'. The problem that arises here is that it is difficult to distinguish between what we very rarely say and what we can never say. But something can be said, because some expressions are obviously wrong (or meaningless) while others are obviously acceptable (or meaningful).

At this point, it will be helpful to look at some of the linguistic

---

1. For a discussion of this distinction, see H.P. Grice, 'The Causal Theory of Perception', 35 (1961), esp. section III and John Searle, 'Assertions and Aberrations' in Bernard Williams and Alan Montefiore, eds., British Analytical Philosophy (New York: Humanities Press, 1966), pp.41-54.

features of expressions which specify a concept. To do this, we can look at the fillers for the blank in the expression 'concept \_\_\_\_\_'. We usually speak of the concept of such-and-such, but this is usually equivalent to speaking of the concept 'such-and-such' (where 'such-and-such' can be considered a variable with the same values in both occurrences). Thus, Wittgenstein speaks of the concept of a game as well as the concept 'game'.<sup>1</sup> In the latter case, the expression in inverted commas appears a bit like the name of a concept, but there are relevant differences as well. The expression 'the concept "game"' should not be confused with 'the concept of "game"' or 'the concept of the word "game"', which are quite different if they mean anything at all. The inverted commas in an expression specifying a concept are not the inverted commas which show that a word is being mentioned. One should also distinguish between a concept of mathematics where it is the concept 'mathematics' and a concept of mathematics where it is a mathematical concept.

English is such that the preposition 'of' must always be followed by a complete noun phrase such that the blank in 'concept of \_\_\_\_\_' must always be filled by a complete noun phrase.<sup>2</sup> Not any noun phrase will do - for example, the noun 'game'. We cannot have the concept of game, although we can have the concept of a game. Of course we can have the concept of

- 
1. The relevant German from Wittgenstein's Philosophical Investigations is: 'mein Begriff vom Spiel' (§ 75) and 'der Begriff "Spiel"' (§ 71). He also uses expressions like 'Begriff der Zahl' (§ 135) and 'Schmerzbegriff' (§ 282), but there does not seem to be a comparable variety in English.
  2. Ryle does speak of 'the concept of the square root of' and the 'concept if' (his italics) where the specifying expression is not a noun phrase. It is not clear what role the italics play, but the expressions do seem rather odd anyway. Cf. Ryle, 'Thinking Thoughts and Having Concepts' p.158.

uranium, but 'uranium' is a mass term and is not preceded by an article. The same kind of syntactic restriction does not arise in the case of using inverted commas, but there appears to be a similar restriction that applies. I do not think we can speak of the concept 'negligently' or the concept 'educated', although I must admit that all the expressions with inverted commas seem a bit strained to me. Wittgenstein speaks of the concept 'I am now seeing it as....'<sup>1</sup> This expression seems to me to be quite wrong, even though we might speak of the concept of seeing x as y and maybe even shorten this to 'the concept of seeing as'.

There are other restrictions to the noun phrase besides being complete. One is that it cannot be in the plural. We might be said to have a concept of pain or of a person, but we do not have concepts of pains or of people. The noun phrase is also restricted in that we cannot use a pronoun to specify the concept. It would be wrong to speak of a concept of him or a concept of that (unless we meant a concept of that kind of thing). Finally the noun phrase in the specification of the concept cannot begin with a question word. We cannot speak of the concept of where he is or the concept of how he did it, although the case is different with conceptions. Wittgenstein speaks of the 'concept of what we mean by "game"',<sup>2</sup> but this seems to me quite wrong.

It might seem that the requirement that the specifying phrase be a complete noun phrase grossly limits the kinds of things we can have concepts of. But it is quite to the contrary. We can always form a noun phrase by adding the relevant general terms and using an appropriate gerund. Thus, I

---

1. Wittgenstein, Philosophical Investigations, p.213.

2. Ibid., §135.

think we can have the concept of being educated, the concept of being taller than someone else, the concept of procrastinating, and the concept of doing something negligently. It might also seem that we can speak of the concept of being red or the concept of being an obligation, but I think this sounds odd because we would tend to speak of the concept of red and the concept of an obligation instead. Furthermore, I think that when we are tempted to speak of the concept of being \_\_\_\_\_ where the blank is filled by a noun phrase, then we tend to think about our being such-and-such. But to speak of the concept of our being the prime minister is to strain our notion of a concept. On such occasions, our purposes can be served better by speaking of the concept of a prime minister. There might be other occasions where there are more appropriate alternatives. Most adjectives, adverbs, etc. have their corresponding noun. It might serve our purposes just as well to speak of the concepts of education and of negligence rather than the concepts of being educated and of doing something negligently. Perhaps there are some adjectives or adverbs without corresponding nouns, and then we would not have this resort. The concepts of being formulatable and of being graphic sound better than the concepts of formulatability and of graphicness.

That examples like some of those above are prevalent in the philosophical literature is undoubtedly one reason why some philosophers have said that a concept is a possible predicate or that which is expressed by a possible predicate. It seems that one can always use a predicate to specify a concept by making the appropriate change of the verb to the present participle. Among other things, this view reflects a certain indefiniteness about the nature of a predicate. When we speak of the concept of red or the concept

of an obligation we are using what might be considered a possible predicate but without the verb. In the sentence 'He is a leader.', some would probably say that 'is a leader' is the predicate while others would say that 'a leader' is the predicate, and correspondingly I suppose some would speak of the concept of being a leader and some of the concept of a leader.

I should add, however, that from the remarks that I have made so far there seems to be no reason to connect concepts with predicates. Any locution subject to the restrictions that I have mentioned above which is a possible subject of a sentence can also be used to specify a concept. In fact there would have to be no changes in the possible subjects as there are in the verbs of possible predicates. The specification of the concept of being educated could come directly from the subject in a sentence like 'Being educated is desirable.'. The linguistic restrictions that I have mentioned seem to be more important than whether the expression is a possible predicate or possible subject.

There are further limitations to the specification of a concept which I have not yet discussed. One problem is that there is no limit to the length of a gerundive phrase, but there does seem to be a limit to the length of a gerundive phrase that can be used in specifying a concept. Can we speak, for example, of the concept of being taller than someone who is the minimum height for a bobby? I am not sure, but it is at least odd. Absurdity would definitely be reached if we were to suggest that there is a concept of being the first person to walk a tight rope after the signing of the Magna Carta or the concept of going to more performances by Nureyev at Covent Garden in 1965 than any other person who lives outside the limits

of Greater London. Similarly, in the case of specifications not using gerunds there is a limit to the length of the expressions that can be used in specifying a concept. It does not seem to make sense to speak of the concept of an obligation to cash a cheque at Barclay's Bank in order to pay the gardener for his services during the month of July or the concept of a machine what would produce more paper clips than any other machine in England. Obviously there are no limits to the variety of the absurdities that could be so produced, but what is more disturbing is that the line between absurdity and reasonable specification of a concept is so vague that it is hardly there at all. Not only is it obscure how long the specification must be before it becomes absurd, but also there are some long specifications in science, for example giving a specification of the concept of a particular atomic particle. The notion of a concept is too unclear to provide much help in distinguishing absurd from bona fide specifications of concepts.

The notion of a concept is clear enough, however, to eliminate some specifications. We certainly cannot speak of the concept of this table or the concept of Harold Wilson. Neither can we speak of having a concept of that intention or of his exuberance. We can speak of the concept of a Hercules, although we cannot speak of the concept of Hercules. At first it appears that we cannot have a concept of a particular, i.e. where the specification specifies a particular, but this is not quite accurate. We can have the concept of red, which is a particular colour, and the concept of two, which is a particular number. More importantly, we can also have concepts of China, of the universe, and of the moon.

The determining factor seems to be whether or not the specifying noun phrase is a common name or a term.<sup>1</sup> This solves a number of problems that arise about what we can have concepts of. The answer to a question about what something is called in English will provide us with the specification of a concept. In English, a particular area is called China and a particular heavenly body is called the moon, and so we have concepts of China and of the moon. A particular person is called Harold Wilson, but he is not called this in English or in any other language, and we do not have the concept of Harold Wilson. What is referred to by 'Harold Wilson' is called a man, a leader, and a prime minister in English, and we can have concepts of all these things. We can also have concepts of certain numbers but not of others. It would be odd to speak of the concept of 1,348, of  $6+5i$ , or of  $3.14$ , but there is no difficulty in speaking of the concept of two, or of a thousand, or of pi. All of the numbers in the latter group are those with names, while those in the former group could be said to be referred to by expressions composed of names but not being names themselves.<sup>2</sup> Similarly we have the concept of a chiliagon but not the concept of a 1001-sided figure.

This determining factor makes the decision whether or not we have a concept vague in just the right places as well. We can have the concept of a grandmother and perhaps the concept of a great-grandmother as well, but it gets progressively more difficult as we add on more 'great's. Americans could be said to have the concept of Independence Day, but it is not clear

1. Cf. my discussion of this in chapter 8.ii.

2. This was suggested to me by Professor Ryle.

whether or not they have the concept of the Fourth of July just as it is not clear whether or not that is a name.

I do not think that this determining factor is limited to what things can be called in English, however. I think we can also speak of the concepts of Gemutlichkeit and of bonheur, and it is not only speakers of German and French that have these concepts. Some say that one acquires the concept of Gemutlichkeit by going to the Hofbräuhaus, but one does not learn German by going there. Nevertheless, it is more likely that the speakers of a language rather than the non-speakers will have the concepts specified by the names or terms in the language. Perhaps Germans are more fortunate for this reason, since they are likely to have concepts of things like ein Hottentotenpotentatentintentententat.<sup>1</sup> Speakers of English need not be without this concept, but they would have to turn to German to specify it.

Wittgenstein suggested in his last lectures<sup>2</sup> that people might be said to have different concepts if they had concepts like that of a red circle. In fact, he suggested that these people might have a word for 'red-circle'. We indeed do not have a word for 'red-circle' in English, but this does not seem to show that we have different concepts. If there is such a concept, I am sure that most speakers of English have it. The only difference seems to be that of their language having a word for it and our language not having such a word, but this is a difference that I have already discussed above and one which does not seem to affect whether we have the concept or not.

---

1. Professor Ryle reminded me of this famous, reputed German headline.

2. Geach's notes of Wittgenstein's lectures, 1946-47, p.98.

Another suggestion comes from examples used by Professor Ryle in lectures (Trinity Term, 1965). He considered the possibility of having words like 'machelor' (meaning married bachelor) and 'squangle' (meaning square triangle). One could ask the corresponding question of whether there could be concepts of such things. First of all it is clear that there are not such things, and furthermore that it is logically impossible for there to be such things. It is self-contradictory to say that something is both a triangle and a square, although this would not mean that a word 'squangle' would be self-contradictory. Words are not the kind of thing that can be self-contradictory, and in this respect concepts do not seem to be any different. I see no reason for it to be logically impossible for there to be such words and correspondingly such concepts. It is just that it would be difficult to find any use for them, and consequently it is unlikely that such words and concepts will come into anyone's repertoire.

I have come to the end of my discussion of what we can have concepts of, but I should like to re-emphasize that the concept of a concept is not a clear one. The vagaries of the discussions about concepts show the vagueness of the concept itself. That it is vague is further shown by the fact that we rarely speak in ordinary discourse of someone having a concept. It thus becomes difficult to determine whether one can be said to have concepts of heliotrope, ice cream, or peanut butter. Nevertheless, we have found some means of determining what things we can have concepts of, and I think there are some lessons to be learned from these determining factors.

#### iv. A Few Important Lessons

Psychologists, and others, have often talked about concepts and categories

interchangeably as though they were the same thing.<sup>1</sup> But we and our language are said to have concepts, while we do not have categories. If anything has categories, it is reality. Things are put into categories but not into concepts. The relevant consideration is that we can set up anything we like as a category, but as we have seen this is not true of concepts. What concepts there are depends upon what words there are in languages, but what categories there are depends upon what distinctions we want to draw, and these can be any distinctions as the psychologists have shown us in their experiments. As we saw from Lenneberg's experiments, the distinctions that one can make do not depend upon the language one speaks. We can say everything we like with our language, and this means that we can draw whatever distinctions we like as well.

One thing that is shown by the fact that we cannot have concepts of some things is that contrary to what Geach says having a capacity is not a sufficient condition for having a concept.<sup>2</sup> Not even having a verbal capacity is a sufficient condition for having a concept. I may know the use of the words 'the man who is now prime minister' (which is the kind of verbal capacity Geach was considering), but this is not a sufficient condition for my having the concept of the man who is now prime minister. There is no such concept as that. One might retort that it is, nonetheless, a sufficient condition for my having the concept of a prime minister or of being prime minister. This might be true in the particular case, but then we also know the use of 'Hercules'. But even in the particular case a

---

1. For a prime example of this see: Bruner, J.S., J.J. Goodnow, and G.A. Austin, A Study of Thinking (New York: Science Editions, 1966), passim.

2. Cf. Geach, Mental Acts, p.12.

serious problem arises if the retort is accepted. Geach gives us no way of determining which verbal capacities are connected with which concepts. We, of course, can make some vague connections, but that is not enough if we are going to have sufficient conditions. It is quite likely that verbal capacities are important in determining whether a person has a concept, but more needs to be said.

We have also seen that having a recognitional capacity is not a sufficient condition for having a concept.<sup>1</sup> In the sense in which Price talked about recognitional capacities, we do have such capacities in connection with the absurd "concepts" which I have mentioned above. There are no logical restrictions to our finding out about, picking out, and thinking about someone who is shorter than the shortest possible bobby or the first person to walk a tight rope or whatever. Either more has to be added to the sufficient condition for having a concept, or the notion of a concept will have to be so changed that things which previously were not considered concepts could now be so considered.

#### v. The Comparison of Concepts

So far I have suggested the possibilities and limitations of the kinds of things of which we can have concepts, but I have said nothing about the comparison of concepts or the relation between them. First I shall consider the questions whether two people can have the same concept and whether two people can have different concepts of the same things. Geach argues that concepts are subjective and belong to particular persons.<sup>2</sup> I can agree with

---

1. This view seems to be held by a number of philosophers and is suggested by Price in Thinking and Experience (cf. p.355), but it is not clear whether having a recognitional capacity is for him a sufficient condition or just important.

2. Geach, Mental Acts, pp.13-14.

the import of this latter contention, but I disagree that it is reason to think that concepts are subjective. Geach wrongly thinks that the distinction between numerical and qualitative identity applies to concepts, and thus he thinks that two people necessarily have numerically distinct concepts. It is true that people have numerically distinct capacities, since even if we have the same capacity my capacity is not your capacity. But it is not true that we have numerically distinct concepts, and Geach seems to have been misled by thinking that concepts are capacities. If we both have a concept which is specified in the same way, then my concept is your concept. It might be said that the having of a concept is subjective since my having a concept is not your having a concept, but this only shows that the having of a concept is different but not that the concept itself is different.

This presents a rather important problem, however. It might be suggested, in the light of modern science, that there can be two different concepts of the same thing, such that the specifications are the same but the concepts are different. Thus, people speak of the difference between simultaneity in Newtonian physics and simultaneity in Einsteinian physics. People who do Einsteinian physics are then said to have a different concept of simultaneity from those who do Newtonian physics. It should be clear, however, that these are not two different concepts of the same thing if simultaneity in Newtonian physics is a different thing from simultaneity in Einsteinian physics. If this is true, then the expression 'the concept of simultaneity' is either ambiguous or incomplete. In either case, the specification will be clear and complete when we specify whether the

simultaneity is Newtonian or Einsteinian. In the same way, the English and the Americans do not have two different concepts of a ton. It is only that they have the concept of a ton in two different senses of 'ton'. The word specifies different things, and since a specification specifies what a concept is a concept of, strictly speaking there cannot be two different concepts of the same thing.

There are cases where there are two different concept specifications but where the specifications are logically equivalent. In such a case, one might contend that there are two different concepts of the same thing. It might then be said, for example, that one could have the concept of fourteen pounds but not the concept of one stone. The expression 'the concept of fourteen pounds' is indeed odd, but it does not seem to me that a person has two concepts if he can be said to have the concept of fourteen pounds as well as be said to have the concept of one stone. And if one person figures his weight in stones and another in pounds, then the difference between fourteen pounds and one stone would seem to be verbal rather than a difference of concepts. This also seems to have been Wittgenstein's inclination when (as reported) he wanted to say that two groups of people 'have the same concept if there is an easy translation from one language to the other - if they could learn our language without learning a new life.'<sup>1</sup> It would certainly seem that a German who has the concept 'Rot' has the same concept as an Englishman who has the concept 'red'. And someone who has the concept of a triangle has the concept of a three-sided figure and vice versa. There will be times when there is no

---

1. Geach's notes of Wittgenstein's lectures, 1946-47, p.99.

easy translation, but then the only difference will be that there is a word or a name in one language and only a difficult but still possible translation of it in the other. The problems and their solutions here in relation to concepts will be no different from the problems and their solutions in relation to translation and there being names in a language.

It is not always easy to compare concepts, however, because of the vagueness in their specifications or the difficulty in finding proper relations between concepts. People speak of the concept of red as well as of the concept of redness, of the concept of a triangle as well as of the concept of triangularity. We might also speak of the concept of being poor and the concept of being happy or of the concept of poverty and the concept of happiness. I am inclined to think that these are all pairs of the same concept, but more would have to be said about each in order to be sure. We would have to know exactly how it is determined whether we have one concept or the other.

Compare the following, all of which would seem to be good examples of what would be called a concept: the concept of negligence, the concept of being negligent, the concept of doing something negligently, and the concept of doing something out of negligence. Are these different concepts or the same? Ordinarily, a philosophical investigation of negligence could be introduced as an investigation of any one of these four concepts. In the ordinary philosophical investigation there would not seem to be relevant differences, and saying something about acting negligently would be a contribution to saying something about negligence. On the other hand, it would seem odd to say that all of these are the same concept. Certainly

negligence is different from doing something negligently, and it would make the nature of the specification of a concept rather strange if the concept of negligence were to be the same as the concept of doing something negligently. Specifying a concept would be far too vague if the concepts of such different things were the same.

I must say, however, there is almost nothing to go on to show what relations there are between concepts. One might be able to show the relation between negligence and doing something negligently, but there is no reason to suppose that this relation is the relation between the concept of negligence and the concept of doing something negligently. One might maintain that one of the four concepts above is necessarily related to or included in one of the other concepts, but again there seems to be no basis on which to establish such relations. Concepts just do not seem to be the kinds of things that can be included in each other. One might maintain that the concept of knowledge is necessarily related to the concept of truth because there cannot be knowledge without there being truth. This, however, does not seem to be a reason for saying that there cannot be the concept of knowledge without the concept of truth, although it might suggest that we cannot have the concept of knowledge without having the concept of truth. Unless there is no difference between something, the concept of something, and having the concept of something (which I think no one would want to hold), it does not seem to be true a priori that the relation between any two of one of these things will be the same as the relation between two of another.

Perhaps more could be said about the relations of concepts once we consider what determines whether someone has a concept or not. This is clearly what we should turn to now.

## CHAPTER 10

## ON HAVING CONCEPTS AND CONCEPTIONS

i. The Determining Factors for One's Having a Concept

I have not been able to find anything with which a concept could be identified, but maybe it will help to say at least something about what determines whether or not someone has a concept. Unfortunately, this subject is even hoarier than that of determining what we can have concepts of. There are a number of different determining factors with varying degrees of importance depending upon what it is we are said to have a concept of.

Consider first under what conditions we would say that someone has or does not have the concept of red. If a child, for example, were able to pick out things when asked and could distinguish red things from those which are not red, then I think there would be good reason to say that he has the concept of red. It is not altogether easy, however, to determine whether or not a child is able to pick out or to distinguish red things. If we have several boxes of different colours before a child and put something we know he wants in a red box and he reaches for the wrong box after they have been mixed up, then we have evidence that he is unable to distinguish red from non-red things. We might change our view about the child, however, if we saw him putting red blocks together and putting blocks of other colours aside. There are numerous little tasks of this kind that we can use to determine whether or not a child is able to distinguish red from non-red things, and for each of these tasks the child

can either fail or succeed. If the child fails at all the tasks, then we shall assume that he is unable to make such a distinction. Furthermore, if he is unable to make such a distinction, I think that would be reason for us to believe that he does not have the concept of red. And if he succeeds at all the tasks, we would assume that he does have the concept. Being able to make certain distinctions and to pick out red things seems to be the primary factor in determining whether a person has the concept of red.

