"Linguistic-cultural contact and its effects in a language teaching situation: Afghanistan 1964."

by

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Preface

The initial inspiration for this research has come out of the practical side of life, that is the teaching of English language to Afghan students in Kabul, Afghanistan between the years 1954 and 1962. This experience was gained over the whole range of teaching and administration from beginning students in the seventh class to university students preparing for advanced study abroad. From these experiences it became apparent to the writer that a dimension of language teaching in the classroom was not being dealt with adequately, indeed had not been dealt with adequately by linguists, and as a consequence left teaching and learning materials to a large extent inadequate for the task at hand. Reference is here being made to the larger picture of language as a part of culture, language as a social process with its locus in the individual, language in its socio-cultural context. Early leading linguists and anthropologists such as Sapir, Firth, Malinowski, Boas and others saw language as a part of culture, a special part, that of a mediating element serving all cultural institutions as a system for communication. Culture from this point of view was dependent on language for its transmittal and without it much of its system and content would perish. Thus language occupies a unique and exalted place in the hierarchy of human institutions. Language also depends on the content of culture for its meaning since the linguistic form has its meaning lodged in extra-linguistic experience. We see a two-way system here -- linguistic form serving to transmit the institutions of human society and these same institutions giving meaning to linguistic form. In the thesis we have referred to this relationship at the language teaching level as linguistico-cultural contact and along with Firth we have sought to consider language events both in a cultural context and as shaped by "the creative acts of speaking persons."
As the above suggests several disciplines must contribute to the advancement of understanding of the nature of meaning and its transmittal. Since the goal of descriptive linguistics and the aim of all language teaching must be to make statements about meaning and to teach students to use language in a meaningful social situation, we see these disciplines as logically combining forces in the solving of problems in the general area of applied linguistics.

The thesis deals with the socio-cultural, psychological and linguistic aspects of language learning and teaching in the context of language teaching in Afghanistan. From the Afghan learner's point of view the first language (L₁) is Persian and the second language (L₂) is English. The corpus under investigation comes from the texts in use in the schools of Afghanistan entitled *Afghans Learn English* from which over 1000 lexical and grammatical items were extracted and their instantial, potential, and cultural meanings studied.

I would here like to acknowledge the assistance of Robert L. Canfield, Director of Materials Preparation, Institute of Education, Kabul University for his cooperation in keeping me up to date on the evolution of materials being prepared and used in Afghanistan and making available to me current copies of the complete set of texts *Afghans Learn English* Books 1-8.

During the early stages of the research while still a novice in the field of sociolinguistics, the friendly cooperation and assistance of the following scholars was greatly appreciated and is hereby acknowledged:

Dr. Karl Bock of the University of New Mexico, Professor Robbins Burling of the University of Pennsylvania, Dr. Charles A. Ferguson of the Center of Applied Linguistics; Professor Joshua Fishman of Yeshiva University; Professor R. N. Frye of Harvard University; Dr. John Gumperz of the University
of California; Harvard University, Center of International Studies;
Professor H. L. Nostrand of the University of Washington; Professor Kenneth L.
Pike of the University of Michigan; Professor George L. Trager of the
University of Buffalo and others. This is not to ignore the very valuable
association and friendship of fellow students and staff of the University of
Edinburgh who have their share in my general intellectual evolution over the
past three years.

I also count it my privilege to have had as supervisor in Persian
language for the 3-year period of study Mr. L. P. Elwell-Sutton of the Wm. Muir
Institute of Islamic Studies who has in a most unselfish manner made available
to me his considerable knowledge in the area of Persian language and the ways
and customs of the Persian peoples. I have benefited both from his teaching
and his personal friendship. In my first year at the School of Applied
Linguistics my supervisor was Mr. Ronald Mackin and although at the end of that
year he was forced to resign his position at the university due to illness I
have continued to benefit from his suggestions and value his continued interest
in the thesis and my on-going research. For the second year Mr. Ian Catford,
Director of the School of Applied Linguistics, assumed the responsibilities of
principal supervisor and helped in the planning of the thesis. On the resignation
of Mr. Catford from the University to take up the position of Director of the
English Language Institute at the University of Michigan, his successor
Mr. S. Pit Corder became the principal supervisor and for the past year has
given invaluable assistance in his very able criticism during the final stages
of writing.

I would be less than grateful if I failed to mention the facilities
both at the General University Library and at the Department of Applied Linguistics
made available to me, at the former in the way of books either purchased or borrowed and at the latter the room for study and writing.

I must express my appreciation to the University of Edinburgh for financial assistance in the form of a Post-Graduate Studentship for the last four terms which has helped make possible the completion of the thesis at this time.

Last but by no means least I extend my admiration to my family, Dinorah, Jonathan, Elizabeth and Peter, for their willingness to make the sacrifices necessary for this period of study.

R.J. Goodell.

Edinburgh
June 1965.
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| REFERENCES AND SELECTED WORKS | 334 |
It is peculiarly important that linguists, who are often accused, and accused justly, of failure to look beyond the pretty patterns of their subject matter, should become aware of what their science may mean for the interpretation of human conduct in general. Whether they like it or not, they must become increasingly concerned with the many anthropological, sociological, and psychological problems which invade the field of linguists.

(Edward Sapir, 1929, "The Status of Linguistics as a Science," Language 5.214.)
1.0 The theme and scope of the thesis.

1.1 Background information.

The following information relating to Afghanistan and its people is felt pertinent to the general scope of the thesis especially since the burden of the thesis goes beyond what has until recently been traditionally claimed as legitimate territory for a scientific study of language, i.e. in the definition of scientific linguistics. There have, however, been scholars such as Firth, Halliday, Ellis, Pike, Trager, Lyons, etc. who have extended the study of linguistics to include meaning in the contextual sense and hence to make contact with the study of culture and social institutions. As will be seen later the role of language in the development and perpetuation of all of these social institutions is both the carrier and the symbolic embodiment. Language is the means of transmitting culture as well as creating it. It is itself a part of culture and yet distinct from it. Culture on the other hand gives meaning via context and situation (technical terms to be defined later) to linguistic items. These

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1 Much of the following information comes from my paper, Afghan Values, Attitudes, and Characteristics (mimeo, unpublished) given at the monthly staff meeting of the Institute of Education, University of Kabul, May 1962 and from my paper, The Afghan Student (mimeo, unpublished) given at the monthly meeting of teachers and staff of the English Language Program, Institute of Education, University of Kabul, April 1962.

relationships will be dealt with in 6.0. Here we will only make a brief statement of the culture and languages used in Afghanistan.

1.11 Languages and ethnic groups in Afghanistan.

From the linguistic and ethnic point of view Afghanistan has considerable variety. The spoken languages can be grouped into three subdivisions of Indo-Iranian as follows: 1) Iranian languages which include Persian, Pashtu, Baluchi and Pamir; 2) Dardic languages which consist of Pashai, Gawar-Bati, Tirahi, and Kafiri; and 3) Turkic languages which consist of Usbek, Turkoman and Kirghiz. Besides these there are also several others such as Mongolian, Kurdish, Arabic, Lahnda as well as Hindi, Urdu, etc. spoken by minority groups without full political or social integration. Of the above mentioned languages two are predominant, Persian and Pashtu. Although Persian is the most universally known and used (it is the language of business and government as well as the unifying medium of education), Pashtu has been in recent years named the official language.

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by the government and is being used as a criterion for advancement in political and civil offices.  

Neither does Afghanistan have one homogeneous ethnic group making up its populace but is composed of many and varied groups of peoples in most cases in a one to one relation to the languages previously mentioned. Known history gives a satisfactory explanation for the presence of most of the

4See Georg Morgenstierne, 1926, Report on A Linguistic Mission to Afghanistan, Oslo: Institutet For Sammenlignende Kulturforskning, where he outlines the position of Persian and other languages to it. (This, of course, considerably prior to the decision of the government in the forties to make Pashtu the national language): "Persian is spoken by Parsivan and Tajik peasants in most parts of the country, and by the majority of the population of all towns, perhaps with the exception of Kandahar. Even so far east as Jallalabad the population in the immediate surroundings of the town speak Persian, not Pashtu, and Kabul is almost entirely Persian-speaking... These _languages_ other than Persian have also been considered socially inferior _in Afghanistan_, and they are all, even including Pashtu, receding before Persian," p. 7, 8.

With the rise of nationalism in Afghanistan becoming for the first time in its long history a "nation-state", we see its leaders seeking a unifying element which they have conceived to be Pashtu.

ethnic groups in Afghanistan. Due to its particular topography and geographical location Afghanistan became the crossroads of the Middle East at a very early time in history consequently migrant and warring groups, to say nothing of the traffic of trade, commerce, and religion, to a large extent account for the diverse ethnic nature of the geographic area now

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5 The following groups with their populations have been listed in Dupree, 1960, p. 17.

1) Pushtun .................................. 6,500,000
2) Tajik (Persian) ............................ 2,200,000
3) Aimak ..................................... 813,000
4) Uzbek ...................................... 800,000
5) Hasara .................................... 665,000
6) Turkoman ................................... 200,000
7) Nuristani .................................. 60,000
8) Hindu and Sikh .............................. 30,000

Total .................. 11,268,000

It should be added that the present boundaries of Afghanistan are the result of political power-plays between and among Iran, Great Britain, and Russia in the late 19th and early 20th centuries. Consequently these boundaries are artificial from an ethnic point of view and cut across major ethnic groups. For example, the Uzbek, Turkoman, and Kirghiz peoples can be found on both sides of the border with Russia as can large groups of Pushtuns be found on both sides of the border with Pakistan.

6 No really adequate historical explanation for the Nuristani people is available. Some historians suggest they are (due to their fair complexion, blond hair and blue eyes) the remnant of a contingent of Greek Alexandrian soldiers. This cannot be substantiated.
called Afghanistan. Historical records do not identify known places in Afghanistan farther back than around 2000 BC. When a full account of archeological material in Afghanistan is brought to light, however, this will no doubt be pushed back considerably.

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7 Dupree, 1960, p. 5. The ten major periods listed by Dupree are:

1) Prehistory
2) "Aryan" invasions
3) Graeco-Bactrian dynasties
4) Central Asian invasions
5) Early Islamic dynasties
6) Turks and Mongols
7) Moghuls and Persians
8) Tribal Kingdoms and European expansion
9) Period of consolidation
10) Period of independence

It will be noted that all of the periods are characterized by an outside group and the effect that this particular group had on the area now known as Afghanistan. Not until the time of the Tribal Kingdoms do we see any attempt of indigenous peoples to exert an influence on their own destinies. "At the time of this Persian and Moghul rivalry, the Pashtun tribes of the eastern part of the country began to awake and stir. They steadily grew in numbers and began to move out of their mountain crags and valleys... until they were in the ascendancy in the 18th and 19th centuries. Comparatively much is known about this period due to its being more recent with more records extant. Thus, the 18th century begins the rise of the indigenous people ruling the general area of Afghanistan and its environs. It was the Abdalis and Ghilzais who grew to ruling power and the Ghilzais even extended their control into Persia. But by the middle of the century their power had waxed and waned and Ahmad Shah (an Abdalis) had had himself elected ruler of Kandahar (his tomb still stands in Kandahar city today) and forthwith began to extend and strengthen his kingdom. Shah Ahmad created for himself the title of Durr-i-Durran (Pearl of Pearls) and thus originated the Durrani royal line still found in Afghanistan today although not the ruling family. By the beginning of the 19th century, the Durrani dynasty had lost its lands and its influence and we see growing out of this the Mohammedsai clan assuming more and more control until in 1818 a Mohammedsai chief, by the name of Dost Mohammad Khan, defeated the last of the Durrani in Kabul and began the reign of the Mohammedsai, which continues to this day. It was under the grandson of Dost Mohammad, Abdur Rahman Khan, that the country was finally made safe for travel and most of the tribes were brought into allegiance to the court of Kabul. His son, Habibullah Khan, and grandson, Amanullah Khan, continued in this vein until the revolution in 1929, when King Amanullah was deposed. After a short war, which brought to power the late Nadir Shah, peace and order were restored and Afghanistan entered a more stable period both politically and economically." (Goodell, May, 1962, pp. 4-5.)
Mindful of its deep roots in history and of its illustrious periods of artistic, literary and religious achievements, Afghanistan is today making a serious effort to enter the 20th century. One of the means of doing this is seen to be via the use of another language -- which is seen as English. Those in authority have demonstrated their belief that through English their country will be able to industrialise, exploit natural resources, advance technologically and play a part in the world political scene in spite of factors which suggest with some logic that the Russian language should be this avenue to the modern world of technology and progress. The outworking of the present commitment to English as the foreign language has taken place over the past half century.

The first secondary school as we define it today (there were schools in the mosques of long standing) in Afghanistan was Habibia College which was inaugurated just over fifty years ago by King Habibullah Khan. It was patterned on an English speaking school he had visited in Delhi a year or so earlier. Thus the introduction of English to the school system in Afghanistan comes through India with some of the first teachers being Indian. After this initial launching of a modern educational system there came an overlay of French influence and German until in the early forties we have in the capital one French speaking secondary school, one German speaking and three English. At this time the government decided to strengthen the teaching of English in Habibia and staffed it with young American teachers. This decision was later amplified in the other English speaking schools and by the introduction of

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6 Their dates of inauguration are as follows: Habibia College, 1903; Nejat, Istaqlal, Ghazi, and Ebn-i-sina c. 1930 during the reign of King Amanullah. The last two and first teach English from the seventh class to the twelfth which is terminal. Originally, when staff permitted, English was begun in the fourth class and from then on all subjects were in English. As the demand for education grew in the late forties and early fifties this could not be maintained and English was taught only from the seventh class and as a language not as a medium of instruction.
English at the seventh class to all newly established schools. By the mid-fifties English was, by accomplished fact if not public announcement, the unchallenged foreign language in the school system of the entire country. Socially French had been the language of greatest strength but its position began to weaken when the present King, Zaher Shah, decided to have two of his sons tutored in English although they were being educated in French at Istaqlal Lyceee, the French speaking school, and to send the two younger sons to Habibia where they would learn English. Thus the foreign language of the royal family began its change to English and English became the only foreign language taught in the middle and secondary schools, through the entire country. By the early sixties English had been made the one foreign language of the university and the Ministry of Education had begun to fully recognize the

9 The Afghan constitution (the revision of this in the fall of 1964 was not available, but I am led to believe that it is substantially unchanged on this point) under Article XX makes primary education compulsory for all children of school age. "The doors of the schools are open to all, regardless of their religion, wealth, and lineage." Under Article XXXI it makes clear that all matters relating to education are under the supervision of the government. "The aim of education, in general, is to bring enlightenment to the masses, to impart literacy, to raise standards of living, and to train capable persons to handle national affairs." (____, 1956, Education in Afghanistan, Kabul: The Royal Afghan Ministry of Education, pp. 10-11.) "...Although slow progress is being made to provide facilities for all children of school age, money, buildings, and teachers are the limiting factors, not the constitution. As yet the educational system has not developed or been allowed to develop a separate and privileged system for the elite and the affluent. There are no private schools and the King's sons can be found attending school with the other students of Habibia. This is rather remarkable in view of the struggling position of the educational system but nevertheless a point of strength and a unifying factor for the country. It shows that those administering the affairs of the country have faith in the present system and expect to see it improve. In this way the idea of equality of education is upheld and if the present system progresses steadily in improvement, will continue to hold all members of the society in the one system." (Goodell, May 1962, pp. 2-3.)
staggering responsibilities it now had in the area of teaching English as a foreign language.

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A useful distinction should here be made between the two terms, foreign language and second language. The former implies use of the learned language in contacts with foreign nationals either in or outside of one's own land, the latter refers to the use of the learned language as a unifying language between linguistic groups within a country. In Afghanistan this unifying language or second language is Persian whereas English would be called the foreign language.

Marokwardt in an address to the 1962 General Meeting of the Modern Language Association points up this distinction which, as he observed, originated among British English language teachers. "By English as a Foreign Language they mean English taught as a school subject or on an adult level solely for the purpose of giving the student a foreign-language competence which he may use in one of several ways -- to read literature, to read technical works, to listen to the radio, to understand dialogue in the movies, to use the language for communication possibly with transient English or Americans. It is a use of the language not too different from what we have in mind when we teach foreign languages in the United States.

"When the term English as a Second Language is used, the reference is usually to a situation where English becomes a language of instruction in the schools, as in the Philippines, or a lingua franca between speakers of widely

10 For further details of the history and proportions of this task see — 1956, Education in Afghanistan; Wilber, 1956; Gerald Dykstra, 1959, Terminal Report with Reference to the English Language Program, (mimeo) Teachers College Columbia University, Office of Overseas Projects; and Goodell, May 1962.
diverse languages, as in India. The reference to unity here is not necessarily political but socio-cultural in areas such as commerce, law, education, interpersonal relations, etc.

The Afghan educational policy for languages instituted by the Ministry of Education consists of the following hierarchy:

<table>
<thead>
<tr>
<th>Rank</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>National language</td>
<td>Pashtu</td>
</tr>
<tr>
<td>Mother tongue, L₁</td>
<td>Pashtu or</td>
</tr>
<tr>
<td></td>
<td>Persian or</td>
</tr>
<tr>
<td></td>
<td>Uzbeki or</td>
</tr>
<tr>
<td></td>
<td>Turki or</td>
</tr>
<tr>
<td></td>
<td>Other (See footnote 5 for languages and number of speakers.)</td>
</tr>
<tr>
<td>Second language, L₂</td>
<td>Persian - (for L₁ Pashtu, Uzbeki, etc.) and/or</td>
</tr>
<tr>
<td></td>
<td>Pashtu - (for L₁ Persian)</td>
</tr>
<tr>
<td>Foreign language</td>
<td>English (except in two secondary schools, one German, one French.)</td>
</tr>
</tbody>
</table>

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12 In the hierarchy the terms second language and foreign language are used in the British sense as defined by Markwardt, 1963, and I have added two further designations, that of L₁, the language learned first or the one of constant or habitual use and L₂, the language learned after the first for whatever purpose, as used by J. C. Catford at the School of Applied Linguistics, University of Edinburgh.
As already mentioned, as yet Pashtu is not actually operating in the fullest sense as a national language or as a genuine second language. For the native speaker of Pashtu and the well taught second language speaker of Pashtu this is the case but the latter group is small. As the chart indicates something less than the stated policy of Pashtu as the national language is in reality taking place. Until the decision to make Pashtu the national language which ideally was intended to serve as the second language as we have defined it was taken, Persian was in fact filling this position for all practical purposes. It should be noted that for substantial groups within Afghanistan Turki, Uzbeki, Nuristani, etc. operate as mother tongues \((L_1)\) with Pashtu and Persian as second languages depending on the area. In the past it has usually been the case for instruction to begin in Persian for these areas with Pashtu as the other learned language beginning in the third class. Now, however, with the greater effort of the government to actually make Pashtu the national language, this state of affairs may well reverse with Pashtu as the language of instruction where the mother tongue is other than Persian or Pashtu.

1.12 The kind of Persian under description.

Modern Persian today covers a large geographical area (although not as large as it did in the Middle Ages when it became the language of government and commerce as far east as India and as far west as the Mediterranean and was still serving as a viable instrument of government in India when the British
were extending their influence over the sub-continent more than a century ago) which can be divided according to national governments into three parts: Iranian, Tajik, and Afghan Persian. Although these three divisions are made on geo-political considerations one can make clear and valid differentiations between the three by appealing to their standard forms as spoken in the three capital cities, Teheran, Doshambe, and Kabul, respectively. At the same time along the contiguous borders of Iran, Afghanistan and Tajikistan SSR we find closer dialectal affinity than exists between these border cities and their respective capitals of the standard dialect, e.g. the Persian of Herat in western Afghanistan is more closely allied.

13 See Mountstuart Elphinstone, 1915, An Account of the Kingdom of Cabool, and Its Dependencies in Persia, Tartary and India: Comprising a View of the Afghan Nation, and a History of the Durrani Monarchy, London: Longman, Hurst, and John Murray; and Alexander Burnes, 1842, Cabool: A Personal Narrative of a Journey to, and Residence in, that City, in the Years 1836, 7, and 8, London: John Murray. Of Elphinstone, Donald H. Wilbur, 1956b, Annotated Bibliography of Afghanistan, New Haven: Human Relations Area Files, Inc., makes the following evaluation: "The first detailed account of Afghanistan from a Western observer, compiled by an envoy from the East India Company to the court at Kabul in 1809. A number of members of the envoy's mission collected information on such subjects as geography, government, languages, manners and customs, education, religion, and tribes. Its popularity resulted in French editions in 1817 and 1842 and an expanded English edition in 1842." P. 6. In both of these works the influence of Persian as a lingua franca for the entire middle east area is very evident.