The case is a bit different for other concepts. We would not ask a person to distinguish or pick out a proton in order to find out whether he has the concept of a proton. We would probably be more interested in whether he could say what a proton is and what its relation to other particles is. If he could not tell us what a proton is or even anything about a proton (whether he knows the word or not), I think we would deny that he has the concept of a proton. And if he could tell us no more than that a proton is an atomic particle, I think we would begin to doubt that he has the concept. In this case, what he can say about the concept seems to be more important than anything else.

The case of the concept of a triangle presents still a different case for determining whether someone has the concept. If a person could wield a pencil but were unable to draw a triangle, we would be disinclined to say that he has the concept of a triangle. On the other hand, if someone were able to produce a picture of something, i.e. produce an example, this would be reason for us to say that he has the concept of whatever it was.

In discussing the concepts of red, a proton, and a triangle, I have found three important abilities, namely distinguishing, describing, and

drawing, which determine whether or not someone has a particular concept. I should not want to suggest, however, that there is only one criterion for each concept and that this one criterion is different depending upon the particular concept in question. This is certainly not the case. A person who can be said to have the concept of red should be able to tell us at least that it is a colour and maybe even something else about it. He should also be able to ask for red things and produce examples of red things. That a person has the concept of a proton was said to be shown by his being able to say what a proton is, but there are other things which have a certain amount of significance. One would expect a person who has the concept of a proton to be able to show a proton in a representation of the nucleus of an atom. There are also various ways in which to distinguish protons from other atomic particles, for example in photomicrographic pictures and in models of the atom. I have also pointed out that if a person is able to draw a triangle we would say that he has the concept of a triangle, but the same would be true if he were able to distinguish triangles from other geometric figures. We also expect someone who has the concept of a triangle to be able to describe a triangle or at least say something about it.

What I have tried to show is that there are many different ways in which it is determined whether a person has a concept and that most of these different ways are used in practically every case. The variation comes in the degrees of importance of each of the ways of determination in the particular cases. Being able to distinguish red things is of primary importance to having the concept of red, it being something that we observe. On the other hand, a term like 'proton' can only be understood in

connection with a theory or quasi-theory, and for this reason the linguistic consideration is the primary concern for having the concept of a proton. There seems to be no general rule for determining which considerations will be more important; for that seems to depend rather loosely upon the kind of thing which we are said to have a concept of, its importance to other things with which we are concerned, the kinds of judgements we make about it, and the things we do with it. But this is more of an apology than an explanation. What we can say is (as Price says) that concepts are manifested 'by intelligent action of all kinds'<sup>1</sup> or, in the tenor of what Geach says, that concepts are exhibited by the 'capacities exercised in acts of judgement'.<sup>2</sup> Again we should see that what an intelligent action is varies with the action itself and that the capacity to make a judgement varies with what the judgement is about.

What I have not yet considered adequately is what happens when there is conflicting evidence. To return to the example of the concept of red, there seems to be no doubt that a person who fails at all or at least most of the tests to determine whether he can distinguish red things will be said not to have the concept of red. While a person who succeeds at all of the tests to which he is subjected will be said with good reason to have the concept of red. A problem arises, however, when someone succeeds at some of the tests and fails at others. In this case, we have some reason to believe both that the person has the concept and that he does not have the concept. But I think it would be wrong to hold that one

1. Price, Thinking and Experience, p.345.

2. Geach, Mental Acts, p.7.

must be able either to distinguish and pick out one kind of thing or not and thus either have the concept or not. Having ability or inability to distinguish something is not without its range of cases in between. Some people are more able than others at distinguishing various things. This sometimes means that they are quicker, but it more often means that they are more often right and less often wrong. Similarly, individuals are more able in distinguishing some things than they are in distinguishing other things. Some people are more able than others at distinguishing Bach from Telemann, and sometimes they are more able at distinguishing Bach from Telemann than they are at distinguishing sparrows from warblers. In fact, for everything that we can distinguish it seems possible that we can be good or bad or better or worse at distinguishing it.

Similar variations will arise in connection with describing and drawing. Some people are more facile than others with language, and there are those who excel with the drawing pen and paint brush. Diversity and conflict of evidence does not arise, however, only in the case of one determining factor. Sometimes two or more factors conflict with each other, and again there is some reason to say that the person has the concept and some to say that he does not have the concept. This is where some determining factors can be seen to be more important than others. An aphasic or a child who does not know a language is still thought to have the concept of red even though he is unable to say that red is a colour. On the other hand, a blind person can say that red is a colour but is unable to pick out red things, and we are disinclined to say that he has the concept of red. Nevertheless, some blind people can say quite a bit about protons'

and there is no doubt that they have the concept of a proton. But it would not be enough to say that a child has the concept of a proton if he could do nothing more than pick out the protons in a model of the atom. The case would be a bit more puzzling if we found a person who knew the definition of a triangle but did not know how to draw one or vice versa.

Nevertheless, we do not have to say that a person either has a concept or does not have a concept. It is more likely that determining whether a person has a concept is like determining whether a person is able to make particular distinctions. Some will exhibit all of the determining factors and others will exhibit none of them. But there are also those in between who can do some of the things and not others, and these people can also be said to be in between concerning whether they have the particular concept or not. Similarly there are stages when a child is acquiring a concept and can neither be said to have the concept nor be said not to have the concept. It is possible that a child could suddenly have the concept, but it is indeed unlikely and certainly not necessary. There are the periods in between when the child has a bit of facility in making certain distinctions but when the facility has not yet developed. It is not, however, that he has a different concept from us, just as the blind man does not have different concepts from the man with sight. It is only that he does not quite or does not completely have our concept.

This view is similar to one indicated by Ryle when he says, 'I suggest that the question "Has he really got the concept or has he got the whole of the concept so and so" is like the question "Has he really learned the art or has he learned the whole art of skating?".'<sup>1</sup> There is not a time

---

1. Ryle, 'Thinking Thoughts and Having Concepts', p.161.

when we suddenly acquire the concept nor is it the kind of thing that we can only either have or not have. There are many stages to acquiring a concept, as Ryle points out, and few of them are definitive with respect to whether one has the concept or does not have it. And in this respect, having a concept is like having an ability.

It should also be clear that there can be confusions about the relevant sense in which a person can do something or not. It is probably true that any normal individual can distinguish between Gemutlichkeit and something else, and perhaps any normal individual with enough training could distinguish a proton from a neutron, but these are not distinctions that are close at hand. We might also say that when the distinction is not close at hand the person cannot make the proper distinctions. Whether someone can or cannot will depend upon the conditions under which one is supposed to be able to make the distinctions. It might therefore be said that a person does not have a concept even though he can make the relevant distinctions. Sometimes whether we have the concept will depend upon how quick we are to make the relevant distinctions.

## ii. Concepts, Language, and Predicates

It is sometimes helpful to look at the case of animals (i.e. excluding human beings), and I think that is true here as well. It is not because animals have things in a much clearer and simpler way nor is it because issues are so hotly disputed in the case of animals. Rather it is because animals are different from people, and yet at the same time many of the concepts which apply to people are extended to animals. By seeing which factors carry over in the extension of the concept, we can get an idea of

which are the more important factors. In connection with this, I think it is significant that we do not speak of animals having, applying, or understanding concepts.<sup>1</sup> Concepts are important only in connection with human beings. This is true in spite of the fact that we do speak of animals distinguishing and picking out things. Sometimes we also speak of an animal understanding but usually not in the sense of understanding language. What this suggests is that being able to speak or at least to understand a language is necessary for our being said to have concepts. This does not mean that in each particular case it is necessary (consider the concept of red), but it does mean that it is necessary in general for us to begin to talk about someone having concepts. It also indicates that speaking and understanding a language is important in a large number of particular cases.

I think the main reason for this importance of language is that concepts are closely tied up with making judgements. All of the determining factors which I have discussed above involve our being able to make judgements. Distinguishing and picking out are dependent upon making judgements about whether the right thing is being distinguished or picked out. We also make judgements about how to draw or represent something. Describing obviously involves the judgement whether one has the right description or not. We cannot have a determining factor without it being possible to say that we have made a judgement. First of all, it is important to see that, as Geach says, '[a]ny reportable act of judgement is apt for

---

1. When I talk about what we say of animals, I do not intend to be responsible to what many psychologists would say. I do this because I think many psychologists are not responsible to what we say.

verbal expression'.<sup>1</sup> This does not mean of course that every act of judgement is or must be expressed verbally. We often make judgements without expressing them verbally, and some who are able to make judgements are not able to express them verbally - for example the aphasic.<sup>2</sup>

Animals without verbal facility also make judgements. They judge how far something is away, that a person is friendly, etc. This shows that making judgements is not a sufficient condition for having concepts. I think the reason for this is that without a language we are not able to make the variety of distinctions and thus the variety of judgements that we can otherwise make. A dog cannot judge that a bone is the largest he has ever had or that his master will take him for a walk three days hence. Neither can a dog distinguish a dictionary from an encyclopedia, nor does he know the difference between a proton and an electron. And when a dog anticipates his food, there is no way to distinguish between his judging that he will soon get food, that the meat will be slopped on the plate again, that it may be steak this time, etc. Certainly the judgements of a dog and of any other animal are limited as are the distinctions that any animal can make. I consider this more of a factual than a logical point here, but it is the factual point in which I am interested. Certainly in the large number of cases where someone has made a distinction or judgement we learn what that distinction or judgement was by his telling us. This is obviously the kind of thing that influenced Geach when he said that '[t]he

1. Geach, Mental Acts, p.11.

2. This example comes from Geach, Mental Acts, p.13.

central and typical applications of the term "having a concept" are those in which a man is master of a bit of linguistic usage'.<sup>1</sup> This is again to give an indication (I do not intend it to be anything more.) of the close relationship between concepts and language.

I think the fact that there is a close relationship explains why Waismann was prepared to say that a concept 'comes into existence only by its incorporation in language',<sup>1</sup> although this seems too extreme if I know what it means. Nevertheless, it also suggests why philosophical investigations of concepts have so often been philosophical investigations of meaning and vice versa. And it is probably the reason why people have talked about the meaning of concepts and about defining concepts.<sup>3</sup> Still it should be clear that such locutions are misguided, and concepts are not linguistic expressions.

Another point should also be clear now. I have pointed out above that concepts have tended to be connected with predicates rather than subjects in spite of the fact that changes have to be made of predicates but not of subjects in the specification of concepts. I think the reason for this is that concepts are closely tied to judgements and in judging we tend to be concerned about the application of a predicate to a subject. A whole subject frequently refers to a particular, although a whole predicate rarely does, but a concept cannot usually be a concept of a particular. Many of our judgements seem to be about particulars being of a certain kind, and

---

1. Geach, Mental Acts, p.13.

2. Waismann, Linguistic Philosophy, pp.227-228.

3. See: Hempel, Concept Formation, p.4.

this is to say that that which is referred to by the subject falls under a certain concept. This is to explain why people have thought that concepts are possible predicates and not why they are possible predicates. The latter view is not one that I would hold.

It should now be clear that the nature of concepts is quite vague. First of all, there is great variation in the importance of the ways of determining whether a person has a concept. Secondly, there is no rule for determining the variation itself, and the exact importance of the ways is often unclear. Thirdly, there is the possibility of conflicts between the ways for determining whether a person has a concept, and this produces a further vagueness. Finally, there is not agreement about the particular cases in relation to the three points above. I have tried to show that having a language is necessary to having concepts in general, but in the case of having particular concepts this is not true. There are a large number of different factors which determine whether we have particular concepts and not all of them are linguistic factors nor are any of them necessary in every case. The only thing that can be said is that there are several factors with varying significance, all of which I have tried to suggest above.

### iii. Concepts Are Not Abilities, Images, or Ideas

I have discussed at some length the factors determining whether someone has a concept, but I should not want anything I have said to suggest that I have found what concepts are. The concepts themselves cannot be identified with the factors which determine whether one has them, even though in some respects having a concept is like having an ability. There

are differences between concepts and abilities as well. Abilities are not the kind of things that are vague or empty, nor do we understand them in anything like the way in which we understand concepts. Moreover, we have abilities to do things but concepts of things. Abilities are like capacities, and I have already shown that they are not the kind of things that can be concepts. Thus, it would be quite wrong to think that a concept could be identified with any set of capacities to distinguish, describe, and/or draw. Nor are distinguishing, describing, and/or drawing concepts. Those are not the kinds of things that we have, and besides that they are episodic which is not true of concepts. We have concepts when we are asleep, but we do not distinguish, describe, or draw when we are asleep.

For the moment we shall have to be satisfied with determining factors rather than some kind of identity, but it is worth looking a bit more closely at these determining factors. We might speak of them as determining factors for other things as well. One's ability to distinguish, describe, and draw will also be important to determining whether or not someone knows the meaning of a word. Of course he will also have to know the word (unlike the case for concepts) if he is to know that it is the meaning of a particular word. This shows how closely concepts and meanings are tied to each other and why we have similar inclinations about whether the blind man knows the meaning of the word 'red' and whether he has the concept of red.

The determining factors are also closely related to those factors which determine whether a person can imagine or conceive that which he is supposed to have a concept of. This is important, and I think we can agree with Price when he says that one way in which concepts are manifested is through

mental images.<sup>1</sup> The relation between drawing and describing on the one hand and imagining and conceiving on the other is neither necessary nor sufficient. One can surely describe a proton without being able to imagine or conceive one. Most could also draw a picture of a chiliagon without being able to imagine one. We can also imagine or conceive something, e.g. a face, and be hard put to draw or describe it. Nevertheless, the relation is close, and if one can imagine a triangle and can wield a pencil it is difficult to imagine that one could not draw a triangle. If one can draw a picture of or describe something in its absence, one is also quite likely to be able to imagine or conceive that thing. Of course, there is a rather complex set of criteria for imagining and conceiving, but that is not immediately relevant to what I am interested in here.

In spite of the affinities between images and concepts, it should be clear that concepts cannot be identified with images. We come to have images and images appear, but we do not come to have concepts nor do concepts appear. Neither are images understood, simplified, learned, or introduced. That we do have images of some things is an indication that we have concepts of these things, but the images are not the concepts. Moreover, there are certainly concepts of a large number of things (e.g. proteins and validity) for which we do not have images.

Ideas and notions also have affinities with concepts, but they as well should not be identified with concepts. I have already pointed out that we only have the ideas of the nature of something and not the idea of of

---

1. Price, Thinking and Experience, pp. 338-339.

something as we have concepts of things. Thus, we have ideas about what something is like but not concepts about what something is like. In this way, ideas are often like beliefs or opinions. It is probably for this reason that we do not speak of boundaries of or names of ideas, although concepts are said to have boundaries and names. I think it is because ideas are like beliefs or opinions that we speak of putting ideas but not concepts into someone's head. And just as we can have many beliefs about any one thing, we can have many ideas about something, but we cannot have many concepts of any one thing. Sometimes our ideas consist of plans or schemes, which is never true of concepts. Some might also say that understanding certain linguistic expressions is a sufficient condition for having a concept, but it is not a sufficient condition for having an idea. We also express ideas but not concepts. Ideas are indeed not the same thing as concepts, even though if we have concepts we are likely to have particular ideas.

Notions are like ideas in taking a variety of different forms. Old-fashioned notions are like beliefs; notions to do things are like plans; and notions of what things are like can be compared with ideas of what things are like. None of these things could be concepts. We do sometimes have notions of things, but usually to say that one has the notion of something is to suggest that he is less definite and clear about that thing than one who can be said to have a concept of it. And sometimes we speak of the notion of something where we do not want to say that there is a concept of that thing. One might speak of the notion of a safe car and yet not speak of the concept of a safe car. The expression 'the notion of a duty' might also be preferable where one wants only to bring together rather

vague ideas about duties. One might be said to have a notion if one has a concept, but notions include many other things and suggest a certain amount of indefiniteness or incompleteness.

#### iv. Concepts and Conceptions

The last suggestion that I shall consider is that concepts are conceptions. We do have conceptions, and among our conceptions are those of a game, of poverty, and of a dodecahedron, all of which we can be said to have concepts of. On the other hand, we also have conceptions of, but not concepts of, a good job well done, of what it is like to be poor, of the conditions under which the Negroes live, and of how he feels. Unlike the case of a concept, the specification of a conception can be of any length. Thus, we can speak of the conception of how long it takes a person to repair the transmission of a Jaguar by himself assuming he is a good mechanic. Just as the noun phrase specifying a conception (unlike that specifying a concept) can begin with a question word (e.g. conception of how he feels), it can also begin with a pronoun (e.g. conception of him), or be in the plural (e.g. conception of Frenchmen). This in turn shows that we can have conceptions of particulars. We can have a conception of his strength, of Hercules, of the size of Australia, and of the White House. On the other hand, we do not seem to have conceptions 'truth', of red, or of colour.

This should be enough to show that there is at least some difference between concepts and conceptions, but more has to be said to see where the difference lies. It is important to realize that we have misconceptions but not misconcepts. There is no such thing as a concept being wrong or

false or mistaken, but conceptions can be wrong or false<sup>1</sup> or mistaken. This seems to come from the fact that two people can conceive exactly the same thing differently and thus have different conceptions of the same thing, but when two people have different concepts they are concepts of at least slightly different things. Thus, two people might have the same concept of a man from Mars, i.e. a rational animal which comes from the planet which is next furthest from the sun, but at the same time have different conceptions of a man from Mars. One man may imagine Martians as little green men with pointed ears, and the other man may imagine them as large blue creatures with two pairs of arms and space helmets.

This gives us a good indication of the nature of conceptions, which are closely connected with how we imagine or conceive something. This also gives us some insight into the examples that I mentioned above. Instead of speaking of conceptions, one can speak of conceiving a good job well done differently, not being able to conceive what it is like to be poor, not being able to imagine the conditions under which the Negroes live, and being able to imagine how he feels. This brings out a difference between, for example, the concept of a dodecahedron and the conception of a dodecahedron as well. We might have a concept of a dodecahedron (which could be shown by our being able to say that it is a solid having twelve plane faces) and yet not have a conception of a dodecahedron meaning that we could not conceive or imagine a dodecahedron. Since we can also conceive or imagine particulars and situations with descriptions of any length, we

---

1. Cf. Wittgenstein, Philosophical Investigations, § 20.

can have conceptions of such things. We can also misconceive or imagine wrongly or falsely, which gives sense to misconceptions and false conceptions.

It might be thought that conceptions are like beliefs. This view is given weight by the fact that we speak of the conception of Africans as primitives in modern dress. It also makes sense to speak of a person having a conception of flowers as reincarnations of people. Again this is like a belief, and we might say of that person that he thinks flowers are reincarnations of people. It is important to notice, however, that we can also speak of someone imagining or conceiving Africans as primitives and flowers as reincarnations. It is probably true that whenever we have a conception of something we have a belief about it, but we also have beliefs which are not accompanied by any conceptions. Thus, to speak of conceptions as beliefs is to ignore the important difference between the concept of a dodecahedron and the conception of a dodecahedron. It also is to ignore the fact that we might have no conception of a million pounds or of the suffering of Jews in Germany. I would suggest that to the extent to which our notion of a conception is at all clear it is closer to imagining and conceiving than it is to believing. In any case, having a conception is indeed different from having a concept. Having a concept may sometimes be manifested in imagining or conceiving, but it does not necessarily involve imagining or conceiving as in the case of conceptions.

My conclusion from what I have said above is that there is nothing with which concepts can be identified. I have already shown that concepts cannot be identified with their determining factors, i.e. the capacities that we have. And none of the other things that we have can be considered concepts either. There is no other term which fits all of the expressions

we have found filling the blank in '\_\_\_\_\_ concepts'.

v. Concepts and Distinctions in a Language

What I have said so far applies primarily to individuals' having concepts. I have given the determining factors for a particular person having a concept, and it should be obvious how this can be extended to groups of people. If each of the members of a group has a particular concept, then we can say of all of them that they have that concept. They have it in the distributive sense, however, in which they can be said to have the same opinion rather than in a collective sense in which they might all be said to have an agreement among themselves. One might even be able to extend the notions here to say that a group of people have a concept collectively. They could be said to have the concept if together they exhibit the determining factors. One difference here would be that the statement would not be falsified by there being one person without the concept. Moreover, the determining factors would not apply in the same way as they do in the case of individuals. Nevertheless, we could speak of a group of people having a concept if a large number of its members had the concept.