14 For a linguistic description of the three dialects of Persian see the bibliography in Jacqueline Wei, 1962, Dialectal Differences Between Three Standard Varieties of Persian: Teheran, Kabul, and Tajik, Washington, D.C.: Center for Applied Linguistics of the Modern Language Association of America, (mimeo and stamped NOT FOR GENERAL CIRCULATION), pp. 48-9. Unfortunately (as it is the only work of its kind) it has not been revised and formally published; therefore it will not be quoted in this thesis. I am indebted to Dr. Charles Ferguson, Director of the Center for Applied Linguistics, Washington, D.C. for circulating this paper privately.

15 The boundaries of this geographic area are as follows: On the West: Iraq and Turkey; On the North: Soviet Azerbaijan, the Caspian Sea, Turkmen and Uzbek SSRs as well as the Kazakh and Kirghiz Republics; On the East: Sinkiang, Kashmir and Pakistan; On the South: Baluchistan and the Persian Gulf.
to the Persian of Mashad in eastern Iran than either is to the standard of Kabul or Teheran. The differences between the three are largely of a phonological (and here more heavily in the vowel systems than in the consonants) and morphological nature (allomorphs, principally as to minor changes of a vocalic nature in verbal affixes). In the lexical area we see differences that are explained on the grounds of cultural contact with other nearby groups (different cultures or sub-cultures of the same culture). For example Morgenstierne well pictures the resultant differences of even present day Afghan Persian when he says, "The vocabulary of Afghan Persian has to a very small extent borrowed from the old Iranian and Indian tongues, which it has superseded, and the number of Pashtu words is also negligible. ...Not a few Turki words are in common use; but the great majority of loan-words, peculiar to the Persian of Afghanistan, are of Hindostani origin. A suffix like -vāla [/wala/ in the transcription of this thesis] is freely used, and compounded with Persian words; one constantly hears words like bōlvāla 'spademan', or even xud-e xtiyārvāla 'an independent man'.

"In some cases ancient words are still in use, which have disappeared in ordinary Persian. Thus 'daughter-in-law' is called sunā [/sunu/] (Vullers sunah, sunhār, Koran Comm., sunuh, Browne, JRAS., 1894, p. 472), and 'husband's brother' is (h)ēvar (not in Vullers). This last word must be connected with Pashtu lēvyā, Sanskrit deva- etc., even if the disappearance of the d- cannot be explained. The word nanū 'husband's sister' is also curious, reminding one of Pashtu nandrōx, Lahnda nīnār and other modern Indian derivatives of Sanskrit nandr-."

16 A common remark from a Teherani is that Afghans speak "Shakespearean" Persian due to the retention of these ancient words.
"Generally speaking the Persian, at least of Eastern Afghanistan, is related to the Tajiki of Turkestan, and seems to have been introduced from there, rather than from Persia itself. The Badakhshi and Madagashti dialects described in the LSI [Linguistic Survey of India] and by Col. Lorimer (RAS. Prize Publ. Fund, VI) are also very closely related to the Persian spoken in and about Kabul."

For the purposes of this thesis we will call the Persian spoken in Iran, Iranian Persian; in Tajikistan, Tajik Persian; and in Afghanistan, Afghan Persian. More specifically the dialect of Afghan Persian described will be Kabul Persian and of that what I shall call educated colloquial, that spoken by teachers, government officials, radio and press participants in the normal affairs of their respective professions. Kabul Persian is looked upon as the prestige dialect of Persian in Afghanistan because of the fact that Kabul

17 Morgenstierne, 1926, pp. 8-9. These examples given by Morgenstierne are still in current use as seen in J. Christy Wilson, 1960, Kabul Persian, Washington, D.C.: Foreign Service Institute, Department of State, pp. 7.45-6: /sənə/ 'daughter-in-law' (note, this becomes /sunə/ in the transcription of this thesis); /eɪwəx/ 'husband's brother (/eɪwar/); and /nænu/ 'husband's sister' (/nænu/). The curious use of /v/ in Morgenstierne in place of /w/ can only be explained as the use of the formal pronunciation pattern for this one phoneme by the informant out of deference to Morgenstierne's great scholarship.

Corroborating this observation in L. Bogdanov, 1930, "Stray notes on Kabul Persian," Journal and Proceedings of the Asiatic Society of Bengal 26.1-123, pp. 48-51 in the following terms: "More than that, I maintain that these two languages [Kabuli and Tajiki Persian] are essentially and originally identical and that any differentiation of these two languages must have occurred at a quite recent epoch. We may take it that, roughly speaking, up to the rise of the Barakzay dynasty (1826) there has never been any actual isolation of Afghanistan from the rest of the vast tract of land between Samarqand and Bukhara, on one side, and Kashmir and the Punjab, on the other (including, besides Afghanistan, Khiva, Khoqand, Kashghar, Khorasan and Seistan), and that the Persian language used through the whole expanse of that area must have been more or less uniform." P. 49.
is the capital, and center of commerce, and learning. It is so-to-speak the mother city for all Afghanistan.

References made to English will mean American English and that spoken in the Eastern United States. For the most part a simple reference to Persian and English will be made but must be understood to refer to the above mentioned varieties.

A word about the transcription of Persian and English is necessary. A consistent phonemic notation has been devised and, for convenience, one that is easily typed. This, of course, was a prerequisite of linguistic description but it did not solve the question as to the use of the Arabic script. The Arabic script has not been used in chapter 3 on phonology nor in chapter 5 on grammar due to its limitations to adequately represent all sounds or word and morpheme boundaries. Where these considerations were not paramount the Arabic script has been employed, i.e. chapter 6, although supplemented by a phonemic transcription in line with that used in chapters 4 and 5.

1.2 The problem stated and defined.

Communication in the broadest sense, defined by some psychologists as any stimuli received by any organism, does little to adequately set boundaries for those concerned with communication between humans or verbal communication. It does, however, suggest that there is an aspect even of human communication that is not precisely covered by the term verbal. By this I mean the type of communication carried on by means of paralanguage and that aspect of linguistic meaning carried by cultural institutions.

1.21 Communication: form and meaning.

This vastly complex aspect of communication has until recently been considered to be the legitimate work of the psychologist, sociologist, and anthropologist. Although the reason for this on the part of linguists
is not the burden of this thesis it might be well to allude to the fact that many American linguists of the Bloomfieldian persuasion until recently made a very sharp cut between what they called form and meaning or mechanism and mentalism, concerning themselves solely with the physical properties of the utterance. Of late there have been those who have come forward, e.g. Fries, Katz and others, in defence of both Bloomfield and mentalism making a very convincing case for the fact that Bloomfield did not exclude meaning and that he did not castigate mentalism as the term is contemporarily used by some linguists today. It is unfortunate in light of this that Katz in his article "Mentalism in linguistics" has not chosen another term for this concept since the current use of the term is not that which Bloomfield was criticizing. Bloomfield was against bringing into a science any term as highly theologized as spirit or mind because these terms were often considered as having independent being but lay outside what Bloomfield wished to include in an empirical study. "Typical of Bloomfield's criticism of mentalism is this: 'The mentalistic theory ... supposes that the variability of human conduct is due to the interference of some non-physical factor, a spirit or will or mind ... that is present in every human being. This spirit, according to the mentalistic view, is entirely different from material things and accordingly follows some other kind of causation or perhaps none at all.' ... Bloomfield is criticizing mentalism because it renders prediction and explanation of linguistic behavior in terms of causal laws completely impossible." Katz goes on to explain that taxonomic

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18 Fries, 1954; and Katz, 1964. See footnote 2. The juxtaposition of these names should not be construed to imply any kind of identity other than their wish to see linguistic study freed from a rigid mechanistic approach.

linguistic theory and mentalistic linguistic theory deal with differing data precisely because of the difference in the conceptual machinery they contain.

There is nothing in the data that is untouchable (as one is lead to believe by the taxonomic theories) it is the theory that decides which data shall be considered. As Katz says, "The step of hypothesizing such a mechanism in the process of theory construction in linguistics is no different from hypothetical postulation in theory construction in any other branch of science where some component of the system about which we wish to gain understanding is inaccessible to observation. The linguist can no more look into the head of a fluent speaker than a physicist can directly observe photons or a biologist directly inspect the evolutionary events that produce the human species."20 The conclusion is a valid one from the point of view of psychology and neurology for it allows for the extension of linguistic inquiry within a theoretical framework to these areas without appeal, as Bloomfield would say, to such "mental entities as 'spirit' and 'soul' ".

Since this very recent injection of Katz's into the general question of the boundaries of linguistics and verbal communication is but illustrative of the same thrust beyond form to meaning and situation made by Halliday21 and others a concluding remark by Katz will suffice: "The actual difference between the taxonomic and the mentalistic conceptions of linguistics lies in what

20Katz, 1964, p. 128.

linguistic theories built on each of these conceptions can accomplish by way of answering questions (1), (2), and (3). The three fundamental questions with which a synchronic description of a particular language deals are these:

(1) What is known by a speaker who is fluent in a natural language? That is, what facts about his language underlie his ability to communicate with others in that language?

(2) How is such linguistic knowledge put into operation to achieve communication? That is, how does a speaker use such linguistic knowledge to convey his thoughts, opinions, wishes, demands, questions, emotions, and so on to other speakers?

(3) How do speakers come to acquire this ability? That is, what innate dispositions and developmental processes are responsible for transforming a nonverbal infant into a fluent speaker? (Katz, 1964, p. 130)

We have found that the taxonomic linguist confines linguistic investigation to stating those facts about the structure of a natural language which can be formulated within the framework of a classificational system, while the mentalist goes far beyond this in seeking a full answer to all three questions. This difference is important; it justifies us in rejecting the taxonomic conception in favor of the mentalistic one. Taxonomic linguistics can only describe the utterances of a language; mentalist linguistics not only can do this but can also explain how speakers communicate by using the utterances, and how the ability to communicate is acquired."^22

This is but one instance of the break with a totally formal stance in linguistic theory and an indication of the change which will be needed to form the setting and background for the study of linguistic and cultural differences in the teaching situation.

1.22 In communication cross-culturally at the language teaching level.

The usefulness of a theory in any scientific discipline proves or disproves its adequacy and any adequate linguistic theory is usually based on insight into and an intimate understanding of the practical business of language use (acquisition and production).