Some people have spoken of languages having concepts or of there being concepts in a language. It should be palpably clear, however, that the determining factors do not and could not apply to languages. Languages are certainly not the kind of thing that describes or draws. We use languages to describe, but as I have tried to show earlier languages are composed of words (among other things) and not sentences, while it is sentences in which descriptions are given. Certainly languages do not draw or imagine things. Sometimes, however, languages are said to make

distinctions or it is said that there are distinctions in languages.<sup>1</sup> Obviously, if languages make distinctions it is in a way much different from people. Languages do not move around blocks or choose objects, which are ways of determining whether people make distinctions. I think languages are said to make distinctions when there are names or words in the languages for the things being distinguished, but this is at best metaphorical. The distinctions are not in the language nor are they made by the language. It is only that people often make or could easily make the distinctions by saying in the language what they are. I think this is the reason that it is sometimes said that there are concepts in a language. Languages are said to have different concepts when they differ in the names or words that they have. It should be clear, however, that speakers of languages with different concepts will not necessarily have different concepts. They can still distinguish, describe, and draw in the same way. Moreover, it is important to point out that such a variation of concepts is no different from a variation of distinctions in the language, i.e. a variation of words or names.

It is sometimes suggested, however, that speakers of different languages will make different distinctions because of distinctions that are made in the language. Of course, in some languages it is difficult not to make certain distinctions. If we say that someone is a sister or that he is a brother, we necessarily make the distinction between a male sibling and a female sibling. Nevertheless, we do not have to make in our speech the

---

1. E.g. Cavell, Stanley, 'Must We Mean What We Say', Inquiry, 3 (1958), p.200. A similar view is suggested by Whorf when he talks about the patterns in our language. Cf. Whorf, Language, Thought, and Reality, p.213.

distinction which is in our language. We can say that a person has a brother or a sister although we do not know which. On the other hand, we can speak of a friend without revealing the friend's sex, while the German's use either 'Freund' or 'Freundin'. Because we have only the one word where the Germans have two does not mean that we cannot make the distinction between male and female acquaintances. Speakers of a language are not limited by the words of the language in the distinctions that they can make. One can give descriptions to make distinctions even though there are not names for the things being distinguished. Just because we do not have the words for a distinction does not mean that we cannot make the distinction. The Welsh have a word for a colour which includes both blue and green, but they can distinguish blue and green as well as speakers of English. Independent of the language that is being spoken, speakers of all languages seem to be able to make the same distinctions if they want to.

It is sometimes said that speakers of different languages divide up the world or the universe in different ways because of the language they speak. Thus, Hampshire says that a language not only does but 'must provide a means of differentiating, of dividing, reality into the pieces and segments which are to be constant subjects of reference.'<sup>1</sup> This sort of view is widespread in Whorf, who often speaks of the flux (which is believed to be common to all) being divided and dissected. Wittgenstein, in what seems

---

1. Hampshire, Thought and Action, p.11. Hampshire speaks of 'rules that single out elements in reality' (p.12), but it is difficult to imagine what these rules would be.

to be a similar vein, is reported as having said in his lectures that the 'concepts we have show what selection of phenomena we make'.<sup>1</sup>

I have already considered this view to some extent in my discussion of Whorf. There I tried to suggest that having a language does not involve dividing up the world, segmenting it, cutting it up, or anything of the kind. We do not butcher the world in either having a language or speaking a language. The world remains just the same for speakers of all languages, and it looks the same too. As I have said above, we all see the same rainbow. To have a language or to speak a language is not to change the world, in spite of what some might say about the power of words. Nor is speaking like dividing reality into a picture puzzle. I think some have thought of dividing up the world as something parallel to dividing up a sentence. There is a sense in which a sentence is applied to the world and also a sense in which a sentence is divided into words, but this is not a reason to say that we divide up the world. If dividing the world were taking account of shores and surfaces, then we all do that. If it were drawing lines through a three-dimensional space in any direction that we happen to choose with no criteria, then none of us do that. We divide and cut up objects, but reality, the world, and the universe are not objects. They are not the kind of thing to which we can take a knife. I doubt even that there is any variation in what people take to be the objects in the world. There may be disagreements about which objects are important, but I do not think there is any disagreement about what things are objects. I can think of a couple of questionable cases such as Siamese twins, but these do not seem important for a relativity thesis of language.

---

1. Geach's notes of Wittgenstein's lectures, 1946-47, p.101. (Emphasis in the notes.)

Another view that is often suggested is that languages differ according to the interests of the speakers of the languages. The Kwakiutl are supposed to make more distinctions about things concerning the sea because of their special interest in the sea. This is misleading, however. It may be true that they talk about distinctions concerning the sea more than people in most societies do, but this does not mean that they can make more distinctions than people in other societies or even necessarily that they have occasion to make more distinctions. The perceptive powers of others are just as good, although occasionally they may suffer (if that is the word) from lack of attention. But lack of attention is not the kind of thing that limits our powers of thought. We can certainly pay attention when we want to, and then we can make any distinctions that we like as well.

First of all, if the speakers of Kwakiutl do talk about distinctions concerning the sea more and even talk about more distinctions, this is a matter of speech rather than language. It is a matter of what they tend to say rather than the language they have to say things with. Others might make the distinctions even though they do not speak about them very much. In fact one way of finding out the extent of a person's interest in a subject is to see how much he talks about that subject and how much of his own language he knows about it. There are certainly speakers of English who have a special interest in the sea (for various reasons) and who, as would be expected, speak about the sea more than most people. Although this is not something to be formulated into a law, it is natural that people who are interested in a subject would often speak about that subject. And of course sometimes people do not speak about the subject which interests them because of other factors.

Moreover, when people talk a lot about a subject they are likely (but not certain) to find things for which they do not have words, in the sense in which there is not a name or one expression for such a thing. In such a case they are then likely to look for appropriate words in the language that they do not know or to invent new words. In a language which is spoken by members of a complex society, the latter course will rarely be taken. A complex society will usually have members of wide-ranging interests such that the language will be likely to have many words for many different subjects. What happens in some societies is that most people are interested in one specialized area, e.g. the Trobriand Islanders who lived off their gardens. In such a case, most people will talk about that specialized area and know the words for things in that area. But this is more a matter of speech than of a language. It is a comment about what they tend to say, and their speech behaviour will tend to reflect their interests in much the same way their other behaviour will.

Sometimes, however, the speakers of a language will need new words for things in a particular area. But it should be clear from what I have said above in what sense this is a need. The speakers could use other words and each time describe what they are talking about, but of course it is a matter of convenience to have a single word or short expression, which is much less cumbersome. Again it is not a law that most people will do that which is convenient, but that is what one would expect. In any case, it is usually a matter of convenience that we make up new words rather than a matter of need. Necessity never plays this kind of role in language. We could still get along without the new words, but where new words are convenient we are likely to make them up.

The important thing is that we can express in language the distinctions that we want to make, and everyone can make the same distinctions as long as their powers of perception are the same. Describing is dependent upon language, but only because descriptions are made in language, and that is not a dependency which is interesting to us here. At the very least, I hope I have shown enough about distinctions and the nature of concepts to make anyone hesitant about suggesting that concepts are relative to language. Such a view is impossible without saying much more than usual about concepts and in the course of this transgressing the ordinary notion of a concept in crucial ways.

## CHAPTER 11

## WAYS OF THINKING AND CONCEPTUAL SCHEMES

i. Points of View and Ways of Seeing

Not only authors who have been interested in the relativity of languages but also those interested in metaphysics have suggested a distinction between the content of what we think and the way in which we think. A similar distinction is made between what we see and the way we see, and often both distinctions are said to be related to our individual or communal conceptual schemes. Sapir wrote, 'The latent content of all languages is the same - the intuitive science of experience. It is the manifest form that is never twice the same, for this form, which we call linguistic morphology, is nothing more nor less than a collective art of thought'.<sup>1</sup> Shortly afterwards, he says, 'Culture may be defined as what a society does and thinks. Language is a particular how of thought.'<sup>2</sup> In a similar vein Whorf says that revolutionary changes 'have been due not so much to new facts as to new ways of thinking about facts.'<sup>3</sup>

Numerous philosophers have suggested similar distinctions between form and content. In recent work in metaphysics philosophers have tried to emphasise the importance of forms of thought, suggesting that besides the form of the thought there is also the content. John Wisdom has been prominent

1. Sapir, Language, p.218.

2. Ibid., p.218.

3. Whorf, Language, Thought and Reality, p.220.

in making this kind of distinction. In his article on philosophical perplexity, he recommends that we concentrate not on the subject-matter of certain psychological sentences but on the 'peculiar manner in which those sentences work'.<sup>1</sup>

In previous sections, I have considered and rejected the suggestion that a relativity of language or of concepts can affect what we think, i.e. can affect the content of our thoughts. Here a rather different view is being suggested, and that is that it is the way we view or perceive something and the way we think that is affected and not the content. As a characterization of this view, we might adopt Wisdom's mnemonic slogan: 'It's not the stuff, it's the style that stupifies.'<sup>2</sup>

What I want to investigate at this point then is the difference between the stuff and the style in seeing, speaking and thinking. Numerous authors have spoken about the way we see something as opposed to (either explicitly or implicitly) what we see. This is sometimes put in terms of 'a point of view', which in its primary sense is a position from which a person views or sees something. Anyone with a different point of view will have a different view.

Hampshire speaks of our referring to things 'from our own point of view'.<sup>3</sup> In the anthology, The Nature of Metaphysics, there are several references to our view of the world and our changing this view.<sup>4</sup> Whorf speaks of our picture of the universe<sup>5</sup> as well as our world view.<sup>6</sup> These authors surely cannot mean that different individuals have different points of view or

1. Wisdom, John, Philosophy and Psychoanalysis (Oxford: Basil Blackwell, 1957), p.38.

2. Ibid., p.38.

3. Hampshire, Thought and Action, p.86.

4. Cf. Pears, ed., Nature of Metaphysics, pp.4, 20, 39, and 146.

5. Whorf, Language, Thought, and Reality, p.214.

6. Ibid., pp.220 and 221.

different views of the world in the primary sense of the expressions where they concern ordinary visual perception.<sup>1</sup> For one thing, in this sense no one has a point of view or a view if the person or the thing he is viewing moves at all. But the point about a point of view in this primary sense is that we either see the same thing from different positions or we see different things, e.g. fronts and backs. This, however, does not distinguish what we see and the way we see them. The pairs of stuff and style and form and content do not seem to apply to ordinary visual perception. Indeed, I do not think it is useful to speak literally of the way we see something, unless we speak of the position from which we see it in which case we could just as well speak of what we see of it. In any case, the authors I have mentioned would surely want their comments to apply to any two people making observations from the same place in the world and the blind would surely be just as susceptible to points of view as those with sight. This would seem to discount any interpretation of 'a view' or 'a point of view' in terms of ordinary visual perception.

It is worth noting here that Hampshire does often speak of points of view in relation to physical objects, and on these occasions he must be understood in terms of ordinary visual perception. He speaks of perception as always involving observation from changing points of view and of objects being perceived from many different points of view.<sup>2</sup> He then suggests that in a similar way the universe is viewed from our own point of view, but the way in which this is true it is not interesting. At any one time, everything

---

1. Ibid., p.214.

2. Cf. Hampshire, Thought and Action, pp.40-47.

that we see in the universe is from our own point of view, but this could rarely be the reason for disagreements or misunderstandings about views of the world. It is not important that one person's view of a chair (as well as other things in the universe) differs from my view of it.<sup>1</sup> We can still refer, request and relax. What is important is that there is a sense in which the universe or the world is not another object and to this extent cannot be viewed from a point of view. Nevertheless, I think it is this sense to which Hampshire sometimes reverts.

Perhaps there would be some use in taking the expressions in these senses in which they are extended from those applying to ordinary visual perception. We do speak of taking or having the view that such-and-such is the case. In this case, having a view is like having a belief. Having the view that such-and-such is the case is thinking that it is the case. It is not the way we think something, but that we think something.

It is not always clear that this is the interpretation that is meant to be given, but neither is it always clear that there is a clear interpretation that is meant to be given. Of the authors I mention above, Whorf is the only one who even suggests that a view is constituted by holding certain beliefs or accepting certain statements. Thus he speaks of scientists having the same picture of the universe because of a 'unanimity of description'.<sup>2</sup> In the case of Whorf, however, I think this view is due to a candid expression that is inconsistent with other things that he says.

1. This example comes from a series of lecture notes on lectures by Wittgenstein entitled 'Philosophical Psychology', p.51.

2. Whorf, Language, Thought, and Reality, p.214.

In another article (written shortly afterwards) he speaks of our new world view depending upon new ways of thinking about facts rather than new facts.<sup>1</sup>

Others also try to interpret a view of the world as the way we think about or the way we see the world. Hampshire speaks of the way we see the world as 'a result of...our ways of thought and speech'.<sup>2</sup> In the introductory essay of The Nature of Metaphysics, we find it said that we get a change of view from a change in 'our ordinary way of looking at things'.<sup>3</sup> In the same volume, Iris Murdoch speaks of 'a general way of conceiving the universe'.<sup>4</sup>

I have said above that I do not think one can in any useful way speak literally of the way we see something. We may see the way something is, but that is not a way of seeing it. Nevertheless, there are people who have spoken of the way we see things. N.R. Hanson does just this, but it soon becomes clear that for Hanson the way we see something involves nothing more than what we see, even though he sometimes tries to make a distinction between the what and the how.<sup>5</sup> Thus he says that the infant and the layman 'cannot see what the physicist sees; they are blind to what he sees.'<sup>6</sup> Of course, it is not that the layman does not see something which is before his eyes, but that he does not see that something is the

1. Ibid., p.220.

2. Hampshire, Thought and Action, p.39.

3. Pears, ed., Nature of Metaphysics, p.4.

4. Ibid., p.109.

5. See: Hanson, Patterns of Discovery, chapter 1.

6. Ibid., p.17.

case or that one thing is another thing. To take an example from T.S. Kuhn, in a perfectly straightforward sense of 'see' the student does not see a picture of a terrain when looking at a contour map.<sup>1</sup> He just does not see that it is a picture of a terrain. In any case, this is not a way of seeing, and to that extent the scientists do not 'see the world...differently.'<sup>2</sup>

Kuhn does think that seeing the world (i.e. things in the world) through inverting lenses is a way of seeing it.<sup>3</sup> We do see the same things, but they appear to be a different way. Nevertheless, this is like seeing the way something is or appears to be which is not a way of seeing. (Incidentally, it should be remarked that I am not suggesting that there is a clear distinction between the way something is and what it is where we are talking about its qualities.) Perhaps seeing something through tinted glasses or in an odd light is a way of seeing it, but then this does not seem to be very helpful in considering the issues before us.

There is also the famous case of the duck-rabbit, which we first see as a duck and then as a rabbit or vice versa.<sup>4</sup> Seeing the figure as a duck rather than as a rabbit might be thought to be a different way of seeing it. But the difference is in what we see - whether it is a picture of a duck or a picture of a rabbit - and not how we see it. Nevertheless, there is also a sense in which we always see the same thing, i.e. the figure, and it is useful to have a different locution to bring out the fact that sometimes we see it as one thing and sometimes as another. Still it should

1. See: Kuhn, Structure of Scientific Revolutions, p.110.

2. Ibid., p.110.

3. Ibid., p.111.

4. Cf. Wittgenstein's discussion of this in his Philosophical Investigations, part II, section xi.

be clear that when we see things in a different way in this sense there is also a sense in which we see different things. Moreover we ask a person what he sees or what he sees it as rather than how he sees or how he sees it.

Similar things can be said about the case of illusions. We might say that we see one line as longer than another, although we usually say that one line looks longer than another. It would be odd to ask how someone sees the top hat or how someone sees the horizontal lines in the Müller-Lyer illusion. What we are interested in is what the person sees -- two lines of different lengths or two of the same length. It is interesting to note that experiments indicate that there is cross-cultural variation in susceptibility to particular kinds of illusions.<sup>1</sup> There is no indication that the variation is due to language or concepts, and the important consideration here is that the variation is always in susceptibility and not in the possibility of seeing the illusion. Further experimentation needs to be done on this subject, but I shall leave that to the psychologists.

Another author who speaks of the way we see things is E.H. Gombrich. He says of a brooch that what matters is 'how it was seen: the attitude, or mental set, which enters into the evocation of the scene at the hunt and tries to imagine with the artist how the hound went in for the kill and how the victim struggled.'<sup>2</sup> It is just this sort of thing to which Gombrich is referring when shortly afterwards he says that the Greek artists approached art 'with a different mental set and therefore saw it with different eyes.'<sup>3</sup>

---

1. Herskovits, M.J., M.H. Segall, and D.J. Campbell, 'Cultural Differences in the Perception of Geometric Illusions', *Science*, 139 (1963):769-771.

2. Gombrich, E.H., Art and Illusion (New York: Bollinger Foundation, 1965), pp.132-133.

3. Ibid., p.133.

One might consider this a way of seeing something to the extent that one sees it in a different context, i.e. with different attitudes and imagining different things. Still the only perceptual difference is in what we notice and not in the way we notice or see. There is only content to our visual sensation and not form. Gombrich could say that the power of expectation 'molds what we see in life'<sup>1</sup> but not the way we see in life. Nevertheless, it might be of interest to consider the 'mental set' we have (i.e. the context) when we see an object, and perhaps in an extended sense this could be a way of seeing. Nevertheless, this does not indicate that there are any limits to what we can see or think (as well as to our attitudes and imaginations) when we see something.

#### ii. Forms of Thought and Ways of Thinking

There are also those who think that there are limits to our thinking as well as to our seeing. This is suggested by some who think there are ways of thinking or forms of thought. Whorf says that 'the forms of a person's thoughts are controlled by inexorable laws of pattern'<sup>2</sup> and that some people have a 'way of thinking' quite unlike ours.<sup>3</sup> Hampshire speaks of the 'unavoidable grammar of our thought' which is a 'limitation on our thought'.<sup>4</sup> Elsewhere he speaks of the 'evolution of our ways of thought' and then of 'the forms of thought'.<sup>5</sup> Later he says there is a limit to the possibility of 'varying the ways in which we think'.<sup>6</sup> Strawson uses the singular and

1. Ibid., p.225.

2. Whorf, Language, Thought, and Reality, p.252.

3. Ibid., p.241.

4. Pears, ed., Nature of Metaphysics, p.25.

5. Hampshire, Thought and Action, p.39.

6. Ibid., p.67.

speaks of the 'general structure of...thinking' and of 'the actual structure of our thought about the world'.<sup>1</sup> He also speaks of 'our whole way of thinking'.<sup>2</sup>

It would seem to make a difference whether we speak of the forms (or structures) of thought or, in the singular, of the form (or structure) of thought. In the latter case we could not be speaking about the form that any one thought could have but instead about a form that all thoughts together would have.<sup>3</sup> Perhaps we could think of this in terms of the connections between thoughts. The same might be said about forms (in the plural) such that there are different kinds of connections between thoughts, but it is not clear that this is what Hampshire does mean and certainly it is not what Whorf means. I shall say more about this in a moment.

First of all it seems important to point out here that although we can speak of forms of thought(s) it does not seem that we can speak of forms of thinking (unless perhaps we mean the product of thinking). The comparable expression about thinking seems to be 'way of thinking' or 'ways of thinking'. And again it seems incorrect to speak of ways of thought. It is not clear, however, what a way of thinking could be. Just as we do not think with ideas or concepts or anything else, it does not seem that in any straightforward sense we think in some manner or way. We ask a person what he was thinking at a particular time and not how he was thinking at that time.

1. Strawson, Individuals, pp.60 and 9.

2. Ibid., p.29.

3. The exception would be where we thought all thoughts have the same form as Wittgenstein did in the Tractatus. It is clear, however, that this is not what Strawson means.

We need know nothing more than what his thoughts about a matter are, and to ask for his thoughts is to ask for content and not for form.

There do seem to be senses, however, in which we do have ways of thinking. We can think of a way of thinking as analogous to a way of saying something or a way of speaking, where we are not considering speech characteristics such as accent and intonation.<sup>1</sup> To say that a person is a male sibling is just another way of saying that he is a brother. It is saying the same thing in different ways, i.e. using different terms.<sup>2</sup> We can also speak of thinking of (or about) something in different terms. We can think about a figure in terms of Euclidean geometry or in terms of a non-Euclidean geometry. In both cases we will be thinking about the same figure and in that sense will be thinking the same thing.

Another sense in which we can think in different ways seems to be the sense in which we think the same thing but with different beliefs, reasons and attitudes accompanying our thought. Someone in the John Birch Society will have a different way of thinking about American foreign policy from that of someone in the Communist Party. They might both think that American policy is aiding socialism in a particular country, while the one person thinks it is a tragedy and the other thinks it is a success. Here, of course, we see that they have different ways of thinking about the same thing when we see that they have different thoughts about the same thing - differences in what they think. One thinks that socialism leads to destruction the other

---

1. Cf. Whorf, Language, Thought and Reality, p.220; Hampshire, Thought and Action, p.39; and Maurice Charlesworth, 'Metaphysics as Conceptual Revision', Philosophical Quarterly, 16 (1966), p.315.

2. It is not clear that saying the same thing in a different language is a different way of saying it.

thinks it leads to a new life, and they would say of each other that they have different ways of thinking about such matters. One way of saying this is to say that the other person's thinking is prejudiced and doctrinaire.

If people have different ways of thinking about something in this second sense, then they will naturally or even logically think different things about related matters. Since people who have different ways of thinking in this sense will have some difference in what they think, then other differences in related matters will naturally or logically follow. The situation is similar in having different views or points of view. As I suggested above, to have different views about something is to have a difference in what one believes or thinks. When this difference is an important one and leads to other differences either naturally or logically, we could speak of a difference in points of view. In such a case, we could also be said to see things in a different way. That is, we look at things with a different set of beliefs such that we have different beliefs about what we see.

What I have suggested about this second sense of 'a way of thinking' is that there might be different connections for us between that about which we agree and other beliefs or thoughts. People who have different ways of thinking will disagree about what follows from the same proposition, probably because of other differences in what they think. This can then be compared to what I said above about forms of thought. When people are said to have different forms of thought, they will differ about the connection between thoughts. Usually this will be because of another difference in what they think. Nevertheless, I suppose it is logically possible that two

people could think exactly the same things but disagree about the connection between the things that they think, and this shows us that it is the connection which interests us. The only difference would be in what we think follows from what. This, of course, is to have a difference in what we think, but it also gives sense to having a difference in the way we think. This is also what we are interested in when we teach a person how to think, i.e. to think clearly and logically.

Sometimes the difference in the way we think in the second sense involves a difference in the way we think in the first sense, i.e. thinking about things in different terms. We may think the same thing in different terms and have different related thoughts because of these different terms. Or sometimes people speak of thinking about things in terms of different concepts.

### iii. Changing Concepts and the Effects

An important reason for discussing concepts in the first place was to see what this could reveal about the relativity of thought between different people. I have tried to show that there is no difference in what we think, but some say that people think about the world in different ways if the languages they speak have different concepts or if they (the speakers) have different concepts. I shall now turn to this suggestion.

One thing that is thought to affect the way we think is the lack of a concept either by a language or by a speaker. In the case of a language, the lack of a concept, as I have tried to show above, amounts to nothing more than the lack of a word or name. This tells us virtually nothing about whether a speaker has the relevant concept or not, but what we are

interested in is the effect upon speakers of the lack of a concept. (The extent to which the lack of a word in a language interests us I have discussed elsewhere.) That a speaker lacks a concept is determined by some of the considerations which I discussed above concerning what it is to have a concept. A person lacks a concept or does not have a concept if he is unable to distinguish, describe, or draw that which it is a concept of. Things parallel to what has been said about having a concept need to be kept in mind here about how close these are to being criteria, whether the 'or' is inclusive or exclusive, and the nature of borderline cases.

It is then suggested that without this concept we are unable to think about the world in certain ways. Unfortunately, this thesis is never put forward very clearly. It would certainly be wrong to hold the view that we think with concepts and that lacking particular concepts we are lacking the means to think in particular ways or to think particular thoughts. We do not think with concepts, nor do we think with anything else.<sup>1</sup> We do not use instruments in our thinking.

Occasionally we speak of using concepts, however, and if we were to lack a concept we would not be able to use that concept. For example, we might say that a scientist uses the concept of a metre rather than that of a foot in measuring. This would mean that he measures in terms of metres or that he measures things by the metric scale. Rather than using a foot rule he uses a metre stick, and in using a metre stick he is using the concept of a metre. But using a measuring rod is not like using a concept, in spite

---

1. Grice, Pears, and Strawson speak of thinking with a set of ideas but this is at best a vague metaphor. Cf. Pears, ed., Nature of Metaphysics, p.21.

of what people have said about applying concepts to the world.<sup>1</sup> They are uses in different senses of different kinds of things. There is not something which we call a concept and put up against things in the world in the way that we put a measuring rod up against things in the world. The concept is used in that we make distinctions according to the concept and in terms of the concept. Of course a concept is not the kind of thing that has terms, but there are terms in language by which we determine the concept and in which we express the relevant distinctions that we make.

We might also speak of using the concepts of Einsteinian physics rather than those of Newtonian physics, but this seems to me to be no more than a metaphorical way of saying that we use the terms and expressions of Einsteinian physics rather than those of Newtonian physics. It suggests, for example, that we speak of a space which is curved and a simultaneity that is determined in different ways. Of course when we make this kind of change such that we use different terms and expressions (including principles and propositions), we shall also make different distinctions, descriptions, and drawings. In such cases, we can be said to be using different concepts. A difference of terms is not a necessary condition for a difference of concepts, however. One can make the different distinctions, descriptions, and drawings without having the appropriate terms, and these are the determining factors for one's having the concept. If we did not have the concept, however, we would not be able to make the distinctions, descriptions, and drawings. But this is a logical point rather than a point about the means (instruments) for these things. Not having the concept amounts to

---

1. Cf. Pears, ed., Nature of Metaphysics, p.40 for the similar suggestion that ideas are projected on the world.

not being able to make certain distinctions, descriptions, and drawings. It is not that our inability is a result of not having the concept. The lack of a concept does not affect the way we think, but is rather a partial description of the way we think or the way we can think. If we do not have the concept of a metre, we cannot measure (intentionally) according to the metric system; but this is different from not having a metre stick.

If we have both the concept of a metre and the concept of a foot, then we can measure according to both scales or either scale. (Again this is what it means to have those concepts.) We might then sometimes use the concept of a metre and sometimes the concept of a foot, although this seems to be a roundabout way of saying that we might sometimes use a metre stick and sometimes a foot rule. To talk about using different concepts seems to be nothing more than to talk about using different distinctions, descriptions, and drawings. In such cases, where we do use different concepts we can also decide which concept to use. In other words, we can decide whether we want to measure in terms of metres or in terms of feet, which amounts to the same as deciding which measuring rod we shall use. Of course, we will get different measurements depending upon which measuring rod we use.<sup>1</sup>

Another thing that we can do is to use a completely different measuring system - one that has never been used before. For every length there is we could give that a name and use it as our unit of measure. This would

---

1. There is a sense in which the measurements are the same, i.e. the sense in which they are equivalent.

be to change our units of measure and thus our concepts for units of measure as well. But this is a change of our use of concepts rather than a change of our concepts. What this means is that the change is constituted by our using different units of measure as well as concepts for units of measure. If we once measured in feet and then begin to measure in metres, we have not lost our concept of a foot. We still have the concept of a foot, but we just do not use it. We do not make those distinctions even though we still could. There is no change in the concepts that we have just as there is no change in the measuring rods that we have. The difference is only one of use or application.

The place where one is probably most likely to speak of a change of concepts is in science where there are technical changes of scientific language. Scientists frequently talk about concepts changing. The scientific concepts of space, time, mass, cause, etc. are said to have changed during the development of science. Philosophers also talk about this change of concepts in science as well as elsewhere. Wittgenstein occasionally indicated in his lectures that he thought there are changes of concepts.<sup>1</sup> Strawson also thinks that '[c]ertainly concepts do change, and not only, though mainly, on the specialist periphery'.<sup>2</sup> Much later in his book, he speaks of conceptual innovations,<sup>3</sup> although it is not clear what this means. It could be an innovation of our concepts (and this is probably what he means considering the other things he says here), but it could also be an

---

1. Cf. Geach's notes of Wittgenstein's lectures, 1946-47, pp.97 and 201.

2. Strawson, Individuals, p.10.

3. Ibid., p.208.

innovation of our conceptions or of our conceptual schemes, both of which I discuss below. Conceptual innovation sounds similar to if not the same as conceptual revision, which is sometimes said to be the main task of metaphysics. Quinton, in a final discussion of a series of lectures on metaphysics, summarizes the preceding lectures as being in agreement that metaphysics is conceptual revision.<sup>1</sup> From my investigation, there seem to be only two previous occasions where the expression 'conceptual revision' is actually used, but there are alternatives such as 'conceptual shift' and the authors often speak of changing our system or our conceptual scheme. Nevertheless, it becomes clear that by 'conceptual revision' and the other expressions they mean a change in a system of concepts rather than a change in concepts, and this is what I discuss below after first discussing 'changes in concepts'.

I have already mentioned one kind of change of concepts, i.e. the change of our concepts of space and simultaneity. In this connection, Hempel speaks of rational reconstructions and the invention of theoretical concepts as the means for providing changes of concepts.<sup>2</sup> The point is that we already had concepts like those of space and simultaneity, but those concepts changed when we turned from Newtonian physics to Einsteinian physics. It is unnecessary here to go through the intricacies of these particular changes, and I have already pointed out that the change is seen in the change of distinctions, descriptions, and drawings.

But the question that arises here is what a change of a concept would involve. One sense of 'change' is such that a change of a concept would

---

1. Pears, ed., Nature of Metaphysics, p.142.

2. Cf. Hempel, Concept Formation, pp.11 and 37.

be the replacement of an old concept by a new one. But as I have said above, it is not that we lose the old concept and gain the new one in its place (if it makes sense to speak of its place). We still have the old concept as well as the new one; we can still make the old distinctions as well as the new ones.

It might be suggested that there is another sense of 'change' that applies here such that what changes retains its identity and only changes its appearance. Of course this terminology does not apply easily to concepts, and I think it is too different to be even analogous. As I have pointed out in my discussion of concepts, a concept gets its identity from its specification. That is, two concepts with different specifications will be different concepts, and there is only one kind of difference here — the distinction between numerical and qualitative difference does not apply in the case of concepts. We sometimes speak of our concept of space which changes slightly but is still our concept of space, but this is only because we have used the word 'space' with a slightly different meaning. It is not that there is a sense in which we still have the same concept. In no sense do we have the same concept of space if we have a new concept of space which is different from an old concept of space. It might be thought that very minute changes do not create a new concept just as very minute changes of an hypothesis are not thought to create a new hypothesis, but then I am inclined to say that the minute changes are not changes in the concept. The important point is that if a concept is different in any way then it is a different concept.

What might be suggested is that a change of a concept involves a change in the use of concepts. A change in the use of concepts certainly makes

sense, as I have tried to show above, and it is also something that can be recommended. But this does not seem to be what could be meant by a change of a concept. A person could change the concepts he uses without changing the concepts he has. Thus, I could begin to measure in metres rather than feet but have had both concepts before and after. My concepts are not any different; it is only the use that is different. It would be misleading to call such a change a change of concepts.

What I think a change of a concept is sometimes supposed to involve is a change in beliefs. Two people might be said to have different concepts of space or of the universe and at the same time understand each other's concepts, such that they could make the same distinctions, descriptions, and drawings. What would then be meant is that they would disagree about what space or the universe is really like. This view is suggested by those who think that the important part of metaphysics is ontology,<sup>1</sup> but I would suggest that the change is not one of concepts but one of conceptions. When I change my mind about what space or the universe is really like, I am changing my conception rather than my concept. This difference might not seem very important at first, but this is just the point where clarity is needed particularly when a change of concepts is said to affect our point of view or the way we think.

I think the conclusion that must be drawn from this discussion of concepts is that anything which might be considered a change of concepts will not necessarily change or limit anything that might be considered a point of

---

1. On this point compare: Pears, ed., Nature of Metaphysics, pp.146-147 and Strawson, Individuals, p.119.

view or a way of thinking. I think people have been misled partly because of a confusion about what a change of concepts is and partly because of a confusion about what a way of thinking is. We still have our old concepts if we want to use them, which is to say that we can still make all the distinctions that we made before. This change might incline us to have different thoughts than we were otherwise inclined to have, and this might be interpreted as our being inclined to a different way of thinking, but we can just as well talk about being inclined to have different thoughts. Furthermore, what I have been discussing here is what we can do and not what our inclinations are.

#### iv. Systems of Concepts and Universes of Discourse

People are sometimes said to think differently if they have different conceptual schemes or systems. This is a view worth pursuing partly because of its prominence. Important to this view is another view that there is a universe of concepts which can be systematized according to what might be called the 'conceptual landscape'.<sup>1</sup> Chomsky speaks of having 'a language-independent characterization of a "system of concepts"',<sup>2</sup> as if one could make sense of giving all the concepts there are or all possible concepts. This view is clearly suggested by the anthropologists who are interested in componential analysis and whose work depends upon there being such a thing as a universe of experience. Their universe of experience is said to have

---

1. See: B.A.O. Williams in Pears, ed., Nature of Metaphysics, p.59.

2. Chomsky, Noam, 'Comments on the APA symposium: The Relevance of Linguistics to Philosophy', December, 1962, p.2.

'a multitude of dimensions' and each area supposedly represents a kind of experience one can have.<sup>1</sup> This is presumably what Whorf calls 'the world of phenomena'<sup>2</sup> which is the set of all possible phenomena. In a similar vein, Schlick spoke of every quality being 'inter-connected with all others by internal relations which determine its place in the system of qualities.'<sup>3</sup> The problem of speaking about a universe of experience or concepts is that it is difficult first to speak of all possible experiences or concepts and secondly to know what more is being said about them. It seems impossible to give a consistent model of a universe of experience with a multitude of dimensions. In any case, if we could portray or characterize a universe of all possible experiences or concepts, there would be no relativity of the experiences or concepts about which we could think. We could then all at least think the same thing.

In an analogous way, a number of authors have spoken of universes of discourse where there can be several universes of discourse.<sup>4</sup> It has never been clear to me what a universe of discourse is, and I doubt that the notion itself is clear. It is never made explicit what kinds of things are included in such universes nor what the principles of inclusion are. Technically, a universe of discourse might be defined as the set of all things which can be the value of some specified variable or variables. The application of this in ordinary discourse is what is difficult. Non-

- 
1. See: Ward H. Goodenough, 'Componential Analysis and the Study of Meaning', Language, 32 (1956): 195-216 and Wallace L. Chafe, 'Meaning in Language', American Anthropologist, 69, 5, 2 (1965): 23-36.
  2. Whorf, Language, Thought, and Reality, p.213.
  3. Schlick, M., Gesammelte Aufsätze (Vienna, 1938), pp.161ff. as quoted in Weismann, Linguistic Philosophy, p.243.
  4. Cf. Goodenough, 'Componential Analysis' and Strawson, Individuals, p.82.

technically, we might speak of a universe of discourse as all those things which we can talk about in a particular discussion. But then what is it to talk about something? And who makes the decision about what we can talk about and how? I might add here that a universe of discourse will probably not be a universe of concepts, although this kind of limitation is logically possible. It will usually be a universe specified by the application of concepts, and concepts themselves will not be outlawed except perhaps in their application. But even this is questionable, because there are no clear, independent principles of exclusion. We cannot exclude the concept without saying what the concept is, and once we say what it is we know what it is.

It is concepts, nevertheless, which interest us here in relation to conceptual schemes or systems. Wittgenstein speaks of defining a concept as being roughly equivalent to finding 'equivalent concepts within some system of concepts'.<sup>1</sup> In the Investigations, he says of 'noticing an aspect' that we 'are interested in the concept and its place among the concepts of experience',<sup>2</sup> as if there were a system of concepts. In a similar vein, von Wright speaks of the philosopher being not so much interested in a single concept as in moving 'in a field of concepts' such that he is 'interested in logical distinctions and connexions between parts of the field'.<sup>3</sup>

---

1. This comes from the notes on Wittgenstein's lectures, 'Philosophical Psychology', p.2. Whether we think concepts are the kind of thing that can be defined is independent of whether there are systems of concepts.

2. Wittgenstein, Philosophical Investigations, p.193.

3. Von Wright, Georg Henrik, The Varieties of Goodness (London: Routledge and Kegan Paul, 1963), p.6. (His emphasis.)

Many others have also spoken of systems of concepts,<sup>1</sup> although it is rarely clear what they mean. First of all, there are the same problems with systems of concepts as there are with universes of discourse, i.e. it is unclear what concepts are included and what the principles of inclusion are. Is it to accept some concepts and deny others as concepts? Furthermore, there are the problems of knowing how the concepts are systematized. Let's consider these problems further.

#### v. The Metaphysics of Conceptual Schemes

In the introductory essay of The Nature of Metaphysics it is said that it is misleading to ask questions about the reality of 'entities corresponding to the fundamental ideas of the system in question.' Instead, we are to raise 'the practical issue of whether or not to embrace and use a given conceptual scheme or framework of ideas.'<sup>2</sup> This seems to me to be a suggestion that the problems of metaphysics (at least those concerning conceptual schemes) should not involve problems of ontology. This is to say that it is not a question of determining which concepts are instantiated or which concepts can have application. It does not involve questions of existence, according to these authors, but instead it involves 'assimilating to one another some things which we customarily distinguish, distinguishing others which we normally assimilate'.<sup>3</sup> This would not seem to be a very significant task. We can make all the assimilations and distinctions we

---

1. Cf. Hempel, Concept Formation, pp.20-23 and 47; Strawson, Individuals, passim; Hampshire, Thought and Action, p.86; and Quinton in Pears, ed., Nature of Metaphysics, pp.142, 144, and 148.

2. Pears, ed., Nature of Metaphysics, p.9. (Emphasis in the original.)

3. Ibid., p.21.

like, but what is the point in it? Such processes certainly do not set any logical limits to what can be said and thought. It might bring about a certain association of ideas, but this is a psychological question that I shall not consider here.

P.F. Strawson and R. Harré have taken quite the opposite view in some of their writings. Strawson begins his Individuals by making certain remarks which are said to be 'about the way we think of the world, [cf. my remarks above on this matter] about our conceptual scheme.' And he adds that a 'more recognisably philosophic, though no clearer, way of expressing them would be to say that our ontology comprises objective particulars.'<sup>1</sup> Obviously for Strawson, metaphysics where it concerns conceptual schemes does involve questions of ontology. According to Strawson, for us to understand our conceptual scheme, we must understand what things are individuals, i.e. what things can be identifyingly referred to.<sup>2</sup> R. Harré agrees with Strawson that metaphysics involves questions of ontology, but he adds a bit more. Harré says that what he calls a 'general conceptual system can be expressed as a tripartite list.

- (1) The list of classes of independent individuals
- (2) The list of classes of properties of these individuals....
- [and] (3) The list of classes of relations between individuals or properties.<sup>3</sup>

---

1. Strawson, Individuals, p.18.

2. On this matter see B.A.O. Williams, 'Mr. Strawson on Individuals', Philosophy, 36 (1961), p.323.

3. Harré, Matter and Method, p.28.

A careful analysis of what Strawson does, however, will show that his view is not so different. Strawson is not only interested in the existence of individuals but also the basicness of individuals (thus the relation between individuals) according to their properties.

There are important questions relating to these matters, but here I think it is enough to notice that nothing has been said about concepts or schemes in either exposition of the nature of metaphysics. Perhaps this is the way it should be, but then it should also be quite clear that the notion of a conceptual scheme is a way of speaking (as one might say) about things that can be said much more straightforwardly. To have a conceptual scheme then, is to think that certain things exist, are basic, etc. This is not a new way to think, but an addition to some of the things that we do think. Other things will logically follow, but the other things will be other things that we shall think and not new ways of thinking.

Perhaps we can now make more sense of the notion of applying a conceptual scheme to the world. Quine speaks of imposing 'upon the world some conceptual scheme'.<sup>1</sup> Hampshire speaks of 'attaching words and thoughts to reality'<sup>2</sup> and of 'the application of the whole grid of thought to reality'.<sup>3</sup> Prima facie it is rather difficult to understand what these expressions could mean. Surely they are metaphorical. As I said above, applying a concept is not like applying a measuring rod, and a fortiori applying a set of concepts is not an application of this kind. Perhaps

---

1. Quine, Willard van Orman, From a Logical Point of View (Cambridge, Mass.: Harvard University Press, 1953), p.78.

2. Hampshire, Thought and Action, pp.30-31.

3. Ibid., pp. 85-86.

Quine and Hampshire are saying nothing more than that we sometimes use a concept or set of concepts in speaking about the world, and then the things that I said above about the use of concepts would apply here. This would just be to say that we tend to make certain distinctions and descriptions in talking about the world, but this sounds much different from imposing a conceptual scheme.