Applied linguistics, therefore, encompasses not only the application of linguistic theory in description and comparison and the use of these findings in the presentation of language material in the classroom but also the use of psychological theories and principles, as well as knowledge of sociological and cultural principles that will allow the fullest implementation of linguistic material in serving to adequately interpret, cause growth in or identify with a new linguistically-cultural milieu. We see meaning as the pivotal link between language and culture; context, between form and situation. 23

In keeping with the strict adherence to form and formal patternism in linguistic study in the first half of this century American linguist-language teachers applying linguistic principles to teaching materials prepared teaching texts geared to teach item sequence, but not semantic placement. That is, they did not see the pivotal place of meaning in linguistic theory nor of situation in meaning theory hence the great lack of semantic placement for lexical items. Meaning and use in a linguistically-cultural milieu were not provided by these materials. Hence situation was never a focal aspect of teaching materials and the result often seen was either lexical items with no meaning (but used correctly in the pattern practice sentences) or lexical items which had become

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23 Halliday, 1961, p. 244 ff for the relation of form to situation; Ellis, 1964, pp. 1-4 and note p. 23 with diagram of this relationship.
extensions of the native language of the learner, i.e. the student added 'table' as an alternate linguistic symbol to the glossed equivalent in the text. English was merely an extension of his own linguistic system for communication in a familiar cultural setting. For the Afghan student this meant he merely assigned all the various meanings and uses of /mesə/ onto 'table' with consequent misunderstanding. (See 3.6 where coordinate and merging linguistic systems are discussed.)

The semantic similarity between two physical items, e.g. house, each in its own culture may not exist beyond the elementary fact that they are both used to live in by people. The function of "the house" semantically (including cultural meaning, see 6.) may be entirely different between the two languages. It is apparent that it will be as we come to see the total culture behind each language and the part houses play in it.

Fries makes the following comment on this point: "As a matter of fact practically no words of one language, except highly technical words, ever cover exactly the same areas of meaning and use as those of another language. For the English word table there is the Spanish word mesa; but this word mesa is not used in many of the situations in which the English table is used. Mesa is not used for a 'table of figures' or a 'table of contents', or for a 'time table'. On the other hand mesa is used in many connections for which we do not use the word table, as for 'landing of a staircase,' or for an 'executive board.' "

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24 This, of course, must be taken to include at the formal level the collocational range for these two items which differ between the two languages.

Cross-cultural contact of this sort in the classroom (and this is where it must be dealt with) demands more thought as to the 'meaning' one can build into a situation by its relevant features that will adequately and truly support the English language meaning of the lexical items being taught. It is folly to imagine that a beginning student of English or any language can be expected to jump mentally from sentence to sentence in a substitution drill each with a different situation and keep his "meaning" bearings situationally. The mind boggles at this absurdity and the lexical items being mouthed become meaningless sounds.

Coming together at the point of contact of either a lexical item such as 'table' or a phrase such as 'give me the book.' are two vastly complex linguistico-cultural systems. Carried by the item 'table' are many and varied aspects of the culture in which the language that employs it is a part. To ignore this fact on either side of the languages in contact in language teaching is to ignore the living, systemic aspect of language at this level. Form and system are only guidelines to the more effective description of language and hence eventual learning. They should not be made an end in themselves. The word or phrase or sentence must be seen in its total linguistico-cultural setting for one to come to a full knowledge of its meaning. This is ideal, for even a native speaker of a language never knows the total aggregate of all possible situations. One thing he does know and that is how to recognize possible sentences from impossible and this knowledge the new learner of the language should be expected to acquire as he acquires a larger and larger number of the possible situations and uses of any lexical item to be learned.
This author takes the view that sentence meaning, for example, is the combined aggregate of its isolable parts. It is not as some theorists have implied a unit of meaning with no smaller references for this would mean that users of language would have to learn separate combinations of linguistic symbols for every event and no generalizations would be possible as to the meaning of a lexical item from one context to another.

1.23 In Afghanistan and the teaching of English as a foreign language.

In Afghanistan there are teaching materials which have been developed over the past dozen years and which show an evolution from the very strictly pattern-practice oriented variety to a theme-oriented one, to one which at present is a combination of the two. The name of this set of eight volumes with supplementary readers is Afghans Learn English and was edited by Robert L. Canfield, Director of Materials, Institute of Education, Kabul University. In no case was an adequate study made nor knowledge used of linguistico-cultural meaning of Persian as it came in contact with English words used in the texts mentioned. As will be pointed out later this contact between Persian and English has its locus in the Afghan student.

The study, made in section 6.0 of the thesis, will, therefore, be the capstone of the previous four sections all of which add to fulling-out the picture presented by language as it affects individual behavior, its psychological aspects.

26 A résumé of the English Language Program in Afghanistan in Dykstra (1959) gives the essentials of this evolution. The texts referred to are (1) untitled experimental versions, little more than pattern practice by Schottin, Eyestone and others; (2) English for Afghans by E. A. Hall, edited by M. M. Eyestone, with teachers editions, a series of seven books. These were theme-oriented, i.e. they contained dialogues built around school and home life in Afghanistan. In this sense they were culturally oriented but to the Afghan culture rather than the American; and (3) Afghans Learn English (8 vols.) by Jane Williams et al., edited by R. L. Canfield, in present use in Afghanistan. More will be said about these volumes in 6.0.
and some specifics of phonology and grammar to give linguistic background for the study of lexical items and their cultural load in section 6.0.

1.3 Linguistic stance and definition of terms.

For the purposes of this thesis the material presented will be largely within the context of the Neo-Firthian (as already mentioned and expanded on by Halliday (1961) and Ellis (1964)) framework of grammatical and situational theory.

1.31 Wholism

During the extensive reading and research for the thesis I have, however, also been much influenced by the 'wholistic' approach to the description of the world around us and as this related to linguistic and non-linguistic phenomena. This concept has made substantial contributions in various sciences as attested by the well-known German-American philosopher, Ernst Cassirer, who writes: "The electro-magnetic field -- in the sense of Faraday and Maxwell -- is no aggregate of material points. We must, and must, indeed, speak of parts of the field; but these parts have no separate existence. The electron is, to use the term of Herman Wiyl, no element of the field; it is, rather, an outgrowth of the field ("eine Ausgeburt des Feldes"). It is embedded in the field and exists only under the general structural conditions of the field. An electron is nothing but a part in which the electro-magnetic energy is condensed and assumes a peculiar strength. In the development of psychology we meet with the same tendency of thought. According to Hume or Mach, there was no other way to understand a complex psychic phenomenon than to disintegrate it into its first elements; into simple sense-data. Even our self, our personality, is nothing but a 'bundle of perceptions'. In modern 'Gestalt-psychology' all this was transposed into its very opposite. Psychical phenomena -- it was declared --
have a definite structure; and it is impossible to understand this structure by treating it as a loose conglomerate — a mere mosaic of sense-data."^{27}

In the field of anthropology we see a similar view being taken by such prominent scholars as the late Ruth Fulton Benedict in *Patterns of Culture*,^{28} Margaret Mead in her description of south-sea island communities in *Cooperation and Competition Among Primitive Peoples*, and A. L. Kroeber in *Configuration of Culture Growth*.

Linguists, too, have been venturing out of their well-established domain of phonology and grammar to encompass the setting of linguistic utterances. Pike in a recent article entitled "Language as particle, wave, and field," very ably points out the field or total aspects of language and its relation to the human scene: "The view of language as made up of field sees language as functional, as a system of parts and classes of parts so interrelated that no parts occur apart from their function in the total whole, which in turn occurs only as the product of these parts in functional relation to a meaningful social environment."^{29}

Pike continues by pointing out the wholeistic aspects of language in communication. "Communication requires understanding, and understanding requires a memory reservoir, or pool of common experience, or field, against which particular speech events at a particular moment stand out as figure on ground,

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and provide the structure which provides the potential for patterned events. Without the total ground, the figure has no meaning and no perceptual impact."\(^{30}\)

The field approach... "emphasizes the 'wholistic' nature of phenomena. It emphasizes that in communication it is not the bits and pieces which communicate, but the total speech event which carries communication impact only against a behavioral background of structured experience, structured memory, and structured potential."\(^{31}\) It is at this point in the study of language and extra-linguistic phenomena that we find ourselves today: with considerable knowledge of the figure but with very little comparative knowledge of the ground.

Professor Firth with characteristic insight to the problems of the science of language saw the field aspects of linguistic meaning in the total human setting but in contrast to Pike and others felt this could best be handled by an analysis at different levels. He saw meaning as primary in linguistic study and since meaning must ultimately become a part of any comprehensive linguistic theory, the end product of linguistic study must include the semantic content of linguistic form.

1.32 Meaning.

Until recently (in the United States at least, less so in Great Britain) and in line with early Bloomfieldian doctrine laid down in his Language\(^{32}\) meaning was to be excluded from scientific linguistic theory because it could not be subjected to empirical formulation. This line of reasoning has been more


\(^{31}\) Ibid.

\(^{32}\) Bloomfield, 1933. (See footnote 2 for full reference.)
or less followed until recently by the followers of Bloomfield. (See statement on this above.) On the continent, however, a more generous point of view emerged from the teaching of Ferdinand de Saussure (1857-1913) and set forth in a posthumous volume, Course in General Linguistics edited and published by his students. This volume, contemporary with both Bloomfield's Language and Sapir's volume of the same title, takes a slightly different tack stating that language must be studied in context as part of the whole man. Language being a whole, an internally congruent entity, could not be cut up into bits and pieces, at least, not so and retain its meaning.