I think a better lead is given by Quinton when he speaks of accepting a system of concepts 'as the finally adequate instrument for description and explanation'.<sup>1</sup> This is unclear in itself, but it suggests the application of a theory or a set of laws to a body of knowledge. This is to say that we will interpret observed facts in terms of a particular theory or set of laws. The laws themselves suggest a particular structure, because there are logical or natural relations between the laws. Moreover, I do not think we are so dependent upon a metaphor when we speak of applying laws. Nevertheless, rather different questions arise here from what we might have originally expected. We do not have the problem of whether we can get out of a particular theory or set of laws. It seems to make sense to say that there are mutually consistent sets of laws which can equally well be used. There is this sense of applying a conceptual scheme, although in this sense we can get out of our conceptual scheme even though there are usually reasons for using the particular theory (conceptual scheme) that we do. It would be misleading to say here that we are limited by our conceptual schemes.

In connection with what Strawson and Harré say, we might speak of

---

1. Fears, ed., Nature of Metaphysics, p.142.

according reality to certain items.<sup>1</sup> In these terms, the application of a conceptual scheme would involve accepting certain things as real or existing. The question then arises as to what extent we are committed and to what extent limited by our list of classes of independent individuals or existing things. Harré suggests that we are not limited to any one particular list, although he points out that a change in the list of individuals is not independent of a change in the list of properties or a change in the list of relations between individuals or properties. As he says, if we choose to drop atoms as our basic individuals 'in favour of electrons, protons, etc. then we must add electro-magnetic properties to our list of fundamental properties'.<sup>2</sup> Harré shows very clearly that there are reasons to make such changes, but at least we are not limited to whatever lists we accept. Perhaps there are commitments, but they do not limit us.

Quine seems to suggest that we are limited to our conceptual scheme. Nevertheless, he argues that the philosopher cannot get 'outside the conceptual scheme that he takes in charge' and then adds: 'He cannot study and revise the fundamental conceptual scheme of science and common sense without having some conceptual scheme, whether the same or another'.<sup>3</sup> It is not clear to me that everyone has a conceptual scheme, but there is no problem if one only has to have some conceptual scheme. This suggests that we can choose whatever conceptual scheme we like and are not limited to the conceptual scheme with which we happen to be working at the moment. At least we can get out of our own conceptual scheme, it seems, any time we want to.

---

1. The authors of the introductory essay of Fears, ed., Nature of Metaphysics, use the expression 'to accord reality' (p.12).

2. Harré, Matter and Method, p.36.

3. Quine, Word and Object, pp.275-276.

On the other hand, Strawson maintains that 'the whole process of reasoning only starts because the scheme is as it is; and we cannot change it even if we would.'<sup>1</sup> For this reason, he says that 'our whole way of talking and thinking' is conditioned.<sup>2</sup> This view seems to be suggested by another view that there are basic particulars which are in some sense primary among particulars. The suggestion seems to be that we have no choice about which particulars are to be considered basic, although his argument appears to have certain weaknesses. Here I am thinking of the criticisms advanced by B.A.O. Williams where he indicates that Strawson has argued in a circle that defeats his intentions.<sup>3</sup>

Strawson, nevertheless, is talking about descriptive metaphysics, and perhaps he would allow that we could do revisionary metaphysics as well. After his comment that we cannot change our scheme, he does say that the revisionary metaphysician could offer an alternative scheme with which we do not have to quarrel but need not follow. This would seem to allow that we could understand the revisionary metaphysics and in this sense are not tied down to our own conceptual scheme. The same could be said about those with other conceptual schemes if there are such people. We can think in the same ways they do, which is to say that we can think the same things they do. Again there is no limit to the things that we can think.

Where the problem would arise is where we could not understand something in their conceptual scheme. But if we can translate everything in their language, there will be no problem. So we must now turn to the nature of translation to see if there might be limits to the intertranslatability of any two languages.

---

1. Strawson, Individuals, p.35.

2. Ibid., p.29.

3. See: Williams, 'Mr. Strawson on Individuals', esp. pp.320-327.

## CHAPTER 12

QUINE'S RADICAL THEORY OF TRANSLATION<sup>1</sup>1. Translation and the Thesis

There is one problem that is now beginning to loom large before us, and that is the problem of translatability. If everything in every language were intertranslatable into something in every other language, then there would be no relativity of languages and consequently no variation of factors that could effect differences of thinking. But this, of course, is to generalize too far. In considering the logical possibilities of a language, we are not interested in translating the redundancy, cacophany, paronomasia, etc. of one language into another. Even if it were possible to translate such things, it would not affect in any way what could be said in either language. What would be significant would be to find that some statements (or sentences of the form 'It is true that....') are not translatable from one language into another. If a sentence could not be translated from one language into a second, then what was said in the first would not be expressible in the second. Giving a translation of what was said is nothing more than expressing in the second language the same proposition that is expressed in the first and indicating the identity. In other words, to translate what was said is to assert something like, 'To say'...'in language X is to assert (ask, etc.) the same as to say '\_\_\_\_\_' in language Y.' Whatever is said must be sayable in both languages and obviously it would be wrong to suggest that what is said is sayable in both languages but not translatable from one to the other.

---

1. Many of my remarks in this chapter have been aided by discussions with and manuscripts by John Delan.

Further, if what was said could not be translated from one particular language into another, then the difference in the languages would show a difference in what could be thought unless some things can be thought but not expressed in the language spoken. However, I have tried to show above that it is inconceivable that we could have a thought which we could not express in our language. This means that if an untranslatability of language can be shown about anything that can be said in one of the languages, then it has thereby been shown that what can be thought is relative to the language(s) one speaks. It would also show (contrary to what has been said above) that what can be said is relative to the language(s) one speaks. Parallel things could be said if the thesis is one of indeterminacy of translation rather than one of untranslatability. Exactly where there is indeterminacy of translation there will be indeterminacy of whether what can be thought is relative to the language(s) one speaks.

ii. Quine's Theses and Their Foundations

So we must now turn to the intertranslatability of languages, and in particular I shall begin with one particular, forceful, and influential attempt to consider whether languages are intertranslatable. I am referring to Quine's discussion of this matter in his book Word and Object.<sup>1</sup> His thesis there is that 'manuals for translating one language into another can be set up in divergent ways, all compatible with the totality of speech dispositions, yet incompatible with one another.' (WO, p.27.)

---

1. Quine, Word and Object (henceforth: WO). See esp. chapter II, 'Translation and Meaning', pp.26-79. An earlier and different version of this chapter appears as 'Meaning and Translation' in Fodor and Katz, eds., The Structure of Language, pp.460-478.

What he is advancing is 'a principle of indeterminacy of translation' such that two manuals can 'diverge in giving, as their respective translations of a sentence of the one language, sentences of the other language which stand to each other in no plausible sort of equivalence however loose.'  
(WO, p.27.)

It seems to me that in the course of arguing for this thesis there are two main points that he wants to make. The first is about 'radical translation, i.e., translation of the language of a hitherto untouched people.' (WO, p.28.) The point is that two linguists without interpreters can both go into a community where one language is spoken and come out with perfectly adequate but mutually incompatible 'jungle-to-English' dictionaries and grammars. Moreover, the incompatibility is said to be unresolved by any of our speech dispositions, which is all the objective data that we have to go on. (Cf. WO, pp.80 and 28.) His second main point involves showing 'how much of language can be made sense of in terms of its stimulus conditions, and what scope this leaves for empirically unconditioned variation in one's conceptual scheme.' (WO, p.26.) To put this in other words, he wants to show how much (what he variously calls) 'empirical content', 'empirical meaning', or 'stimulus meaning' there is in a language as opposed to what is given by what he calls 'analytical hypotheses' or by the rules for the dissection of the sentences of the language. Of course more will have to be said shortly about all of these terms, but the intention here is only to introduce the two main points. And perhaps the two points can be best emphasized and related by quoting Quine: 'To the same degree that the radical translation of sentences is under-determined by the totality of dispositions to verbal behavior, our

own theories and beliefs in general are under-determined by the totality of possible sensory evidence time without end.' (WO, p.78.) The first point involves a principle of the indeterminacy of translation, and the second point involves a distinction between the empirical and non-empirical aspects of our language.

In both cases we must be cautioned about our investigation. In connection with the former point, we must be clear that the reason for indeterminacy of translation is not because of some inadequacy on our part in one of the languages or because of lack of imagination. And in connection with the latter point, we must be extremely careful that no part of the non-empirical aspect of our language creeps into our account of the empirical aspect of our language. We shall see that it will be necessary to return to both of these considerations, but for the moment I shall introduce them only as words of caution and continue my discussion of Quine.

One striking thing about the whole of Quine's discussion of translation and meaning is the absence of any significant examples to bolster his theses. We are not given a single case of incompatible manuals (dictionaries or grammars) that have been considered equally compatible with the speech disposition of the speakers of the languages. Nor are we even given an example of a 'jungle'<sup>1</sup> sentence whose reference is (or even could be) indeterminate in any of the ways that Quine suggests. Considering all the translating that has been and is being done, it is surprising that Quine

---

1. This is Quine's way of indicating a 'language of a hitherto untouched people'. I shall follow him in this practice even though it is inappropriate both descriptively and evaluatively.

has been unable (or unwilling) to find just one example to illustrate (not even to confirm) his comments about translation. Similarly, there is no illustration of the distinction between empirical and non-empirical aspects, although in this case it is not so clear what kind of illustration could be given.

One reason for the absence of examples might be that Quine himself, to the best of my knowledge, has not done linguistics in the field. He does not have his practical experience to draw upon. But this is not a good enough reason, because there are many who have done linguistics in the field and Quine could draw upon their experience. A number of times I have heard it said, however, that according to linguists what Quine has described is not at all what is done in practice. This may be, but the point has not gone unnoticed by Quine. He says, for example, that radical translation 'is not in practice undertaken in its extreme form, since a chain of interpreters of a sort can be recruited of marginal persons across the darkest archipelago.' But he adds that 'the problem is the more nearly approximated the poorer the hints available from interpreters'. (WO, p.28.) This is to suggest, however, that there is usually not occasion to follow the procedures Quine outlines. What about when there is occasion? Quine comments on this in his earlier paper:<sup>1</sup>

The linguist who is serious enough about the jungle language to undertake its definitive dictionary and grammar will not, indeed, proceed quite as we have imagined. He will steep himself in the language, disdainful of English parallels, to the point of speaking it like a native.

---

1. Quine, 'Meaning and Translation' (from Fodor and Katz, eds., The Structure of Language), p.474. There seems to be no reason to believe that he would now disagree with this earlier comment even though it does not appear in his book.

He then adds that such a person will translate as a bilingual but according to the methods that Quine has previously outlined. The difference is that ordinarily linguists will introduce analytical hypotheses at a very early stage and this narrows the possibility of translations later on. (Cf. WO, pp.74-75.) Quine is not criticizing the linguist for this early introduction of analytical hypotheses; he is only trying to show what is involved. Because of this introduction of analytical hypotheses, the situation is confused in practical linguistics and we are without clear examples.

Quine further points out 'an obstacle to offering an actual example of two...rival systems of analytical hypotheses.' That obstacle is that

Known languages are known through unique systems of analytical hypotheses established in tradition or painfully arrived at by unique skilled linguists. To devise a contrasting system would require an entire duplicate enterprise of translation, unaided even by the usual hints from interpreters. (WO, p.72.)

Such duplicate enterprises are rarely entered upon, and thus we are left without a source for examples.

Nevertheless, I do not think Quine has given us reason enough for the striking lack of examples. His point is one about all languages and the 'nature of possible data and methods'. (WO, p.72.) Even if Frisian and English have cognate word forms and Hungarian and English have a shared culture (Cf. WO, p.28), the principle of indeterminacy of translation should still apply. It is clear that Quine meant it to be generalizable in just this way. And yet there are no examples. Of course all that can be said at this point is that this is surprising. There is still the philosophical investigation to be made.

First, it is important to be clear about Quine's presuppositions and

even predilections which guide his considerations. It is obvious that he is oriented toward a behaviouristic study of language. He claims that his concern is with 'language as the complex of present dispositions to verbal behavior'. (WO, p.27.) This seems to influence him in holding that

The recovery of a man's current language from his currently observed responses is the task of the linguist who, unaided by an interpreter, is out to penetrate and translate a language hitherto unknown. All the objective data he has to go on are the forces that he sees impinging on the native's surfaces and the observable behavior, vocal and otherwise, of the native. (WO, p.28.)

All of this is tied in with his belief that he states earlier that '[a]ny realistic theory of evidence must be inseparable from the psychology of stimulus and response, applied to sentences.' (WO, p.17.) These and other comments make it clear that he is in substantial agreement with B.F. Skinner not only on the acquisition of language but also on verbal behaviour itself. (Cf. WO, p.82.) I think Noam Chomsky has given a very effective reply to Skinner,<sup>1</sup> and unfortunately Quine does not make it clear where he agrees with Skinner and thus where Chomsky's remarks would be relevant. In any case, it seems incumbent on Quine to tell us more about what he thinks the relation between a study of language and the psychology of stimulus and response should be as well as how he saves a behaviouristic study from the far-reaching objections of Chomsky. I think some of these objections will be seen more clearly when I consider some of the particular issues in Quine's discussion. We shall also see whether it is enough to consider language merely 'as the complex of present dispositions to verbal behavior'. I think we shall find that Quine is not as behaviouristic as he would like.

---

1. Chomsky, Noam, 'A Review of B.F. Skinner's Verbal Behavior', Language, 35 (1959): 26-58. This has been reprinted in Fodor and Katz, eds., The Structure of Language, pp.547-578.

### iii. The Situation in Radical Translation

Let us return to the situation he is imagining for radical translation. The purely hypothetical situation is one of linguist going to a community where they speak a language which has never been heard by anyone outside the community. The linguist is given the task of translating the language of the community into his known language. Quine suggests that '[t]he utterances first and most surely translated in such a case are ones keyed to present events [Is his speaking of events perhaps imposing his conceptual scheme on the language or people of the community?] that are conspicuous to the linguist and his informant. A rabbit scurries by, the native says "Gavagai", and the linguist notes down the sentence "Rabbit" (or "Lo, a rabbit") as tentative translation, subject to testing in further cases.' (WO, p.29.) The linguist can translate the sentence 'Gavagai' by the sentence 'Rabbit'<sup>1</sup> if he can accumulate inductive evidence to support a general law roughly to the effect that 'the native will assent to "Gavagai?" under just those stimulations under which we, if asked, would assent to "Rabbit?"; and correspondingly for dissent.' (WO, p.30.) This, of course, means that the linguist must know when the native is assenting or dissenting. Where there is agreement in the stimulations that would prompt assent and dissent, there will be agreement in what Quine calls stimulus meaning.

Quine then distinguishes between occasion sentences and standing sentences. Both can be prompted by a stimulation, but an occasion sentence must be prompted by current stimulation on each occasion it is presented. Standing sentences, on the other hand, command assent or dissent notwithstanding the current stimulation. There are also observation sentences, which are those '[o]ccasion sentences whose stimulus meanings vary none under the

---

1. In quoting a sentence, Quine does not give the punctuation if it is a period. This means that the only indication that he is quoting a sentence is the capitalization of the first letter. I think this practice is unfortunate, but I shall follow it here to avoid further confusion.

influence of collateral information'. (WO, p.42.) This should now be enough to give us a general idea of what is involved when Quine's linguist radically translates one sentence into another. For the present, I shall defer a discussion of words. We have enough problems to deal with now.

The situation imagined begins with a linguist going to a community where the language spoken has never been heard by anyone outside the community. This means that the people in the community have never even seen someone from outside the community (unless on that occasion they were completely silent). What would the reaction of such people be to someone who probably looks quite different from them, wears strange apparel, makes strange sounds that are not understandable, and does not understand what they say? It is not easy to predict what the reaction would be, but I certainly would not predict that they would begin by uttering one-word sentences on the appropriate occasions. Quine seems to suggest that the native would immediately understand that the man is a linguist or at least wants to learn the language and would know exactly how this is to be done with an uncomprehending adult. The mere presence of the linguist might have unexpected repercussions or effects such as a change to a special, impersonal language.

I suspect that Quine's ideal is that of an invisible linguist who will merely listen and take note of what is said. It is clear (and Quine realizes it) that this ideal cannot be met, because the linguist would not be able to get the information he needs. (This should become clearer below.) The alternative is that the linguist interact with his 'informant', but then we have to reckon with what the reaction of the informant might be.<sup>1</sup>

---

1. See: Phillips, Herbert P., 'Problems of Translation and Meaning in Field Work', *Human Organization*, 18(1959-60): 184-192 for an indication of some of the problems that might arise between a linguist, an interpreter, and an informant.

Quine has made certain hypotheses about the reaction, but they are divorced from any kind of evidence and might involve certain presuppositions that are unjustified at this point. Perhaps there are no presuppositions, but then this is something about which Quine will have to assure us.

And of course just the opposite is true when we read that '[i]n practice, of course, the natural expectation that the natives will have a brief expression for 'Rabbit' counts overwhelmingly. The linguist hears 'Cavagai' once, in a situation where a rabbit seems to be the object of concern.' (WO, p.40.) Do we expect them to be interested in rabbits as individual objects rather than detached rabbit parts or rabbithood? He has told us earlier that 'it is stimulations that must be made to match, not animals.' (WO, p.31.) And he tells us in the later section that the linguist will be 'always in readiness to discover through some unsought experience that a revision is in order.' (WO, p.40.) Nevertheless, can the linguist afford to have the kind of expectations (natural or not) that Quine mentions? Is there not a danger that extraneous material will be brought in if we are not careful? We must remember this possibility.

#### iv. Some Linguistic Problems

As an incidental remark, Quine adds that he will 'ignore phonematic analysis, early though it would come in our field linguist's enterprise; for it does not affect the philosophical point I want to make.' (WO, pp.28-29.) Again we must be cautioned. As we shall see below, part of his philosophical point concerns the dividing of an utterance into its proper words or terms. He himself says that he is interested in the 'anatomy of

sentences' (WO, pp.53-54) as inscrutable, and then later points out that 'the linguist imposes a technical segmentation upon the norms to implement his business of specifying the lot.' (WO, p.89.) This imposition is presumably at the phonemic level, but unfortunately the particular phonemic segmentations that are made determine in certain ways which morphemic segmentations can be made. Phonemic and morphemic analyses are interdependent and are usually treated so.<sup>1</sup> This means that the phonemic interpretation that we give to a language could determine the analysis of utterances in the language into words. There is no way of getting around this possibility either. A phonemic interpretation has to be made in order to be certain that one is considering the same or a different utterance.

To speak of utterances is just to raise another linguistic point that clouds Quine's ideal. Quine does not often speak of utterances, but he seems to expect the native to make certain responses and interprets these responses in a way that is suspect. It is not always clear whether something is an utterance of a language,<sup>2</sup> but it is even less clear whether something is a complete utterance or a sentence of a language. What Quine imagines is that the linguist's informant will utter one-word sentences. First of all, it is not at all clear that the utterances Quine is imagining are complete utterances or sentences. Perhaps he is comparing them to the utterances of children where '[a] common noun like "shoe," for example...is used by the child imperatively to demand that his shoes be given him, or to

---

1. For a careful consideration of this point see: Harris, Zellig S., Structural Linguistics (Chicago: Univ. of Chicago Press, 1951).

2. On this point, see : Harris, Structural Linguistics, p.158n.

announce that he has just taken them off, or that they are lying near; or, again, to call attention to the fact that he has on a new pair, or that he has got them muddy, etc.<sup>1</sup> We could speak of the child meaning something different each time, but it would be forcing the matter to suggest that that utterance (i.e. the one used on each occasion) was a complete utterance (or sentence) with a particular meaning. But this is what Quine would have to say if he interprets the native's "sentences" in the way I have just suggested he does.

Quine sometimes indicates that there will be an element of surprise in some of the situations he is imagining. This might lead us to believe that the "sentences" could be compared to exclamations like 'Fire!' or 'A rabbit!'. Most linguists seem to consider such utterances complete utterances or sentences. I have my doubts about this partly because it is not obvious what is deleted as it is in the case where there are imperatives. Is the person saying 'There is a fire there!', 'Look out for the fire!', or what? This might not be important usually, but it does seem important for Quine, who wants to determine the "meaning" of sentences. And Quine does not help us by his examples from English. A person would not say 'Rabbit' (unless he were referring to a food at dinner), and I would be shocked to hear anyone say 'Lo, a rabbit'. I suspect that Quine does not use the article in the first (his most common) example because he does not want to prejudge the issue of whether we are talking about rabbit individuals,

---

1. De Laguna, Grace Andrus, Speech: Its Function and Development (Bloomington, Indiana: Indiana Univ. Press, 1963), p.89. The reader will find an interesting discussion in this book of what de Laguna calls 'sentence-words'.

rabbithood, or whatever. But this does not save him from the fact that he has not given us a legitimate sentence as a translation.

If we were trying to teach our language to someone with whom we had no common language, it is quite likely that we would utter things like 'rabbit' and thus try to teach him some of the basic terms. There would be nothing wrong with this except that we would then be teaching terms rather than (as Quine assumed) sentences. Perhaps similar problems would arise here. But then Quine's philosophical point would have to be amended if this were the interpretation given of the situation imagined.

Nevertheless, the more serious problem is that of giving any interpretation as to the nature of the utterances. How are we to know what an informant from 'a hitherto untouched people' would do? To suggest any of the interpretations above would be to impose our own expectations on the informant and his language. This is one more place where perhaps we are bringing in more than we should.

Still other linguistic problems arise at this point, and Quine shows that he is somewhat aware of them. It is not enough just to observe what the natives happen to say. As Fodor and Katz have pointed out, '[t]he striking fact about the use of language is the absence of repetition - almost every sentence uttered is uttered for the first time...It is exceedingly unlikely that even a single repetition of a sentence of reasonable length will be encountered.'<sup>1</sup> Perhaps this is a bit inaccurate, but it clearly applies to some sentences. Quine suggests that eternal sentences like 'Copper oxide is green.' may be uttered only once in a person's lifetime, while occasion

---

1. Katz and Fodor, 'The Structure of a Semantic Theory' in Fodor and Katz, eds., The Structure of Language, p.482. Jacobson has claimed in a lecture that there are repetitions even in this article.

sentences like 'There was copper in it.' are likely to be repeated again and again. (Cf. WO, p.12.) Nevertheless, we cannot expect any one sentence to be repeated often enough to establish any reasonable correlation between the sentence and the situations in which it is uttered. Some means of providing for repetition needs to be found. An obvious solution would seem to be for the linguist to ask the informant about sentences. This is done 'by taking the initiative and querying combinations of native sentences and stimulus situations so as to narrow down his guesses to his eventual satisfaction.' (WO, p.29.)

Quine gives another reason for the linguist's queries, and that is that some sentences such as 'Animal', 'White', and 'Rabbit' have references in common and yet the particular situations under which they are volunteered are mutually exclusive. (Cf. WO, p.29.) Quine then suggests that there is no way (other than querying) of knowing whether the native would have assented to one when he volunteered the other. Of course, one answer is that we could speak of a situation as 'a universal, a repeatable event form' as Quine does later on. (WO, p.34.) He would then not have to worry about particular situations. But he does not do that in this earlier section. Another answer is that there might be other ways of knowing what would have happened. He might then be able to establish certain uniformities and know to what the native would have assented. Neither of these answers are suggested by Quine at this point. There is another question that arises even about the problem itself, however. Quine surely cannot mean that 'Animal', 'White', and 'Rabbit' have references in common. They have no reasonable interpretation in English such that they refer to the same thing, and we do not know what the references are in the native language

of the corresponding utterances. I suppose Quine means that all three can be uttered in exactly the same situation, but there are very few utterances outside contradictory ones that cannot be uttered in exactly the same situation. So there is nothing peculiar about these particular sentences.

In any case, we now have a situation where the linguist is querying the native 'in each of various stimulatory situations, and noting each time whether the native assents, dissents, or neither.' (WO, p.29.) The problem of course, as Quine recognizes, is how the linguist is 'to recognize native assent and dissent when he sees or hears them'. (WO, p.29.) Quine's answer is that he must 'guess from observation and then see how well his guesses work.' (WO, p.29.) The problem of course is what observation? Quine suggests that we get two responses to something like 'Cavagai?' such that we know they correspond to 'Yes' and 'No' but without knowing which corresponds to which. That would be fine if we could do it, but there is no assurance that we can. What if we came up with the two responses 'Uh huh' and 'Quite' or 'Not at all' and 'Wrong'? And what do we do with responses like 'Probably' or 'Perhaps'? After all, at least in English, it is not at all unusual for someone to respond by something other than 'Yes' or 'No'.

Suppose, however, that we do get as far as knowing 'Evet' and 'Yok', to use Quine's examples, without knowing which is 'Yes' and which is 'No'. Quine gives us two methods of determining the exact correspondence. First, we can echo the native's remarks, and secondly we can see which response to the native's remarks 'is the more serene in its effect'. (WO, p.29.) This seems to depend upon an hypothesis that all human beings are serene in agreement but not so in disagreement. Perhaps the hypothesis is true, but

Quine has not given us reason to think it anything more than an hypothesis. More importantly, he seems to make the "meaning" of 'Evet' and 'Yok' depend upon the "meaning" of utterances like 'Gavagai'. Later he speaks of comparing 'the occasion sentences "Yes", "Uh huh", and "Quite" for stimulus synonymy, though the stimulations that enter into the stimulus meanings of these sentences are purely verbal in their relevant portions.' (WO, p.48, my emphasis.) I think that the status of 'Yes', etc. as sentences is no different from that of 'Rabbit', etc.; that is, I do not think they are sentences at all. But if they are to be called occasion sentences, their "meanings", stimulus or otherwise, must be determined in the requisite manner. Does that mean that we must get assent and dissent to them? This surely could not be allowed without entering into a vicious circle. But neither could we make certain that one was used only when another occasion sentence, e.g. 'Gavagai', was used with the proper accompanying stimulations. In order to determine what the proper stimulations are we must first determine what constitutes assent and dissent. This introduces us to another vicious circle. These circles may not appear so serious. As Quine says: 'However inconclusive these methods, they generate a working hypothesis. If extraordinary difficulties attend all his subsequent steps, the linguist may decide to discard that hypothesis and guess again.' (WO, p.30.) But this is exactly what is serious. What right does the linguist have to introduce hypotheses at this stage of his work? The consequences could be drastic if these were analytical hypotheses.<sup>1</sup>

---

1. For a further discussion on this point, see my remarks below on analytical hypotheses.

## V. Quine on Stimulations

All along, according to Quine, what the linguist is interested in are those stimulations which would prompt assent and dissent, and I have previously used Quine's expression 'stimulus meaning'. This is where he shows his partiality to stimulus and response psychology most prominently. One thing that is interesting to note is that in the important sections he does not talk about stimuli but about stimulations. In the first chapter he usually speaks of stimuli, but in the second chapter this changes to 'stimulations' and the change is carefully adhered to. This change is not without its infelicities, however. For example, he speaks of 'putting himself in the way of stimulations' (W0, p.17), which is certainly an odd locution. The notion of a stimulus is notoriously vague, and for this reason it is surely useful if one can do without it. Quine has given another reason for speaking of stimulations rather than stimuli.<sup>1</sup> His point was that he wanted to speak of the effects of outside forces rather than the outside forces themselves as is suggested by 'stimuli'. Of course, there can then be stimulations without outside forces. It is not clear that this terminology is any more precise, but this does not appear to be the most important consideration for Quine.

It is worthwhile to quote Quine at length on the nature of a visual stimulation. According to Quine,

A visual stimulation is perhaps best identified, for present purposes, with the pattern of chromatic irradiation of the eye...ocular irradiation is intersubjectively checked to some degree by society and

---

1. In a brief conversation at the meetings of the American Philosophical Association (Eastern Division) in New York in December, 1965.

linguist alike, by making allowances for the speaker's orientation and the relative disposition of objects.

In taking the visual stimulations as irradiation patterns we invest them with a fineness of detail beyond anything that our linguist can be called upon to check for. But this is all right. He can reasonably conjecture that the native would be prompted to assent to 'Gavagai' by the microscopically same irradiations that would prompt him, the linguist, to assent to 'Rabbit', even though this conjecture rests wholly on samples where the irradiations concerned can at best be hazarded merely to be pretty much alike. (WO, p.31.)

Shortly afterwards, he says that although he has spoken only of visual stimulations, 'we should bring the other senses in on a par with vision, identifying stimulations not with just ocular irradiation patterns but with these and the various barrages of other senses, separately and in all synchronous combinations. Perhaps we can pass over the detail of this.' (WO, p.33.) Unfortunately, he seems to pass over the detail much too blithely. Hazarding that the irradiations will be 'pretty much alike' would seem to be hazardous for Quine. Again there is the possibility of introducing hypotheses that would affect all the rest of the translating.

One qualification that is made about the stimulations and about which he seems quite adamant is that they be non-verbal. (Cf. WO, pp.26 and 32.) He gives no clear indication of why he makes this qualification, but one would guess that the reason is that he wants to exclude things like "'Gavagai" means \_\_\_\_\_'. To give the meaning in this way would be to confuse what he was trying to do in the first place. Supposedly, it is not part of the empirical situation with which the sentence is linked. Of course this does not help us in understanding what he means by 'empirical'. Part of what would surely be considered verbal stimulation would seem relevant. Quine himself later speaks of these stimulations 'that incorporate verbal hints from native kibitzers.' (WO, p.37.) These are cases where the

stimulation includes the presentation of 'a bystander pointing to an ill-glimpsed object and saying "Cavagai".' (WO, p.37.) This would seem to be just what he had earlier intended to eliminate - a verbal stimulation. Even those stimulations which are purely verbal would sometimes seem relevant and thus always to be considered. It might be that 'Cavagai' means He has a high voice, He speaks with an accent, She has nice handwriting (if it is a visual stimulation of written material), or even That is a sentence or That sentence has five words. These are all sentences requiring observations involving verbal stimulations. We often want to say something about someone's speech, and perhaps this is to be distinguished from things we say about language or meaning. But this distinction is not made by Quine, and I suspect that he would not want to talk about meaning and therefore would not make such a distinction.

Nevertheless, he does discuss a distinction between verbal stimulations which merely consist of words and verbal stimulations of "second intention" - i.e., when besides consisting of words they are about words.' (WO, p.48.) But he gives up this distinction, because, as he says, '[i]t is not easy to find a behavioral criterion of second-intention'. (WO, p.49.) For this reason, Quine must disregard all 'verbally contaminated stimulations'. Unfortunately, this results in an overly narrow notion of stimulation, which would seem to eliminate some important cases such as determining whether something is a word or sentence.

Stimuli, as vague as they are, can be given a precise interpretation and be intersubjectively checked by determining the physical forces impinging on our bodies. Perhaps this kind of precision was what Quine was seeking

when he spoke of the 'pattern of chromatic irradiation of the eye'. This is something that could conceivably be measured with the development of technology. At the present, however, we can only make conjectures and guesses, which in turn might allow in unwanted hypotheses. Nevertheless, irradiation patterns would not seem to be what he wants anyway. They are certainly not what we would ordinarily call stimulations, and there could be irradiation patterns without perception or visual sensation, although it is perception or visual sensation in which he seems interested. And yet it is just here that intersubjective checks do become difficult. In any case, irradiation patterns seem irrelevant first because they are more precise than intersubjective checks allow and secondly because they are not the kind of thing that Quine obviously wants.

In view of these difficulties, it would seem useful to introduce an analogy, which will allow us to ignore the difficulties for now. I think Quine's needs and intentions can be met by supposing that a visual stimulation is like a photograph whose boundaries are those of our visual field at the time. If we further imagine the photographs to be translucent, they can be held up to the light and compared. Photographic slides are a good enough approximation for our analogy here. Keeping this analogy in mind, we can now turn to Quine's notion of stimulus meaning.

#### vi. Stimulus Meaning

We have already seen from the quotation above what Quine calls 'the makings of a crude concept of empirical meaning.' (W0, p.32.) Two utterances are said to have the same empirical meaning if the same irradiations prompt assent and dissent when the two are queried. He then

gives this the technical name 'stimulus meaning'. This he defines as follows:

We may begin by defining the affirmative stimulus meaning of a sentence such as 'Gavagai', for a given speaker, as the class of all the stimulations (hence evolving ocular irradiation patterns between properly timed blindfoldings) that would prompt his assent. More explicitly...a stimulation  $\sigma$  belongs to the affirmative stimulus meaning of a sentence S for a given speaker if and only if there is a stimulation  $\sigma'$  such that if the speaker were given  $\sigma'$ , then were asked S, then were given  $\sigma$ , and then were asked S again, he would dissent the first time and assent the second. We may define the negative stimulus meaning similarly with 'assent' and 'dissent' interchanged, and then define the stimulus meaning as the ordered pair of the two. (WO, pp.32-33.)

The reason for both assent and dissent in the explicit statement is that, as Quine points out earlier, the sentence being queried might be 'one rather to the effect that someone is away tracking a giraffe.' 'All day long the native will assent to it whenever asked, under all manner of irrelevant attendant stimulations; and on another day he will dissent from it under the same irrelevant stimulations.' (WO, p.30.) Obviously what he wants are only relevant stimulations in some sense of 'relevance' that will have to be specified. As he adds immediately afterwards, '[i]t is important to know that in the case of "Gavagai?" the rabbit-presenting stimulations actually prompt the assent, and that the others actually prompt the dissent.' (WO, p.30.)

Previously he had spoken of eliciting (the term used by the stimulus-response psychologists) assent and dissent, but this is clearly inappropriate. It would not do for me to request assent (or dissent) after I said 'Gavagai?' This would likely elicit assent (or dissent), but it would not tell me anything further about 'Gavagai'. Also as Quine points out, the query itself is

an important part of what elicits the assent or dissent, and yet we would not want the query to be part of the stimulus meaning. What Quine seems to want (when he speaks of prompting) is some means of determining those situations in which an utterance finds its appropriate application. The problem is that to do this is to know the correct use of the sentence uttered, which would seem to necessitate that one already knew the meaning of the sentence - exactly that which one is trying to determine.

His formal solution to this problem is to spring a new stimulation (This is another example of his odd use of 'stimulation'.) on the native and see if he gets the opposite response. Perhaps this would work as long as the native has not changed his mind, is not being difficult, or is not being threatened by a man with a gun or even some kind of witchcraft. Again this seems to involve more risks than Quine could allow himself to take. Quine remarks, however, that '[i]n practice the linguist will usually settle these questions of causality, [This shows that he is still attached to the psychologists' notion of eliciting.] however tentatively, by intuitive judgment based on details of the native's behavior: his scanning movements, his sudden look of recognition, and the like.' (WO, p.30.) Again this practice might be quite acceptable for anyone but Quine. In a later footnote, he claims that he has been 'startled to find my use of "intuitive" misconstrued'. I am startled to find him adopting its use at all, for he adds in the note that '[b]y an intuitive account I mean one in which terms are used in habitual ways, without reflecting on how they might be defined or what presuppositions they might conceal'. (WO, p.36n.) Does this mean that the intuitive judgment about what prompts assent or

dissent might introduce presuppositions or analytical hypotheses at a very early stage? I see no reason why not, and this may infect his whole investigation. The best that I can do is to mark this down as another trouble-point and proceed with a discussion of the important notion of stimulus meaning.

As we saw earlier, the stimulus meaning is the ordered pair of the positive stimulus meaning and the negative stimulus meaning. And these in turn were defined as the class of all stimulations that would prompt assent and dissent respectively. He is then careful to point out that a stimulation must be conceived as 'a universal, a repeatable event form' rather than a dated particular event. (WO, p.34.) His reason for saying this is that if they were dated events rather than universals the class 'would have to be a class of events which largely did not and will not happen, but which would prompt assent to [the sentence] if they were to happen.' (WO, p.34.) What he does not seem to realize is that under any reasonable interpretation of his notion of a stimulation the same would be true for stimulations as universals as well. There will be an infinite number of minor (or major) changes in most stimulations such that they would still prompt the same response whatever the sentence that is being queried. No change is so small that it can be ignored when one is dealing with an unknown language that might embody a conceptual scheme completely foreign to any of those with which one might be familiar.

So far I have assumed that the stimulations would be universal in every respect. What I am suggesting is that any two particular events of the same event form would in every way be qualitatively identical. This is a stringent demand, but the only alternative would seem to be to pick out the

relevant features and classify particular situations according to some common feature which is relevant to the sentence being queried. This appears to be what Quine is recommending when he talks about the dispositional aspect of stimulus meaning. The problem about dispositions is how the linguist would know what would prompt the native to assent or dissent.<sup>1</sup> Quine claims that there is not really a problem here any more than there is in knowing that a bit of sugar would dissolve if put in water. The only difference, according to Quine, is that here the disposition is one of assenting to or dissenting from a sentence when variously stimulated. And he adds that 'we are familiar enough in a general way with how one sets about guessing, from judicious tests and samples and observed uniformities, whether there is a disposition of a specified sort.' (WQ, p.34.) Supposedly the observed uniformities would provide us with the conditions for the dispositions or, in other words, the relevant features.

At this point, a very serious problem arises for Quine, and that concerns what the observed uniformities are. Consider a very simple case, such as that of saying 'Square' (to use an example like those of Quine). What is in common between all the stimulations that would prompt assent to the query 'Square?'' Perhaps four-sidedness, but certainly not right-angledness. To return to the analogy that I suggested before, not all photographic slides representing our visual field at the times when we were observing squares would be identical with respect to any angles or relative lengths

---

1. My remarks here have been aided by discussions with Joseph Margolis.

of line segments. Nor could we add that we would know what the object would look like if we were to turn it. This would be to treat it as an object, thus imposing our own conceptual scheme on the native. Furthermore, it is the stimulations and not our expectations that are involved in the definition of stimulus meaning, thus making it unjustifiable to speak of what would happen if certain changes were to occur. If the definition is not adequate for 'Square', how can we expect it to be adequate for something as complicated as 'Rabbit' or even 'Cyclotron'? Surely, there is little uniformity in the stimulations we have of rabbits if we think of the stimulations as being like photographic slides. The backs of rabbits are much different from the fronts of rabbits, even though we know they are just different views of the same thing. But Quine would have to say that we know this because of our conceptual scheme.

Looking at these cases more precisely, we should have to say that there are numerous uniformities, in fact an infinite number. Between any two slides we could find an infinite number of similarities, even if it were nothing more than that there is something .362 metres to the right of the white spot. This raises a very general problem for Quine. According to the procedures that Quine sets out, the linguist could never know which of the infinite number of uniformities were the relevant ones. This makes it impossible for him to know what it is about any class of stimulations that would prompt assent. In other words, he would never be able to determine what the stimulus meaning of a sentence is. Of course linguists do determine these kinds of things, but the only way that they can do it is by making guesses at what prompts assent and dissent. As Quine says, they look for 'tempting common traits'. (WO, p.46.) But this is just the kind of thing

that Quine must oppose. Any guess will be likely to be influenced by presuppositions which will affect the conceptual scheme that is attributed to the natives. Even if we were to imagine certain limits to the perceptual powers of the natives and thus to their stimulations such that the number of uniformities would be finite, there would still be so many uniformities that it would be virtually impossible for the linguist to know which it is that is responsible for the prompting. The only thing that we can do in accordance with Quine's suggestions is to impose some conceptual scheme on the natives, and we are given no reason to suspect that they have any particular conceptual scheme.

Even if we had some particular reason to make certain guesses such as a well-grounded belief that all human beings think that the basic objects of the universe are physical objects, the problems would still be enormous. There would be observation sentences like 'That's funny.' and 'That tastes good.', which would surely make guessing rather difficult. Many different things can be funny and many different foods taste good. We would be lucky to find interesting uniformities, and we would likely have a different sense of humour and different pleasures of taste.