It is from these very fundamental premises that the late Professor J. R. Firth of the University of London constructed his own point of view. Like de Saussure Firth held to the more inclusive view of linguistic study: "Since the 1930's I have firmly held to the view that descriptive linguistics fulfils its function best if it regards language behavior as meaningful over the whole range of its relations with life in society, and in order to deal with such a vast subject proceeds by the dispersal of the total complex at a series of levels of analysis, probably constantly increasing in number and specialization. Some indication of this approach was sketched in 1935, and a further example is shown in my 'Modes of Meaning'." In the following year Firth makes a similar


\(^{34}\)See D. T. Langendoen, 1964, Rv. Studies in Linguistics in Language 40.305-21, p. 306-7 where a distinction is made between the de Saussure and Firth-Malenowski concept of language and its referent although they stand together as against others who saw meaning outside the primary concern of linguistics.

statement, "I should like to suggest once more that linguistics at all levels of analysis is concerned with meaningful human behavior in society and that the structures and systems and other sets of abstractions set up enable congruent statements of meaning to be made in exclusively linguistic terms."36

Looking in the same direction as Firth's 'series of levels' for the analysis of meaning, Fries speaks of layers of meaning in Linguistics and Reading which for reasons of space will not be dealt with here except to mention that his 'layers of meaning' include lexical, grammatical, and socio-cultural.37 In a more general statement Fries sees the problem of meaning much as the Neo-Firthians. "The only true and correct meanings of words therefore are the situations in which they are used. A 'word' consists of a sound, or a combination of sounds, that has become conventionalised in a culture or a linguistic community, that is commonly used in certain situations and that stimulates certain responses in a hearer belonging to the same community. The dictionary maker, or anyone who wishes to determine the meaning of a word in a scientific way, will observe and record as many instances of its use as he can. The record will necessarily contain all the essential features of the contexts (the situations) in which the word occurs."38

Firth also drew from anthropology and especially from the very able scholar, B. Malinowski, his contemporary. It was from conversations with


37 Fries, 1962, pp. 104-12. (See footnote 2 for full reference.)

38 Fries, 1945, p. 43.
Malinowski and through the latter’s writings that the term 'context of situation' was obtained and widely used by Firth. The term context of situation, however, is not used in this thesis because a distinction between context and situation is made along the lines suggested by Ellis in "On contextual meaning." In the following discussion a sketch is given of the place meaning has in the Neo-Firthian writings of Halliday, "Categories of the theory of grammar" (1961) and Ellis "On contextual meaning" (1964).

The term meaning in its broadest aspects is best defined as a relationship, that of the linguistic symbol to its situational surroundings. Ellis states it this way: "Meaning is seen as a relation between items at the various levels." Meaning is seen as occurring at different levels. This is necessary since language itself must be accounted for at different levels. The following chart will make this clear.

![Chart](chart-image)

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40 Ellis, 1964, p.1. (See footnote 21 for full reference.)

41 Ibid.
It is, therefore, within this scheme of levels that meaning is seen as a relation. We can then talk about phonological and graphological meaning of an item such as a term in a phonological system and its relation to the total other items in that same system. Thus, for example, the item /b/ in English is related to all other items in the phonological system of English and by virtue of this relationship can be said to have phonological meaning. The item in Persian written as /b/ will have a different phonological meaning due to the different relationships which obtain in the phonological system for Persian. This is more obvious at the graphological level where the items are clearly different, i.e. Roman b and Arabic ٧.

Likewise formal meaning of an item can be spoken of as its relation (at grammar or lexis) to other formal items. Within the kinship system of Persian we have the term /kaːkaː/ 'father's brother' (uncle from the point of view of ego) which is part of a four term system and in English 'uncle' which is part of a two term system; therefore, we can say that the formal meaning of /kaːkaː/ is different from 'uncle'.

**Persian:**

<table>
<thead>
<tr>
<th>/kaːkaː/</th>
<th>/ama/</th>
<th>/maːmaː/</th>
<th>/xaːla/</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

```
( /padar/ )    ( /maːdar/ )

ego
```

**English:**

```
Uncle          Aunt

ego
```
At the interlevel of context we speak of contextual meaning or the relationship between form and situation. Therefore, formal items have contextual meaning. The exact nature of the difference of this contextual meaning as it exists between grammatical and lexical items will not be discussed although Ellis alludes to this by saying, "Whether we speak of grammatical contextual meaning and lexical contextual meaning may depend on our conception of the inner structure of the interlevel of context in its relation to form and to situation (cf. n. 9), but in any case when we speak of grammatical meaning and lexical meaning tout court the reference must be to formal meaning." 42

Contextual meaning includes what the layman thinks of when he uses the term meaning but it does not include necessarily the conceptual scheme he may use to explain meaning. Ellis' formulation is helpful at this point. "Contextual meaning relates form to situation. Unlike phonological and formal meaning, then it is a relation not within a level (or, in the case of phonology, interlevel), but between levels (across the interlevel of context) - it can, of course, be formulated as a network of relations within context, systemic (paradigmatic) and structural (syntagmatic) ones of the formal meaning type, but what is important is that this network is determined, not within the level (or interlevel) as formal meaning is, but by the joint action of formal distinctions (independently established in the statement by formal analysis) and situational differentiations to which they relate." 43 Contextual meaning, then, encompasses the categorisation or segmentation of extra-linguistic phenomena and as this applies to specific uses of language in specific situations. This is not to say that linguistic items do not have individual meanings because Ellis allows

42 Ellis, 1964, p. 3.

43 Ibid., p. 2.
for potential and instantial contextual meaning. "The potential contextual meaning of a formal item is the range of possible contextual meanings of that item considered in abstraction from any text; its instantial contextual meaning is the actual meaning in a given instance of occurrence in a given place in a given text with a given situation."

Situation is a level of abstraction where are recognized relevant features, features relevant to that situation and its linguistic component. Situation is, therefore, extra-linguistic and, as a general category, the same for all languages. Sameness resides in the features of the situation in which any language potentially can operate. What differs between languages is the selection of situational features made by the different systems of contextual meaning.

It is at this point that we should emphasize that cultural and linguistic differences reside. The linguistico-cultural grid then is the term I shall at times employ to designate this network obtaining between form and situation or between linguistic form and culture.

44 Ellis, 1964, p. 3.

45 J. R. Firth, 1957, "Personality and language in society," Papers in Linguistics 1934-1951, London: Oxford University Press, p. 182 where the following statement is made, "My view was, and still is, that 'context of situation' [a term borrowed from B. Malinowski, see Coral Gardens and Their Magic] is best used as a suitable schematic construct to apply to language events, and that it is a group of related categories at a different level from nature." See 2.42 for fuller details.

46 Ellis, 1964, p. 3.

47 Implied here is the overlap in meaning of the two terms, language and culture as commonly used. In using the term, language, we include meaning and meaning also resides in culture. In using the term, culture, we are including language for much of culture would have no meaning without language.
1.33 Practical limits of the thesis.

While the general outline of the thesis may seem broad enough it is limited by the primary nature of the research. The general area of language learning in the cultural context has not had any great amount of research and thinking done in it, therefore, it became necessary to investigate the question in its broadest setting -- i.e. the question of linguistic relativity (2.0) and to some extent cultural relativity, of interference phenomena and its psychological reasons in foreign language learning (3.0). These studies are comprehensive rather than detailed in order to show the part these aspects of language play in the teaching situation. Linguistic differences of a phonological (4.0) and grammatical (5.0) nature are meant to be suggestive of differences in this area by illustrating some of the possible areas of difference for an exhaustive study of either phonology or grammar on a comparative basis is a work of immense proportions in its own right.

Thus it is hoped that a groundwork sufficiently comprehensive has been laid for the presentation of lexical material in a cultural setting as a means of showing differences (6.0). The practical outcome of this presentation will be to show what, in fact, the Afghan student at the seventh class and on may project from his own culture and language onto the English lexical items found in Afghans Learn English Book I to VIII. This study will consist of selected items from these eight books.

1.4 Cultural point of view.

Thus far the term culture has been used in a manner that needs definition for there are two current uses of the term of which only one will be used in this thesis.
1.41 The two uses of 'Culture'.

Culture as it has been used and will continue to be used in the thesis will be taken to include all those learned patterns of living (including cognitive and perceptual behavior) necessary for the adjustment of people in a particular society to their environment.48 The other definition of culture which will not be used but which is still, unfortunately, in rather wide use among language teachers and is the lay definition of the term, includes any of the refinements of artistic expression in the areas of music, art, dance, drama, etc. or broadness of general learning.

The former definition is that used by anthropologists and indicates the area of their interest which upon reflection will be seen to include language for much of culture is revealed and transmitted via language. Indeed, it is doubtful if any specific culture could exist at all without the medium of language. The child acquires language and culture simultaneously. One is not possible without the other. An interesting observation by Bloomfield on the nature of language, society and the individual follows: "Let me now state my belief that the peculiar factor in man which forbids our explaining his actions upon the ordinary plan of biology, is a highly specialized and unstable biological complex, and that this factor is none other than language.... By their common habits of speech the individuals of a human speech-community influence each other and work together with an accuracy of adjustment that makes of the speech-community something like a single biological organism... It may be, now, the social value, the tremendous impact of his speech forms when they are overtly uttered, that makes it possible for a man, even in the absence of significant

outer events, to live most intensely and sometimes to bring forth from such an hour an enduring expression, which we call a work of art." Bloomfield clearly implies the pivotal nature of language in relation to culture and cultural transmittal the means by which group cooperation is made possible and indeed the passing on of any learned activity other than the most elemental.

Fries states the case well for language when he says, "It has been not only the means through which to procure the cooperation that puts at the service of the group all the knowledge and wisdom of the most intelligent and most courageous individuals. Language has also been the store-house of all the information and knowledge that man has been able to achieve throughout his many years of existence and has put into reports that his fellows could understand and remember. Language has furnished both the means of sharing meanings and also the means of storing up meanings."  

Definitions of culture by anthropologists are many and much thought has been expended on delimiting the area of study that anthropology rightly covers. The late American anthropologist Ralph Linton has given the following definition: "A culture is the configuration of learned behavior and results of behavior whose component elements are shared and transmitted by the members of a particular society."  

As with most other definitions the learned

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50 Fries, 1962, p. 98.

aspect of culture is emphasized. Fries relates this to language by saying in *Linguistics and Reading*, "It is the progressive passing on of various parts of this stored body of meanings that 'domesticates' a child — that channels his behavior into the patterns that have significance for each of the various groups of which he becomes a member. Parents, with much 'talk', develop for him the meanings of 'toilet behavior,' of eating with a spoon (or with chopsticks, or with the thumb and two fingers), of not eating 'dirt,' of 'obeying' commands, of greetings and taking leave, of 'ownership' or his and theirs, of 'staying on the sidewalk' and 'red and green lights,' of putting on and taking off of clothes, of toys, of birthdays, and Christmas and Sunday and schooldays, of pictures and stories and games and songs. Through the 'talk' of school companions and teachers he grasps the 'meanings' that control the behavior of what is usually his first group outside the home."