There are other sentences which would probably be similarly confusing. There is a general problem of the method that could be used for determining the stimulus meaning of sentences with first or second person pronouns. If the linguist wanted to know the stimulus meaning of the native's sentence 'I am in the boat.', he could not query 'I am in the boat?'. He would have to learn the use of the pronouns as well as a few variations of verbs. This seems to me to add a few more insuperable problems to the whole task. Even if we were to find another method of determining the stimulus meaning

of these sentences, there would be the old problem of variation of stimulations for sentences like 'I am here.' and 'You are with me.'. These could be said in practically any situation which the linguist could observe. The same can be said for extremely general observation sentences like 'There is something.'. In fact, a problem with these is that there would be almost no stimulation that would prompt dissent. There is far too little to distinguish these from standing sentences, to which one assents or which one dissents independent of one's stimulations. Very general observation sentences are applicable in almost any situation in a way similar to standing sentences. This is why a sentence which is used in a wide variety of situations cannot be put in the class of observation sentences with a wide variety of stimulations like those I have mentioned above. It might instead be a standing sentence.

vii. The Impossibility of Translation à la Quine

The problems of translation are clearly enormous at all stages of the process. I think I have shown that Quine's proposals are not only practically but also theoretically impossible. There are the numerous occasions when the linguist has to make guesses involving presuppositions or hypotheses according to what seems 'convenient'. Even the situation imagined seems somewhat suspect, but then the linguist makes guesses about the phonemes of the language, about what constitutes assent and dissent, about what a stimulation is, about what prompts a stimulation, and about the uniformities of stimulations. To these guesses one can add a number of difficulties which I have not discussed. A difficulty that arises from giving so much importance to assent and dissent is that much then depends upon the questions

that the linguist asks and the situations in which he asks them. He must decide what and when to ask, but other than his previous hypotheses there are no grounds for these decisions one way or the other. Further, as Quine points out, incoherent behaviour is possible (WO, p.55n), but he later adds 'that one's interlocutor's silliness, beyond a certain point, is less likely than bad translation'. (WO, p.59.) Perhaps this is wise in the practical situation, but it seems risky for Quine, who does not want to introduce any analytical hypotheses in the early stages of translation. Quine also suggests that long sentences might be misunderstood. (Cf. WO, pp.49 and 58.) If we are allowed to ignore some sentences as possible instances of incoherence, silliness, or misunderstanding, it will be even easier to impose our own conceptual scheme on a language on which we would have so little evidence.

Another problem arises when he is speaking about the 'modulus' of stimulation, which is the bound for what is to 'count as specious present', or in other words 'the length of stimulations counted as current'. (WO, p.28.) Here he speaks of consulting our 'convenience' in determining the modulus, but this is surely questionable when there is a possibility of a difference in conceptual schemes. It is quite likely that our convenience will not be the native's convenience. We must also be careful of our expectations, which again might lead us quite astray because of our conceptual scheme. Quine, for example, suggests that the linguist will be 'much influenced by his natural expectation that any people in rabbit country would have some brief expression that could in the long run be best translated simply as "Rabbit".' (WO, p.40.) Such an expectation might lead him astray if it is true that there is a South American language spoken in

an area where there are numerous kinds of parrots but which has no general word for 'parrot'. In the face of all these difficulties and Quine's attempt to exclude analytical hypotheses at the early stages, it would seem that something more is needed than just a 'significant approximation'.

(Cf. WO, p.40.) Perhaps Quine is even admitting the practical impossibility when he says that 'nobody's stimulus meaning of "Bachelor" would ever be suitably inventoried'. (WO, p.45.) The task indeed seems to be impossible in practice.

The task seems to be theoretically impossible as well. As Quine tells us, the linguist's conjectures about stimulus meaning are 'never experimentally exhausted'. (WO, p.45.) They can not be, as I pointed out above, because there are an infinite number of uniformities among the stimulations in any class of stimulations that would be used to define the stimulus meaning of an utterance. It would be theoretically impossible to complete the testing of this infinite number of uniformities.

It is important to point out, however, that Quine himself claims that there will be uncertainty in the translation of observation sentences. (Cf. WO, p.68.) And he remarks earlier that there is a point where the 'ideal becomes illusory'. (WO, p.51.) He does not realize how important it is for him to meet this ideal and how illusory it is. Failing the ideal, he will not have shown us that there is an indeterminacy of translation nor that there is a distinction between stimulus meaning and that which is contributed by analytical hypotheses. To see this more clearly, something more will have to be said about why he thinks radical translation will be indeterminate.

viii. Meaning and the Indeterminacy of Terms

Enough has been said already to make it clear that the stimulus meaning of an utterance will not necessarily be what is ordinarily considered the meaning of that utterance. If a 'rabbit-fly'<sup>1</sup> were partly responsible for assent, it would be included in the stimulus meaning of 'Rabbit' but certainly not in the meaning (whatever that is) of 'Rabbit'. There are even greater differences when one considers standing sentences like 'A triangle is a three-sided rectilinear figure.'. In general, no stimulations would prompt this utterance, but clearly it does have a meaning.

One of Quine's central points, however, is that the difference is even more radical. As he claims, '[s]timulus synonymy of the occasion sentences "Gavagai" and "Rabbit" does not even guarantee that "gavagai" and "rabbit" are coextensive terms, terms true of the same things.' (WO, p.51.) What he suggests is that for all we know the term 'gavagai' might not apply to rabbits as we would expect but to 'mere stages, or brief temporal segments, of rabbits' or 'all and sundry undetached parts of rabbits' or 'the fusion, in Goodman's sense, of all rabbits' or even 'rabbithood'. (WO, pp.51-52.) His claim is that in all these cases, and possibly others as well, the stimulus meaning of the one-word sentence ('Gavagai') would be the same.

It is interesting to note at this point that Quine thinks that the sentences and terms are different in this respect. He says that 'Gavagai' and 'Rabbit' are synonymous as sentences but not as terms.<sup>2</sup> But surely if

1. Cf. WO, p.37, for a discussion of this invented insect.

2. This suggests that Quine's indeterminacy of translation is an indeterminacy of the translation of words, but it is sentences that we translate and not words.

the term 'gavagai' meant the fusion of all rabbits, the sentence 'Gavagai' would mean something like Lo, the fusion of all rabbits. Whatever one says about meaning, it would seem that one would have to say that the meaning of a word is the meaning that it has in a sentence and that this partially determines the meaning of the sentence. The same problems that arise about the meaning of the terms would also arise about the meaning of the sentences. This is why I said earlier that I thought the same problems would arise whether the utterances were interpreted as sentences or as terms. Perhaps in both cases the stimulus meaning falls short of the meaning itself. This is something we must investigate further. In any case, if this is true of one it is true of the other. They stand and fall together in this respect.

So the question we want to investigate now is whether a native expression can be variously interpreted as rabbit, rabbit stage, fusion of all rabbits, or whatever. Are all of these equally compatible with the stimulus meaning of the expression? First hearing the expression 'Gavagai' in a situation where there is a rabbit, one could equally interpret it as 'Rabbit', 'Rabbit stage', 'Undetached parts of a rabbit', etc. There would be nothing in the situation to distinguish these interpretations. Quine's remarks are relevant here, and I shall quote him at length:

Point to a rabbit and you have pointed to a stage of a rabbit, to an integral part of a rabbit, to the rabbit fusion, and to where rabbithood is manifested. Point to an integral part of a rabbit and you have pointed again to the remaining four sorts of things; and so on around. Nothing not distinguished in stimulus meaning itself is to be distinguished by pointing, unless the pointing is accompanied by questions of identity and diversity: 'Is this the same gavagai as that?', 'Do we have here one gavagai or two?'. Such questioning requires of the linguist a command of the native language far beyond anything that we have as yet seen how to account for. (WO, pp.52-53.)

It is quite true that in pointing to a rabbit one has also pointed to a stage

of a rabbit, etc., but I do not think that this shows that such distinctions are not made by stimulus meaning.

We find the means of distinction in exactly those sentences which Quine, I think unjustifiably, disregards. If we want to know whether a gavagai is an individual rabbit as opposed to rabbithood or the fusion of all rabbits, all we have to do is ask whether there are two rabbits when we see two rabbits. Quine maintains that such 'questioning requires of the linguist a command of the native language far beyond anything that we have as yet seen how to account for.' Is it so complicated to ask in the corresponding language something equivalent to 'Two rabbits?' or 'A rabbit?'

If we can determine the stimulus meaning of an expression corresponding to 'Bachelor', surely we should be able to determine the stimulus meaning of an expression corresponding to one of ours containing a numeral, a definite article, or the word 'same'. It is also clear that such expressions would have stimulus meanings and that they would be different from other expressions in which those items do not appear. There are clearly stimulations which would prompt assent to 'A rabbit' but not to 'Two rabbits'. They would be exactly those stimulations in which there appeared only one rabbit. In spoken English anyway, one would also expect a person to say 'Two rabbits' rather than 'A rabbit' when there are two. If rabbits are scampering past, we are quite likely to indicate how many there are: 'A rabbit! Look, two. No, three!'

The important consideration behind all of this is that we have to observe how many rabbits there are and whether any of them are the same as those we saw before. Sentences about the number or identity of things before us are observational sentences in an ordinary sense as well as what would seem to

be Quine's sense. We can query such sentences, because they are uttered in different situations, and because of this they will have different stimulus meanings. The classes of stimulations that will prompt assent and dissent will be different. This shows us that the two sentences corresponding to 'A rabbit' and 'Two rabbits' are different observational sentences with different stimulus meanings, and it further shows us that the reference of the term 'gavagai' is something that can be counted. And this, for example, distinguishes it from the fusion of all rabbits. Similar means can be found to make distinctions between all of the other pairs of interpretations. Thus, Quine has failed to show us that 'terms and reference are local to our conceptual scheme.' (WO, p.53.) These can be distinguished along with occasion sentences and stimulus meaning which he claims 'are general coin'.

What Quine did was to show us that there are situations where in pointing to a rabbit we are also pointing to a rabbit stage, etc. In fact, this seems to be true of any particular situation where we could be said to be pointing to a rabbit. But this just shows the disadvantage of pointing. There are also situations where in pointing to white we are also pointing to an animal as well as a rabbit. It goes the other way too. In pointing to a rabbit, we are also pointing to an animal as well as white. Similarly, in pointing to a bottle we could be pointing to milk, milk in a bottle, a milk bottle, white, etc. The only difference between cases like these and cases like those suggested by Quine is perhaps that in Quine's case one points to all of the things in any particular situation, while in the other cases one points to all of the things in only some particular situations.

This is interesting, but what is important for Quine's remarks is that

we are dealing with a class of stimulations rather than particular stimulations. Once we realize this, we see that a distinction can be made between terms with different references. Synonymy of terms will be shown by stimulus meaning, contrary to what Quine has maintained. And it will not do to contend that '[w]e could equate a native expression with any of the disparate English terms "rabbit", "rabbit stage", "undetached rabbit part", etc., and still, by compensatorily juggling the translation of numerical identity and associated particules, preserve conformity to stimulus meanings of occasion sentences.' (WO, p.54.) We have already seen that the stimulus meanings of occasion sentences with different modifiers do not conform to each other, and I see no way to juggle the modifiers such that the stimulus meanings would conform to each other. At least here there is no doubt concerning the reference of the terms once one determines the stimulus meanings.

The view that I have been criticizing is essential to a number of other views in Quine's discussion, however, and it is worth looking at some of them now. Quine wants to hold that there is an indeterminacy of translation concerning the terms of a language and their reference. Supposedly there is no evidence to tell us that a native term means 'rabbit', 'rabbit stage', or whatever. We could only make guesses about this, and even then there would be no evidence that our guesses were right or wrong. What I have tried to show above is that there is evidence and at least in this respect there is no indeterminacy of translation.

#### ix. Quine's Analytical Hypotheses

According to Quine, the way the linguist does translate where there is indeterminacy is by putting forward certain analytical hypotheses which

conform to the speech dispositions of the native speakers and the information which is derived from these dispositions. But as we have seen, again according to Quine, there is an indeterminacy, which means that there will be alternative and equally adequate sets of analytical hypotheses. As Quine puts it, '[f]rom the point of view of a theory of translational meaning the most notable thing about the analytical hypotheses is that they exceed anything implicit in any native's dispositions to speech behavior, and thus they provide 'a way of catapulting oneself into the jungle language by the momentum of the home language.' (WO, p.70.)

In his earlier article, Quine spoke of the analytical hypotheses as hypotheses which would equate the words in one language to the words in the other. But in his book he says that the analytical hypotheses along with auxiliary definitions will 'constitute the linguist's jungle-to-English dictionary and grammar.' (WO, p.70.) He then adds that their form is 'immaterial', although he does single out the equation of 'a native word or construction to a hypothetical English equivalent' as one form. (WO, p.70.)

Perhaps it is more interesting to know some of the things that the analytical hypotheses are supposed to do. One of the most important functions to which he draws attention is that of segmenting a sentence into its component parts. Exactly what he means here is rather unclear. Sometimes it is rather explicit that the analytical hypotheses are supposed to divide a sentence into words. He says, for example, that "'Gavagai", may or may not in the end be parsed as a string of several words, depending on one's eventual choice of analytical hypotheses'. (WO, p.62.) But this sort of thing could be done by stimulus meaning rather than by analytical hypotheses.

We can ask of an inscription or of an utterance how many words it has. This, of course, would be asking about verbal stimulations but in a way that would surely do no harm. We then have a means of establishing observation sentences which would in turn allow us to segment a sentence into its words. This method is confirmed by Quine's view mentioned much later in the book that '[w]ords, or their inscriptions, unlike points, miles, classes, and the rest, are tangible objects of the size so popular in the marketplace, where men of unlike conceptual schemes communicate at their best.' (WO, p. 272.) Since we can observe these tangible objects, we can also segment sentences solely with the help of stimulus meaning.

Sometimes Quine suggests that it is something other than words into which the analytical hypotheses segment sentences. He often speaks of terms rather than words and says, for example, that 'stimulus meanings never suffice to determine even what words are terms, if any, much less what terms are coextensive.' (WO, p.70.) Earlier, he spoke of stimulus synonymy being 'powerless to equate terms'. (WO, p.54.) These remarks suggest that analytical hypotheses determine terms rather than words, which are already known by observation. If there is a distinction here, however, Quine does not make it clear. He does make it explicit that both 'red' and 'rabbit' are terms, although perhaps he would want to exclude words like 'of', 'a', and 'sake'. He simply does not tell us what the distinction is or how there could be a distinction here which would be important to analytical hypotheses. It does seem to be easy enough to segment sentences in a language one is translating, and even the possibility of differences does not seem to arise. Everyone seems to divide Latin inscriptions (where there were no spaces or lower case letters) into the same words, nor do there even seem to be

possible alternatives. There are cases like 'field work' where there might be disagreement and alternatives, but this kind of case is surely unimportant.<sup>1</sup>

Perhaps the analytical hypotheses do not segment sentences into their components but instead merely equate the components with components in the home language. Even then it is difficult to see how analytical hypotheses would be necessary. If there are indeed a number of one-word sentences then we could equate the terms in the corresponding sentences in the ways that have been suggested above. This would provide us with a number of equations (or hypotheses if that is what they are to be called here) from which we could then derive others. For example, we could quickly learn sentence forms like 'There is a....' and 'That is a....', and from these it would be an easy step to learning the terms for all observables.

So far we have not found an explicit function for analytical hypotheses, nor is it clear what they would do at all in making up the 'linguist's jungle-to-English dictionary and grammar', i.e. the manual for translation. We have seen that there are hypotheses at all levels to plague the linguist, but we have not been shown that there are hypotheses that play quite the roles that Quine is imagining.

---

1. Quine shows that he agrees with this in his comments about word segmentations in dictionaries. See WO, p.73.

## CHAPTER 13

## CONCLUDING REMARKS ABOUT TRANSLATION AND ABOUT THE THESIS

i. The Determinacy of Translation

In the last chapter, I tried to show how vague and even confused Quine's remarks are on stimulus meaning and analytical hypotheses. I have suggested that these notions will not serve the purposes for which they were intended. It is interesting to see, however, what he thinks follows from these remarks about stimulus meaning and analytical hypotheses. He says, for example, that '[t]here can be no doubt that rival systems of analytical hypotheses can fit the totality of speech behavior to perfection, and can fit the totality of dispositions to speech behavior as well, and still specify mutually incompatible translations of countless sentences insusceptible of independent control.' (W0, p.72.) Certainly his remarks about 'countless' (cf. W0, pp.73 and 77) sentences finding different equivalents in the language to which they are translated seem exaggerated. In the last chapter, we found no cases where there would be incompatible variants.

Nevertheless, Quine thinks that these rival systems may dictate 'translations each of which would be excluded by the other system of translation. Two such translations might even be patently contrary in truth value, provided there is no stimulation that would encourage assent to either.' (W0, pp.73-74.) Certainly two such translations would be incompatible, but then I doubt that we would call them both translations. If there were two translations of the same native sentence which were contrary in truth value, we would then be able to say in the oratio obliqua that the native said something

which could be both true and false at the same time. This is assuming that rather than giving the translation we could say that the native said that...., filling the space with the translation. The two contrary translations could be given in the oratio obliqua as the meaning of what was said, but I doubt that Quine would want to break the law of excluded middle in this way.

Quine makes no other suggestions about how two translations of equally adequate but rival systems might be incompatible, and it is difficult to see how there could be any interesting sense in which this would be true. (Of course, there could be synonymous translations, but this would not be interesting, nor would Quine accept them as incompatible. (Cf. WO, p.73.) If two manuals differed in a significant way in the resulting translations that they gave of one native sentence, we would go to the speech behaviour of the native speakers to determine which of the translations (if either) was correct. It might take a long time to decide one way or the other, but if we were determined we would continue to observe their speech behaviour until we did find out which was correct.

What would seem to be a final arbitrator is the judgement of bilinguals. Quine does allow that the linguist can become a bilingual himself by learning the language as an infant would (cf. WO, pp.47 and 71), but this, according to Quine, does not give the linguist a special position in comparing alternative translations. For Quine, 'even our bilingual, when he brings off translations not allowed for (by stimulus meaning), must do so by essentially the method of analytical hypotheses, however unconscious.' (WO, p.71.) His 'point is then that another bilingual could have a semantic correlation incompatible with the first bilingual's without deviating from

the first bilingual in his speech dispositions within either language, except in his dispositions to translate.' (WO, p.74.) I approve of Quine's distaste for uncritical mentalistic theories of ideas and agree that there is not an identical idea in the bilingual's mind expressed by both the sentence and its translation. (Cf. WO, p.74.) But the alternative is not to say that the bilingual does not know the reference of the terms in his languages, which is what Quine must say if he makes the point which I have just quoted from him.

If there is sense to saying that a word refers to rabbithood rather than an individual rabbit, then the bilingual (if he is a true bilingual) should be able to make sense of it and make the distinction in his other language as well. This could almost be a criterion for a person being a bilingual. At least the bilingual should be able to tell us what the correct translation is, and he would not be acceptable as a translator if he were to come up with alternative but incompatible translations.

Now we can see that Quine's first point about the possibility of mutually incompatible manuals for radical translation is unjustified and unestablished. He has provided us with no examples of incompatible manuals, nor has he given us reason to believe that there could be incompatible manuals. One manual might produce a mistranslation and then have to be adjusted, but this is not the kind of incompatibility Quine was considering. This possibility of incompatible manuals does suggest a general point, however. Whenever we find an incompatibility, we will want to investigate the possibility of there being a mistranslation because of wrong guesses that were made early on. Considering all of the guesses that the linguist is forced to make even on Quine's proposals, it would seem that any incompatibility

could and probably would force us to alter one of our previous hypotheses. Incompatibility of translations would then always be due to an inaccuracy of translation rather than an indeterminacy of translation. This shows partly how crucial the linguist's early 'risks' were.

They are also crucial for Quine's second point that there is a distinction between stimulus meaning and that which is contributed by the analytical hypotheses. Quine thought that his notion of stimulus meaning would isolate 'a sort of net empirical import of each of various single sentences without regard to the containing theory'. (W0, pp.34-35.) Thus he thought that '[o]bservation sentences peel nicely; their meanings, stimulus meaning, emerge absolute and free of residual verbal taint.' (W0, p.76.) If it were not for the guesses that the linguist makes right from the beginning, Quine could make a sharp distinction between empirical and non-empirical import. But as I have tried to show the guesses are necessary (without them it is an impossible task to translate the language), and therefore Quine's distinction cannot be made. As Quine himself has pointed out, 'a few early analytical hypotheses carry the linguist so far', and 'one fails to note the free prior decisions to which these data owe their significance.' (W0, p.74.) What I have tried to do is to point out these prior decisions as well as their necessity and thereby point out the bankruptcy of Quine's distinction between stimulus meaning and that meaning which is provided by our analytical hypotheses or conceptual scheme.

In the end one wonders if Quine does not give some premonition of the determinacy of translation himself. He speaks of cognate word forms and shared cultures aiding and facilitating translation. Because of these aids, he spoke of radical translation. But is this not to suggest that there is

a correct translation which we arrive at more quickly if we have various aids? He also speaks of 'one's success with analytical hypotheses being due to real kinship of outlook on the part of the natives and ourselves' (WO, p.77), as if there were a difference between success and failure in relation to the analytical hypotheses. One wonders if these are not hypotheses which can be confirmed or falsified and about which one can reach definite conclusions. Otherwise, why would they be called hypotheses?