Osgood, a psychologist interested in the relation of language and other psychological phenomena gives yet another description of the indispensable role of language in culture transmittal. "Why is man the only talking animal? We can only guess at the reasons: the development of language requires (a) a sufficiently elaborate vocalizing mechanism, (b) sufficient complexity of cortical development (intelligence) to establish and maintain a multitude of fine discriminations, and (c) cultural standardization, transmission and elaboration of specific, distinctive symbolic reactions. If the human organism had not developed stable cultural organizations in which the products of one generation could be adopted by another, it is doubtful whether human speech would have developed much above the sympathetic communication of emotional states displayed

52Fries, 1962, p. 98.
in other primates.\footnote{Charles Osgood, 1953, Method and Theory in Experimental Psychology, New York: Oxford University Press, p. 682.}

In the study of culture as in the study of language a gradual turning away from a preoccupation with disconnected data to a position of seeing these elements forming a pattern has taken place. It should be pointed out that no such progress has been made in structuring this data as has been made in linguistics but this should be possible when an adequate theoretical framework has been conceived.

The fact that culture is structured is, however, clearly seen by cultural anthropologists and it is evident from acculturation studies that the removal or addition of a cultural element in a particular social group will affect the entire system. Weinreich points this out in his study of language and culture contact. "In present-day linguistics, the effectiveness of structural factors is taken more or less for granted. But in culture-contact studies, too, the role of the organization of culture elements has been stressed time and again. The following passages are typical. 'Obviously, the results of transmission ... cannot be considered as mere additional acquisitions.' (Thurnwald). 'Culture change normally involves not only the addition of a new element or elements to the culture, but also the elimination of certain previously existing elements and the modification and reorganization of the others.' (Linton). 'That a cultural practice is invested with emotion is an important thing about it, but is not decisive for its stability or lability. What decides between continuance or change seems to be whether or not a practice has become involved in an organized system of ideas and sentiments: how much it is interwoven with other items of culture into a larger pattern. If it is thus connected ... it has good expectations of persisting, since large systems tend to endure. But a trait that is only loosely connected and essentially free-floating can be superseded very
quickly.' (Kroeber). Such statements reflect an emphasis in acculturation study which resembles the structuralist approach to linguistic interference.\textsuperscript{54}

The structural aspects of culture are still in need of precise definition and to be useful to linguistic study must be done with cognizance of the method and approach of linguistics. Harry Hoijer, an anthropologist-linguist, makes the following statement: "Cultural anthropologists, during the last twenty-five years, have gradually moved from an atomistic definition of culture, describing it as a more or less haphazard collection of traits, to one which emphasizes pattern and configuration. Kluckhohn and Kelly perhaps best express this modern concept of culture when they define it as 'all those historically created designs for living explicit and implicit, rational, irrational, and nonrational, which exist at any given time as potential guides for the behavior of men.' Traits, elements, or better patterns of culture in this definition are organized or structured into a system or set of systems, which because it is historically created, is therefore open and subject to constant change.\textsuperscript{55}

What does this mean for linguistic-cultural contact? First, as we have indicated by reference to eminent scholars in anthropology and linguistics, that language structure and culture structure may have some areas of overlap, e.g. color and kinship, but this is not extensive, at least in the same sense; second,

\textsuperscript{54}U. Weinreich, 1953, Languages in Contact, New York: The Linguistic Circle of New York, pp. 5-6.

\textsuperscript{55}Harry Hoijer, 1953, "The relation of language to culture," in A. L. Kroeber (ed) Anthropology Today, Chicago: University of Chicago Press, p. 554. Also relevant to this point is the following quote from A. L. Kroeber, 1960, "Evolution, history, and culture," in S. Tax (ed) Evolution After Darwin 2.14 (Chicago), "...Anthropologists tend to value personal expertise, technical virtuosity, cleverness in novelty, and do not yet clearly recognize the fundamental value of the humble but indispensable task of classifying -- that is structuring -- our body of knowledge, as biologists did begin to recognize it two hundred years ago."
that structural aspects of culture are impregnated by the meaning aspects of language; and third, that social anthropologists and sociologists make reference to the structural aspects of their science but have made little progress in delineation of this.

The most fruitful outcome of cultural and linguistic research, it seems to this writer, must lie in either an independent theory of the structure of culture (internally consistent in terms of the defined limits of cultural study) accounting for all of its parts which would then be bridged into linguistic theory at the various levels of meaning or an extension of a linguistic theory broad enough to include semantics, whereby social institutions would all be accounted for through their linguistic reference.

This thesis does not propose to make a theoretical contribution in either direction but the analysis of lexical material in 6., it is hoped, will contribute to the research needed if the second alternative is attempted, i.e. language as the mediator of experience.

1.42 The relation of language to culture in the broadest sense.

We shall now try to suggest some of the questions which must be answered if we are to see language and culture as two sides of the same coin. One of these is related to thought or what we are able to think in a particular language. Does language represent only that part of the environment that culture via linguistic symbols permits? In other words is our thought potential relative to our particular language? Is reality presented to all people in much the same form? Does the relationship between the linguistic symbol and the situational features vary above or apart from the difference that may exist between two formal language items? From a slightly different point, why do we find translations from one language to another seemingly inaccurate,
twisted, changed, or supposedly not possible? Why do we think of another language as different from our own apart from the fact that the linguistic symbol is different? Why does the value or load of a linguistic symbol vary from language to language?

Unwittingly many have been led to assume from foreign language textbooks that the real world does appear to all people exactly the same way and that a lexical item in English has an exact equivalent in Persian, or German, etc., or to put it another way, that these formal items in different linguistic systems and from different cultures represent the same thing.

"Many people naively assume that the 'words' of diverse languages are simply different sets of symbols for the same things. Many people assume not only that a language consists solely of the words that can be recorded and defined in a dictionary but also that each word refers to some fact of reality about which every individual has had essentially the same experience. From this point of view all that is necessary for the mastery of a second language is to learn a new name for each particular item. If one could only memorize these new names he would, they believe, have at once an ability of expression in the second language equivalent to that which he has in his native language."56 Learning a foreign language is then learning a new segmentation of the world around us, the acceptance of a view of this world from a different stance. Relevant situation and linguistic symbols combine in a new and different way in a foreign language.

This common and naive assumption has been to a large extent extended into the teaching of vocabulary by a lack of situation in the teaching of substitution frames, drills, etc., where the action, setting and situation rapidly change from one frame to the next leaving the learner with a very hazy idea of what he is

56Fries, 1945, p. 39.
talking about. As will be shown in the following section this is perhaps not the best way of viewing the question of meaning which we have already suggested is a relationship between the linguistic symbol and the situation rather than a naming process exclusively. If part of the question of meaning resides in use then we shall more easily free ourselves from the misconception of a one to one equivalence between the lexicons of two languages and will more easily accommodate the phenomena of a symbol in one language containing more or less of a particular situation than the symbol of another language where their convergence may come in only one linguistically-cultural situation but diverge in all others.
2.0 The problem of linguistic relativity.

2.1 General.

In recent years a great deal of interest has been shown in the influence of language on perception and cognition and the way in which this affects one's view of the world. The primary cause of this interest must be looked for some thirty years earlier in the person of Benjamin Lee Whorf (1897-1941) an American linguist who did much to formulate and popularize the issue of language and perception. But our search cannot stop with Whorf for the basic ideas he so ably and imaginatively put forth are without doubt as old as the Greeks and perhaps older. The thread of intellectual thought that relates to Whorf and our present-day interest, however, comes from an 18th century German philosopher/theologian by the name of Johann von Herder (1744-1803) and his student Wilhelm von Humboldt (1767-1835). It was through knowledge of Herder's work\(^1\) that Edward Sapir (1884-1939) an American linguist/anthropologist became

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\(^1\)Based on Sapir's review of Herder's *Über den Ursprung der Sprache* (1769) found in *New Philology* (1907, 5.109-42) it is assumed by this writer that Herder's and Humboldt's writing influenced Sapir. In this review Sapir mentions Herder's earlier work *Fragmente über die neue deutsche Literatur* (1767) which contains his ideas on the conditioning influence of language on thought. Although Herder's main aim in writing *Über den Ursprung der Sprache* was the origin of language there are several indirect references to his views of the influence of language on thought. Harold Basilius in his article, "Neo-Humboldtian ethnolinguistics" (Word 8.97-105) says that Humboldt's idea that men create their conception, understanding, and values of objective reality was "derived in turn from Hamann and Herder". (Italics mine, p. 99.) This, however, appears on the part of Basilius to be a nod of academic deference to Hamann whom Sapir pictures in his review as being highly conservative and not in the least interested in ideas that might state his theology in relativistic terms. (See pp. 137-38 of "Herder's Ursprung der Sprache".) As with many ideas their earliest originators may not be willing to accept their later development. Sapir indicates this was the case with Hamann. "Though many ideas developed in the essay *Über den Ursprung der Sprache* had been largely inspired by suggestions of Hamann himself, nevertheless Herder's flat denial of the direct agency of God in the invention of language was by no means to the other's taste." (*New Philology* 5.138) Herder later repudiated these ideas himself.
interested in this question and it was Sapir who became the teacher and
colleague of Whorf.

2.2 Historical background to the theory.

It would be well to first determine the extent of Whorf's thinking, then
to trace the influences that bore upon it from the time of Herder and finally to
look at the paths it has taken since.

2.21 Whorf and Sapir.

Whorf, in contrast to Sapir who had a wide range of interests as
reflected in his writings, wrote principally about the relation of language to
thought. His work has come to be known variously as the linguistic-relativity
hypothesis, the linguistic Weltanschauung hypothesis, the Sapir-Whorf hypothesis
and the linguistic determinism hypothesis. Of these the first will be used in
this thesis for it is the one Whorf himself used and is as well a very adequate
descriptive title. Of the other titles the linguistic Weltanschauung has
gained some currency because of Whorf's use of the term Weltanschauung in his
writings to indicate that each language or linguistic stock had its own world
view built into its lexicon and grammar. The term linguistic determinism is
used by Gastil but this seems merely a variation which adds nothing to the
others in use. The term Sapir-Whorf hypothesis has arisen among writers wishing
to give credit to Sapir as well as Whorf and has led in some cases to the

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2 Sapir was a literary and music critic of some note as well as being an accomplished
pianist and poet. He achieved prominence in two academic fields through his
writings and his presidencies of both the Linguistic Society of America and the
American Anthropological Association. At the same time he maintained a lively
interest in such other fields as religion, psychology, and civic affairs.

3 Another name for the theory, the Korzybski-Sapir-Whorf hypothesis is listed in
Joshua Fishman, 1960, "A systematization of the Whorf hypothesis," Behavioral
Science 5.323-39.

Department, p. 24.
assumption that Sapir and Whorf originated these ideas. This, of course, is not the case as we see from Whorf's article, "Linguistic consideration of thinking in primitive communities," where he mentions Boas' *Handbook of American Indian Languages* (1911) and Sapir's *Language* (1921) as pivotal in contributing to the advance of linguistic study and to that extent the antecedent of his own thinking.

Dell Hymes in his "Notes toward a history of linguistic anthropology," introduces another link between Whorf and 18th century linguistic thought, "The record of continuity is in fact much longer, going back, of course to Wilhelm von Humboldt, through Daniel G. Brinton in American anthropology, for Brinton translated von Humboldt's essay on the character of the American verb, and posed the dual nature of the problem exactly; Brinton included as a third part of linguistics, besides phonology and grammar, 'the determination of the psychical character of the tribe through the forms instinctively adopted for the expression of its thoughts and reciprocally the reaction exerted by those forms on the later intellectual growth of those who are taught them as their only means of articulate expression.' (Essays of an Americanist (1890), p. 37)." ^5

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^5^E. L. Whorf, 1956, *Language, Thought and Reality: Selected Writings of E. L. Whorf* (Edited and with an introduction by J. B. Carroll), New York: John Wiley and Sons, pp. 65-86. See also "Introduction", p. 23 ff. One may speculate that Whorf's earliest notions on linguistic relativity sprung from his early contact and fascination with the theories of the French mystic and Hebrew scholar A. Fabre d'Olivet — "theories which proposed that certain Hebrew letters and combinations of letters contained mysterious fundamental ideas." This apparently led Whorf to speculate on the associative effect of words and concepts (see Letter to Horace English, p. 35 and other early writing). These ideas no doubt had their effect; nonetheless, the primary influence was Sapir.

It cannot be denied, however, that the one single influence contributing most directly to Whorf's ideas on linguistic relativity was his correspondence with Sapir and, later, his studies with him at Yale University. After this brief but fruitful encounter at Yale, Whorf's writings are almost exclusively on the subject of linguistic relativity and tend to lean more heavily on grammatical examples rather than lexical, a refinement over some of his earlier work. Whorf does, however, give us an indication of the origin and sequence of his thinking in "The relation of habitual thought and behavior to language" where he says, "I came in touch with an aspect of this problem [linguistic relativity] before I had studied under Dr. Sapir, and in a field [fire prevention] usually considered remote from linguistics."\(^7\) We are led to assume that the incidents he describes are the immediate antecedents to the first formulation of an hypothesis of linguistic relativity and that Sapir added to and refined these ideas.

The Whorf-Sapir collaboration continued up to the death of Sapir in 1939. Since it is reasonable to believe that Sapir added to Whorf's ideas on linguistic relativity, we are justified in looking to Sapir's inspiration which was, as we have mentioned, Herder.

2.22 The Whorf hypothesis.

What was the thrust of Whorf's argument and how did it relate to Sapir? No one has more eloquently and boldly stated the case for linguistic relativity than Whorf himself: "When linguists became able to examine critically and scientifically a large number of languages of widely different patterns, their

\(^7\)E. L. Whorf, 1950, p. 27. It should here be added that Whorf was by training and employment a chemical engineer (BA, M.I.T.) working for the Hartford Fire Insurance Co. His research and writing in linguistics were done in his spare time.
base of reference was expanded; they experienced an interruption of phenomena hitherto held universal, and a whole new order of significances came into their ken. It was found that the background linguistic system (in other words the grammar) of each language is not merely a reproducing instrument for voicing ideas but rather is itself the shaper of ideas, the program and guide for the individual's mental activity, for his analysis of impressions, for his synthesis of his mental stock in trade. Formulation of ideas is not an independent process, strictly rational in the old sense, but is part of a particular grammar. We dissect nature along lines laid down in 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; but on the contrary, the world is presented in a kaleidoscopic flux of impressions which has to be organized by our minds — and this means largely by the linguistic systems in our minds. We cut nature up, organize it into concepts, and ascribe significance as we do, largely because we are parties to an agreement to organize it in this way — an agreement that holds throughout our speech community and is codified in the patterns of our language. The agreement is, of course, an implicit and unstated one, but its terms are absolutely obligatory; we cannot talk at all except by subscribing to the organization and classification of data which the agreement decrees.

"This fact is very significant... for it means that no individual is free to describe nature with absolute impartiality but is constrained to certain modes of interpretation even while he thinks himself most free. ... 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."\(^8\)

2.23 Sapir's contribution.

Did Sapir ever make any such bold and sweeping claim as this? He did not perhaps go as far as the implications of Whorf's statement but he shows a clear conviction that language is the "raw material" out of which one's outlook is formed, that "we see and hear and otherwise experience very largely as we do because the language habits of our community predispose certain choices of interpretation." Sapir goes on to a more explicit statement: "Language is a guide to 'social reality'. Though language is not ordinarily thought of as of essential interest to the student of social science, it powerfully conditions all our thinking about social problems and processes. Human beings do not live in the objective world alone, nor alone in the world of social activity as ordinarily understood, 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."\(^9\)

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\(^8\) B. L. Whorf, 1950, p. 5.

Although Sapir's statement may not be as explicit as Whorf's, implicitly it says the same thing. The basic tenet is that language is an active force rather than a passive vehicle, that the conceptualization of the objective world is the business of language not the unchallenged realm of the physical mind. In other words the objective 'out there' is organized and structured by the language rather than as was so universally assumed, by the mind. Joshua Fishman in his article, "A systematization of the Whorf hypothesis," puts it this way, "...language is not 'merely' a vehicle of communication by which man talks about some objective reality 'out there' that exists previously to and independently of his language, but, rather, that language itself represents an objective reality by means of which man structures and organizes the 'out there' in certain characteristic ways."

There is some question at this point whether man makes use of language in the way Fishman suggests when he uses the above phrase, "...by means of which man structures and organizes..." or whether language as it stands presents to man a system of conceptualizations of the objective world and man obediently follows. Whorf and Sapir strongly suggest the latter.

Sapir brings out another side of the question when he says that language "...does not as a matter of actual behavior stand apart from or run parallel to direct experience but completely interpenetrates with it." As we shall see later this fact as part of the language-as-energy or language-as-force hypothesis was first articulated by Humboldt and later expanded upon by the 20th century


11 Mandelbaum, 1951, p. 11.
philosophers Ernst Cassirer and Ludwig Wittgenstein as well as by German linguists of this century.

2.24 Boas and Relativity.

One cannot accurately assess Sapir's work without looking into the writings of his teacher Franz Boas, the great American anthropologist and linguist. Having been trained in Europe as a young man before emigrating to America where he spent the remainder of his life, Boas no doubt was familiar with the works of both Herder and Humboldt in his linguistic orientation. In his *Handbook of American Indian Languages* Boas makes the point that language because of its unconscious nature (or unselfconscious nature) has a great advantage over the completely selfconscious nature of ethnology. Because of this he states as quoted by Jakobson in, "Franz Boas' approach to language," that language can be subjected to a "searching analysis" by which we may seize its "inner form" and "attain the most objective, most literal and least distorting translations of [its] unconscious categories; ...each language is arbitrary in its classifications, but this traditional (particularly Whitney's and de Saussure's) statement is subject by Boas to an essential restriction: ...each language may be arbitrary, but solely 'from the point of view of another language' in space and time. In a mother-tongue whether 'primitive' or 'civilized' no classifications are arbitrary for its speakers. Such classifications develop 'in each individual and in the whole people entirely subconsciously' and build a kind of linguistic mythology which may direct the attention of the speaker and some mental activities of the given speech community in definite lines. So linguistic form exerts an influence not only upon poetry and beliefs, but even on speculative thought and 'scientific views, which are
apparently based entirely on conscious reasoning." Thus Boas indicates the arbitrary nature of linguistic categories and their amenability to scientific description. But Boas was not Sapir's principal source in linguistic relativistic thought. Let us look at the 18th century thinker Herder.

To begin with it would be well to ask in what way Sapir was qualified to be a critic of Herder and 18th century German philosophical thought and why his interest should lie in that direction. A look at his family and educational background will provide the answers.

Sapir was born in Germany and when he was five years old his parents emigrated to the United States where he was educated at the Horace Mann School and Columbia University earning, in 1905, his MA degree in Germanics. Shortly thereafter Sapir became acquainted with Franz Boas and soon became interested in language in a broader sense, in fact as Morris Swadesh recalls, Sapir "...came away from a conference with Boas impressed that he had everything to learn about language." It was Boas' great knowledge of American Indian languages used to counter Sapir's naive and sweeping generalizations about language that eventually caused Sapir to study American Indian languages and culture and become one of Boas' most astute pupils in anthropology and linguistics.

2.25 Herder's decisive role.

Thus with Sapir's thorough training in Germanics it is not unusual that his interests in linguistics should range back to the 18th century and single out

13 Mandelbaum, 1951, vii.
Herder who for his time was one of the more progressive thinkers promulgating such radical ideas as the natural vs. divine origin of language and the principle of linguistic relativity. In *Fragmente über die neueren deutschen Literatur* (1767) we have the following statement that much of Herder's linguistic relativity thinking is built on, "Our servants [words] which form our tongue [manner of speech] are our first teacher of logic." Herder's views on this subject are also found in his *Über den Ursprung der Sprache* (1769) and in Sapir's review of this work we get the following comment, "The real historic significance, then, of Herder's work would be shown to lie in the general service it rendered by compelling a sounder study of the psychologic and historic elements involved in the investigation of the problem language and its relation to man, and ... in the suggestion it gave Humboldt for his far deeper treatment of the same and closely allied themes." Sapir further confirms the influence of Herder on Humboldt as follows: "He [Haynm] goes on to show how, as with Herder, so also with Humboldt, man is 'ein singendes Geschöpf, aber Gedanken mit den Tönen verbinden'; language is to Humboldt very much as to Herder, 'die natürliche Entwicklung einer den Menschen als solchen bezeichnenden Anlage.'