I think the view he will have to take about translation will be parallel to the one he takes about understanding what a child means by its terms. He says that a child might develop certain misconceptions about our terms and that we 'might well not detect, for a while, his misconception' and that the 'variant misconception could...long escape exposure'. (WO, p.93, my emphasis.) I would not disagree that mistakes can go unnoticed - both those of the child and those of the translator - but still, they are mistakes and should be recognized as such. Quine is right when he suggests that there is a correct translation, but unfortunately this is contrary to the striking views he wanted to advance about the indeterminacy of translation, and it is these views that I have been attacking.

#### ii. The "Indeterminacy" of Particular Utterances

In spite of the failure of Quine's attempt to prove the indeterminacy of radical translation, I think there are other less exciting views that are suggested by his remarks and that deserve further attention. There are some mistakes and indeterminacies in our speech that do go unnoticed for a long time and have long escaped exposure. These are indeterminacies about reference as well. In chapter 6 above, I have already mentioned the

case of the word 'speech', where sometimes it is indeterminate what we meant when we talked about speech. It is clear that the word is ambiguous, but usually the ambiguity can be easily resolved. It will be worth looking at a few other cases which might raise some of the kinds of problems which trouble Quine.

Sometimes the indeterminacy will involve a vagueness that is probably not very revealing. People sometimes say, for example, that science is immoral. Such a comment is probably grossly misguided, but what is important for us is that the meaning of 'science' is surely unclear and might mean a number of different things. In this case I do not think it would help us to resolve the indeterminacy. There are other cases where the indeterminacy will be between references to two very different "things". It is clear what is meant when someone says 'Open the door.' or 'Go through that door.' and that the word 'door' means two different things in the two cases. On the other hand, if someone says 'He is near the door.', it is likely to be indeterminate which of the two senses of 'door' is meant. I have heard it said that there is no difference in the reference of the word 'president' in 'The president is here.' and 'The president is elected by the electoral college.'. This may be right, but I think most of us feel that there might be an indeterminacy when someone says 'The president lives in the White House.'.

I think there can be even more interesting indeterminacies of reference in relation to Quine's remarks. We sometimes speak of the moon being a mere sliver on the horizon, although we might also speak of the moon as appearing as only a sliver or that we can only see a sliver of the moon. In one case, it sounds as though the word 'moon' refers to an appearance, while in the other case it seems to refer to an object. It is likely that the

reference of 'moon' is indeterminate between these two in other contexts. Another case that comes to mind is that of saying that we should like to see more of a person, e.g. a fashion model. Does 'person' have a different reference here when we mean that we should like to see the person more often from when we mean that we should like to see the person in a bikini? I have not seen this suggested, but the difference in reference is an interesting one if there is this difference. And with such a difference, there will again be occasions where there will be an indeterminacy of reference or meaning.

The important point that I made much earlier about 'speech' is that we can be explicit when we want to be. The same is true about all of the other cases that I have mentioned above. If I want to be precise, I can make it clear exactly what the reference of any particular term is. But more has to be said about what we are doing when we do this. It should be clear that when I spoke of the indeterminacy of these different words I was speaking of their indeterminacy on particular occasions in particular utterances. It is not that the meaning of the particular word type is indeterminate. There are many utterances in which we know exactly what the word means, and the meaning is different in different utterances. Furthermore, when I said that we can be more explicit when we want to be, this meant that we could produce another utterance where the meaning of the word concerned is quite explicit and not indeterminate.

A question now arises about how we are to understand what happens when we produce this new utterance. One suggestion would be that the utterance which was originally indeterminate is made determinate by the new, explicit utterance. There are, of course, occasions when this would be the case.

If I say that someone is making a door, it might not be clear to others even though it is clear to me whether I mean that he is knocking a hole in the wall or fitting a wood panel with hinges. In this case, I can make it clear to others what I did mean when I said that someone is making a door. The cases I have been considering, however, are slightly different in that the speaker himself is not able to be more explicit about what he meant when he said what he did. He can be more explicit than he was before, but he cannot be more explicit about what he said before. This brings into doubt whether it is appropriate to say that it is indeterminate which of the two (or more) meanings the speaker meant on the particular occasion. It would be odd to say that he meant either the panel that swings open or the hole in the wall but that there is no way to decide which. The way to find out what he meant is to ask him, and if he does not choose either one or both he did not mean either one or both. Sometimes we say things without meaning anything at all, even though the words we say mean something.

Nevertheless, it is the words which Quine is interested in anyway, and again the correct interpretation might be that the originally indeterminate utterance (rather than the speaker's meaning) is made determinate by the new, explicit utterance. But then one wants to know how one would determine the meaning of the original utterance which was supposedly indeterminate without referring to the speaker's meaning. In a way analogous to Quine's remarks, one might say that this is just the point and that the meaning of the utterance is indeterminate - it can mean either one thing or the other, but there is no way for our finding out which. One would then give two mutually incompatible paraphrases both of which will fit all the speech behaviour and dispositions to speech behaviour of the speaker. To take the

example of the door, we could "paraphrase" the utterance 'He is near the door.' by both 'He is near the doorway.' and 'He is near the swinging panel.'. These two "paraphrases" are clearly inequivalent, even though in general they would both be true whenever the original utterance is true. Even so one could imagine occasions when the incompatibility would be such that the two utterances would have different truth values. For example, imagine the speaker not knowing that the door is off its hinges and far away.

It should be clear that this case is analogous to but not the same as Quine's case of 'Gavagai'. I am not contending that the meaning of the English word 'door' is indeterminate as Quine was contending that the meaning of the native word 'gavagai' is indeterminate. It is only that the word 'door' is ambiguous and that there are some particular contexts where it is unclear what meaning should be assigned to the word token.

In my own case, however, I think it is wrong to say that it is indeterminate which of the two meanings should be assigned to the particular occurrence of the word. It is not that we cannot be sure which of the two meanings it has. It does not have either of them. This means that neither of the two utterances suggested above are really paraphrases. They could only both be paraphrases if they both meant the same thing as the original utterance, but then they would also have to mean the same thing as each other, which they do not. 'Meaning the same as' is a transitive relation, and this shows us that the two new utterances cannot both be paraphrases of (i.e. mean the same as) the original utterance.

I am further contending that neither of the new utterances is a paraphrase of the original. Perhaps one thing that misleads us is the belief that every word token must have a clear meaning assigned to it. We do not seem

to think this about the word token which is the entry in the dictionary, but we do seem to think this about other tokens. An analogy might help here. Early on when a child has a very small vocabulary including the word (if it is to be called that) 'milk', it will often utter this "word" in vastly different circumstances. Sometimes it will want some milk or a bottle of milk, other times it will identify what is in the bottle, and sometimes it will just be showing off its speech. This variety of circumstances is not important, but what is important is that it would be misleading to say that the meaning of the child's utterances is indeterminate. It is not that what he says means either 'container of milk', 'milk stage', 'milk fusion', or whatever. It does not mean any of these things. The meaning is not determined in any of these ways, and in that sense it is indeterminate, but then it is also indeterminate with respect to whether or not he likes milk. In both cases, it is not that we cannot determine the meaning but that there is no meaning to be determined. Of course there sometimes is a meaning, but then that is determined. I would say the same thing about my case of the door. In the particular utterance the word does not have the meaning that was suggested must be determined. In general it has meaning enough for the utterance to be understood, and we should not look for more meaning than what is there.

The example of the child can also tell us a bit more about Quine's remarks. In the case of the child, not only is it wrong to say that the meaning of any utterance 'milk' is indeterminate, but it is also wrong to say that the "word" type 'milk' is indeterminate, even though it is not determinate in certain ways. It is not that we do not know which of several meanings the child's "word" has. It does not have any of these

meanings, unless there is a meaning which can be determined from what the child says or might say. If there is going to be a difference of meaning, then it will have to be a difference that makes a difference. The same will be true of Quine's case of 'gavagai'. It may be that it means either rabbit individual or rabbit stage, or it may mean neither. But whether it means either or neither the meaning is determinate, and what cannot be determined is not part of the meaning. In other words, if a word has a meaning the meaning is determinate, and if the meaning is determinate it is determinable.

I think Quine, in Word and Object, wavers between saying that words have determinate meanings which are indeterminable and saying that it is difficult to determine the meaning of a word. The former thesis is exciting but wrong. The latter thesis is correct but not so striking, although I think it is interesting and important enough to give leads for further work in the philosophy of language.

### iii. Some Concluding Remarks about the Thesis

Much of what I have said in this chapter, however, has been tangential to the focus of this work. I discussed some of Quine's views, because he tried to show that along with an indeterminacy of translation there is an indeterminacy of conceptual schemes used by the speakers of languages. I have tried to show that there is indeterminacy of neither translation nor conceptual schemes. The case of translation will be no different from that of paraphrase, so just as there is no indeterminacy of paraphrase there is no indeterminacy of translation. It may sometimes be difficult to determine the correct paraphrase or correct translation, but this is a much different problem. The important thing is that we will not be able to determine

the correct paraphrase or translation until we have first determined the meaning of the original as well as that of the suggested paraphrases and translations. Once we have done that we just connect those linguistic items that have the same meaning.

I have said much less about conceptual schemes partly because it is difficult to know what they are and partly because Quine says so little about them. The important thing is that if different people are supposed to have different conceptual schemes one would expect this to be reflected in some kind of difference in what they think or say. In the previous chapter, I tried to show that the differences Quine was considering would be reflected by a difference in what people would say. This is not to suggest that all are not equally able to use whatever conceptual scheme they like. It is only that if there is such a thing as a conceptual scheme it should be reflected in what is thought or said when it is being used. Quine has not suggested that there is any difference that speakers can think but not say, so even if there were a difference which is not reflected in what they think and say, it would not affect whatever we think or say about the relativity thesis. We have been interested in what effect language might have on our thinking, and Quine has not shown us any effect.

Something that Quine has pointed out to us, however, is the importance of the sentence, or possibly even larger units, in arriving at a translation, and this is something that does seem to be in agreement with what linguists do. One linguist, in talking about linguistic field work, has given the following confirmation: 'In textual analysis I have found the following procedures useful: (1) I first obtain a free translation of the whole text; (2) I obtain a sentence translation; (3) I obtain a word by word

translation'.<sup>1</sup> The agreement, of course, is only to the extent that it is said to be more difficult to determine the meaning of a word than that of a sentence. It is sometimes even said that some words are 'untranslatable',<sup>2</sup> but I think what is meant is that there is no simple formula correlating a word in the translating language with the word in the language being translated.<sup>3</sup> It is not that the meaning cannot be determined by the speaker of the translating language. To put this another way, it has been said that the concordance will not be preserved in a translation but that the content will be.<sup>4</sup>

It should be remembered now that we were concerned about the translation of sentences and not about the correspondence of words. I have argued that anything can be said in any language, and this is about sentences rather than about words. We have looked at translation for counterexamples to my original thesis. If we had found a sentence in one language that could not be translated into another language, then we would have found something which could be said in one language and not in another. Such a counterexample would have been interesting to the relativity thesis of language, but so far we have not found one.

The case can be made much stronger, however. It can be seen that there are no counterexamples to be found at all. Take any sentence from one

- 
1. Henry, Jules, 'A Method for Learning to Talk Primitive Languages,' American Anthropologist, 42 (1940): 635-641 (p.637) as quoted in: Herbert P. Phillips, 'Problems of Translation and Meaning in Field Work', Human Organization, 18 (1959-60): 184-192 (p.187).
  2. Cf. Malinowski, B., Coral Gardens and Their Magic, vol.2 (New York: American, 1935), pp.11ff.
  3. Cf. Nida, Eugene A., 'Analysis of Meaning and Dictionary Making', International Journal of American Linguistics, 24 (1958), p.292.
  4. See: Longacre, R.L., 'Items in Context - Their Bearing on Translation Theory', Language, 34 (1958): 482-491.

language and consider what it would be to show that it is untranslatable. One can show that it is difficult to translate or that all the best bilinguals have not yet found a translation for it, but even this would not be enough. As I have pointed out earlier, there are an infinite number of sentences in any language, and an infinite number of things can be said in any language. We will never be able to check every sentence, which means that there will always be the possibility that there is a sentence which we have not checked and which will serve as a translation. Our not having found a translation only shows at most a lack of imagination or ingenuity on our part rather than the lack of a translation in the language.<sup>1</sup>

Failing the existence of a counterexample to my original thesis that anything can be said in any language, I shall allow the former arguments to stand. Once it is accepted that anything can be said in any language, it should be seen that anything that can be said in one language can be translated into any other language. One merely correlates the two sentences which say the same thing in the different languages. It may be difficult to find the correct translation, but this is different from there not being one.

Something similar might be said about conceptual schemes, although I have tried to show that this notion is not a clear one. It may be difficult to change from one conceptual scheme to another, for example to change from talking about individuals to talking about the fusion. I hope what I have said above has now shown that this is possible even though it may be

---

1. This point was suggested to me by discussion with John Dolan.

difficult. Perhaps it would seem unnatural to ask whether one gallery had more Rembrandt (in the sense of square footage) than another, but what I have tried to show is that it is understandable. It is also understandable that a child could grow up learning only the words for properties and not those for objects. It is unlikely because it would surely make communication difficult, but again I have not been concerned with unlikeliness and difficulty.

In arguing that there are no necessary limitations on what can be said and thought by the speakers of any language, I have not wanted to suggest that there should not be concern about communication efficiency, word association, vocabulary size, etc. There is indeed work to be done here and no doubt philosophical work as well. I have argued against a group of views about there being a necessary relation between linguistic and non-linguistic factors, but at times I have suggested that there are other views about non-necessary relations which might be quite correct. Perhaps Nida is right when he says that the 'vocabulary relating to the focus of the culture is proportionately more exhaustive than that which refers to nonfocal features.'<sup>1</sup> Whether or not he is right, however, will depend upon the thesis being put in a way which is much less vague. Even so it does give some indication and has practical importance as we saw in Sapir's work. There are also the correlates on the individual level, although the case is a bit different there. If someone is interested in a subject, he is likely to develop his vocabulary relating to that subject. On the other hand,

---

1. Nida, 'Analysis of Meaning and Dictionary Making', p.283.

the people around him might use a number of words with which he is not familiar, and in learning these words he might develop an interest in the subject to which they relate. There seems to be no simple formula, even though there are indications and prospects for further work. There might also be relations between language and music or language and folk literature or whatever. And it is probably obvious that in general, there will be a relation between what people say and what they do, but this kind of relation will have to be investigated at a much different level.

I have tried to suggest some of these prospects for further work particularly in my discussion of the work being done by Lenneberg, but my main concern in this discussion has been with the necessary relations between linguistic and non-linguistic factors and some of the related philosophical problems. There are clearly a number of other related and important philosophical problems to be dealt with. I have dealt with only a few of the many problems, but I hope in the end I can at least be said to have made a beginning.

## BIBLIOGRAPHY

The bibliography contains a list of those books and articles which were most important in writing this thesis. Those items which are found in the footnotes but not in the bibliography are given full citation in the footnotes.

A. Books and Collections

- Brower, R.A., ed., On Translation. Cambridge, Mass.: Harvard Univ. Press, 1959.
- Fodor, J.A. and J.J. Katz, eds., The Structure of Language: Readings in the Philosophy of Language. Englewood Cliffs, New Jersey: Prectice-Hall, 1964.
- Furth, Hans G., Thinking without Language: Psychological Implications of Deafness. New York: The Free Press, 1966.
- Gardiner, Alan, The Theory of Speech and Language. Oxford: The Clarendon Press, 1932.
- Geach, Peter, Mental Acts. London: Routledge and Kegan Paul, 1957.
- Hampshire, Stuart, Thought and Action. London: Chatto and Windus, 1960.
- Hanson, W.R., Patterns of Discovery. London: Cambridge Univ. Press, 1958.
- Harré, R., Matter and Method. London: Macmillan, 1964.
- Hempel, Carl, Fundamentals of Concept Formation in Empirical Science. Chicago: Univ. of Chicago Press, 1952.
- Holjer, Harry, ed., Language in Culture. Chicago: Univ. of Chicago Press, 1954.
- Hymes, Dell, ed., Language in Culture and Society. New York: Harper and Row, Publishers, 1964.

- Körner, Stephan, Conceptual Thinking. London: Cambridge Univ. Press, 1955.
- Kuhn, Thomas S., The Structure of Scientific Revolutions. Chicago: Univ. of Chicago, 1962.
- Lenneberg, Eric H., Biological Foundations of Language. New York: John Wiley and Sons, Inc., 1967.
- Lenneberg, Eric H. and John M. Roberts, The Language of Experience: A Study in Methodology. Baltimore: Waverly Press, 1956.
- Pears, D.F., ed., The Nature of Metaphysics. London: Macmillan, 1965.
- Price, H.H., Thinking and Experience. London: Hutchinson's Univ. Library, 1953.
- Quine, Willard van Orman, Word and Object. New York: Technology Press of MIT and John Wiley and Sons, 1960.
- Sapir, Edward (David G. Mandelbaum, ed.), Culture, Language, and Personality. Berkeley and Los Angeles: Univ. of California Press, 1961.
- Sapir, Edward, Language. New York: Harcourt, Brace and World, 1921.
- Sapir, Edward (David G. Mandelbaum, ed.), Selected Writings of Edward Sapir in Language, Culture, and Personality. Berkeley and Los Angeles: Univ. of California Press, 1949.
- Saussure, Ferdinand de (W. Baskin, trans.), Course in General Linguistics. London: Peter Owen, 1960.
- Strawson, P.F., Individuals. London: Methuen and Co., 1959.
- Vico, G., The Autobiography of Giambattista Vico (M.H. Fisch and J.G. Bergin, trans.). Ithaca, New York: Cornell Univ. Press, 1963.
- Vico, G., The New Science of Giambattista Vico (J.G. Bergin and M.H. Fisch, trans.), abridged and revised with an introduction by M.H. Fisch. Garden City, New York: Doubleday and Co., 1961.
- Waismann, F., The Principles of Linguistic Philosophy (R. Harré ed.). London: Macmillan, 1965.

Whorf, B.L., Language, Thought, and Reality: Selected Writings of Benjamin Lee Whorf, edited with an introduction by John B. Carroll. New York: The Technology Press of MIT and John Wiley and Sons, 1956.

Wittgenstein, Ludwig, Philosophical Investigations. New York: Macmillan Co., 1953.

B. Articles and Miscellaneous

Bar-Hillel, Yehoshua, 'Intertranslatability of Natural Languages' in Bar-Hillel, Language and Information: Selected Essays on Their Theory and Application (Reading, Mass., and Jerusalem, Israel. Addison-Wesley Publishing Co., Inc., and Jerusalem Academic Press Ltd., 1964), pp.56-58.

Black, Max, 'Linguistic Relativity: The Views of Benjamin Lee Whorf' in Black, Models and Metaphors (Ithaca, New York: Cornell Univ. Press, 1962), pp.244-257.

Brown, Roger W. and Eric H. Lenneberg, 'A Study in Language Cognition', J. of Abnormal and Social Psychology, 49 (1954): 454-462.

Fishman, Joshua A., 'A Systematization of the Whorfian Hypothesis', Behavioral Science, 5 (1960): 323-339.

Harris, Zellig S., 'Review of Sapir's Selected Writings', Language, 27 (1951): 288-333.

Hymes, Dell, 'Two Types of Linguistic Relativity (with Examples from Amerindian Ethnography)' in William Bright, ed., Sociolinguistics (The Hague: Mouton and Co., 1966), pp.114-167.

Lantz, D. and V. Steffire, 'Language and Cognition Revisited', Journal of Abnormal and Social Psychology, 69 (1964): 472-481.

Lenneberg, Eric H., 'Cognition in Ethnolinguistics', Language, 29 (1953): 463-471.

Lenneberg, Eric H., 'Color Naming, Color Recognition, Color Discrimination: A Re-appraisal', Perceptual and Motor Skills, 12 (1961): 375-382.

- Ryle, Gilbert, 'Thinking Thoughts and Having Concepts' in Thinking and Meaning (Paris: Béatrice-Nauwelaerts, 1963), pp.157-161.
- Ryle, Gilbert, 'Use, Usage, and Meaning', Aristotelian Society, supp. vol. 35 (1961): 223-230.
- Sapir, Edward, 'Language as a Form of Human Behavior', English Journal, 16 (1927): 421-433.
- Wittgenstein, Ludwig, 'Wittgenstein's Lectures, 1946-47', unpublished notes in typescript by Peter Geach.