To Humboldt the chief task of general linguistics is the consideration from a single point of view of the apparently infinite variety of languages, 'und durch alle Umwandlungen der Geschichte hin durch den Gange der geistigen Entwicklung

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16 Haym was Herder's principal biographer.
In this same connection Mandelbaum writes in the introduction to Sapir's writings: "As Sapir said of the [Herder's] argument . . . 'This to us is very axiomatic, but we should not forget that it was necessary for Herder to demonstrate it.' The paper on Herder's Ursprung der Sprache, . . . contains yet another passage that is not inapplicable to Sapir himself, in which he makes note of the 'great service Herder accomplished in merely shifting the point of view. That was of inestimable service.'"¹⁸

².²⁶ von Humboldt and neo-humboldtian.

Some scholars writing about the origin of linguistic relativistic thought have neglected to look at Herder's work in favor of the writings of Humboldt. This is understandable for it was left to Humboldt to expand and cogently state the ideas of linguistic relativity as Herder first stated them. The most concise statement of Humboldt's ideas is found in the following quotation from Humboldt's Werke,¹⁹ "Man lives with the world about him principally, indeed... exclusively, as language presents it."²⁰

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¹⁷E. Sapir, 1907, p. 141. Sapir cites the internal quotations from Haym, Herder nach seinen Leben und seinen Werken dargestellt, p. 403.

¹⁸Mandelbaum, 1951, p. 4.

¹⁹Berlin, 1848, vol. 6, p. 60.

In conjunction with the above statement Humboldt proposed the idea that language was something more than a passive instrument that it was itself a force. Harold Basilius in summarizing Humboldt's view on the nature of language says, "...language is not an ergon, that is a mere means of exchange for purposes of communication, but is instead an energeia which reconstitutes human experience ideally and makes this idealization overt."\(^{21}\)

Basilius concludes by pointing out that Hamann, Herder and Humboldt all basically say the same thing, "...that language is the means by which men create their conception, understanding and values of objective reality. Language is the intermediary world (Zwischenwelt) between subject and object. As a consequence the vocabulary, grammar, and syntax of a given language are no mere reflection of the culture of its users. They are that culture by virtue of their function of making overt the concepts, beliefs, and values of the culture."\(^{22}\)

Having taken a brief look at the 18th century roots of the linguistic-relativity hypothesis it will be of interest to see how these 18th century thinkers (especially Humboldt) have influenced present-day German and European linguistic thought. Basilius has given us an excellent review of this in his article, "Neo-Humboldtian ethnolinguistics," in which he states that there is a small group of German linguists today, sometimes called Neo-Humboldtians, who have taken Humboldt's dictum that language is not ergon but energeia and applied it to the study of some of the European languages notably German. This small group began to emerge in the 1920s lead by a linguist by the name of Jost Trier who took up the concept of the linguistic field which in turn had resulted from


\(^{22}\) Ibid., p. 99.
Gestalt thinking and Gestalt psychology and developed it as a vehicle of structural semantic research. Associated with him in this were Iopen (the person who actually first used the term linguistic field), Jolles, Forsig, and Weisgerber who today could be called the official spokesman for the Neo-Humboldtians.

The Neo-Humboldtians attempted to find in the reconstituted human experience which language idealizes manifestations of culture in one language and manifestations of cultural differences in the variations between the vocabulary and grammatical structure of two or more languages. "The stance of the Neo-Humboldtians is both mentalistic and psychologistic but their approach and method are nonetheless empirical. They are in conscious opposition to traditional linguistics including the contemporary American variety on the grounds that it has operated in a social vacuum by continuing to restrict itself exclusively to the formalical analysis of language."23

2.27 The linguistic field theory.

In a more positive vein the Neo-Humboldtians asserted the concept of the linguistic field as a descriptive device for a structural statement pertaining, as emphasized above, to meaning or as language functions in the cultural milieu. "The technique for investigating languages with a view to isolating their cultural content is based on the structural concept of the field. It is applicable to both vocabulary and grammar-syntax. Jost Trier defines the field concept as follows: "Every language is a system of selection over and against objective reality. As a matter of fact every language creates a self-sufficient and complete image of reality. Every language structures reality in

its own manner and thereby establishes the components of reality which are peculiar to this given language. The language-reality components of one language never recur in quite the same form in another, nor are they simply a straight-forward copy of reality. They are instead the linguistic-conceptual realization of a view of reality proceeding from a unique but definite structuring matrix which continuously compares and contrasts, relates and distinguishes the data of reality. Implicit in the foregoing is, of course, the realization that nothing in language exists independently. Inasmuch as structuring constitutes the basic essence of language, all linguistic components are the result of structuring. The ultimate meaning of each is determined precisely and only by its relation to and function in the total linguistic structure.'

"The structural concept is derived from Humboldt's observation that 'structuring is the most common and profound essential characteristic of all language,' a point of view subsequently maintained by Ferdinand de Saussure (articulation). By means of a typically German wordplay on Glied ('member, component') Trier expresses the structural whole-to-part and part-to-whole relationship between individual words and total vocabulary thus: 'The individual word is ordered or related structurally (sich ergliedern) on ascending levels to the whole of the structured and constructed vocabulary and conversely the total vocabulary is structurally reducible (sich ausgliedern) to its individual words.' This is hardly more than an expansion of Humboldt's statement that 'in reality speech is not assembled from pre-existing words. On the contrary, words result from the totality of speech.'"}

As mentioned earlier Leo Weisgerber is considered the unofficial spokesman today of the Neo-Humboldtians and the linguistic field theory. He has formulated "a more or less comprehensive plan of linguistic research the ultimate objective of which is the discovery of the ethnic and national culture of the German-speaking Europeans in contrast to that of other, mainly European, cultures. This is to be done by studying 'the linguistic mid-way' (die sprachliche mittelwelt) between reality and its conceptualization."\(^{25}\)

Weisgerber's ideas have yet to be implemented as an entire plan although he and many others have done individual investigations which contribute to this end. At times Weisgerber's proposals suggest a cultist attitude on his part which if allowed to develop would distort its linguistic content completely.

In conclusion, "The basic point of departure for the Neo-Humboldtians is always Wilhelm von Humboldt's idea that language is simply 'the human approaching the objective idea.' That language is, in other words, not an independent reality but a relational one. That language is the midway between objective reality and man's conceptualization of it. As such it is the immediate overt expression of reality, and its word classes, and sentence patterns are structured meaning instead of being just vehicles for meaning. If this be valid, then Trier's insistence that linguistic fields are not mere formal devices but rather linguistic realities is likewise tenable. ...Unquestionably the hypothesis affords the most promising basis for relating the fruits of linguistic science to those of the other social sciences."\(^{26}\)


\(^{26}\)Ibid., p. 105.
2.3 Philosophy and Language.

Language has always been considered by philosophy to be within its province and consequently much has been written in philosophy about the nature of language as it affects our thinking, logic and view of the world. Up until the last two decades there had been very little contact between philosophy and linguistics, indeed, scientific structural linguistics had arisen as a protest against the approach taken by philosophers and philologists. Yet, as we have seen the study of the relationship of language to non-linguistic data and cognition/perception is a result of 18th century philosophical thought. Of late philosophical thought has swung away from speculation about meaning and has become interested in the function of words and larger units of utterance. This shift has placed the interest of some philosophers in an area adjacent to but not identical with descriptive linguistics. This convergence of interests and insights between the two disciplines can be seen in the works of Ernst Cassirer, Ludwig Wittgenstein, J. L. Austin. Perhaps the most conscious effort to understand the two disciplines historically and make an accurate assessment of current thought was done by the late Ernst Cassirer. He writes about language as follows: "Language is neither a mechanism nor an organism, neither a dead nor a living thing. It is no thing at all, if by this term we understand a physical object. It is... language, a very specific human activity, not

describable in terms of physics, chemistry, or biology. The best and most 
laconic expression of this fact was given by W. von Humboldt, when he declared 
that language is not an *ergon* but an *energie*.

"To put it shortly, we say that language is 'organic', but that it is 
not an 'organism'. It is organic in the sense that it does not consist of 
detached isolated segregated facts. It forms a coherent whole in which all 
parts are interdependent upon each other. ...Everything hangs together: 
nothing is accidental or superfluous."

Cassirer goes on to say, "It is impossible, he [von Humboldt] maintained, 
to gain a true insight into the character and function of human speech so long as 
we think of it as a mere collection of 'words'. The real difference between 
languages is not a difference of sounds or signs but one of 'world perspectives' 
(Weltansichten). A language is not simply a mechanical aggregate of terms. 
Splitting it up into words or terms means disorganizing and disintegrating it. 
Such a conception is detrimental, if not disastrous, to any study of linguistic 
phenomena. The words and rules which according to our ordinary notions make up 
a language, Humboldt asserted, really exist only in the act of connected speech. 
To treat them as separate entities is 'nothing but a dead product of our bungling 
scientific analysis.' ...It is not a ready-made thing but a continuous process;"}

it is the ever-repeated labor of the human mind to utilize articulate sounds to

32 These ideas relate to the concept of the Gestalt and a holistic view of language. 
For a present-day statement by a linguist see E. L. Pike, 1954-60, Language in 
Relation to a Unified Theory of Human Behavior Parts I, II, III, Glendale: 
Summer Institute of Linguistics, and K. L. Pike, 1959, "Language as particle, 
wave, and field," The Texas Quarterly 21:2.37-45; also E. Sapir, 1921, Language, 
New York: Harcourt, Brace Co. For the holistic view of culture see 
express thought."33

Wittgenstein, another 20th century philosopher, indicates as well that language is more than just words. Although his writings are very difficult to understand (it has been said that his Philosophical Investigations is presented in such a way that it invites misinterpretation) he is clear, however, in several instances about the nature of language. He says, "The meaning of words lies in their use," and again "One cannot guess how a word functions, one has to look at its use, and learn from that."34

2.4 The influence of linguistic relativity in the 20th century.

Thus we see in the mid-twentieth century two distinct branches resulting from the eighteenth century philosopher/linguists, the European branch with their attention being given to the concept of the linguistic field and the American branch investigating the effects of language on perception and cognition. One might make the following generalisation as to the basic difference between the two branches -- the European Neo-Humboldtians emphasize the reflecting nature of language and the American Whorfians emphasize the determining nature of language. Both of these branches are ultimately interested in the relation of language to environment or linguistic to non-linguistic data and can be considered the prime movers in the present-day attempt at a rapprochement between linguistics and the social sciences. This coming together, pooling of resources between the various fields of psychology, anthropology, sociology and linguistics, can be seen as a direct result of eighteenth century thinking which changed the point of view from one of atomism and the study of parts, to one of the whole and the study of the

33 Cassirer, 1944, pp. 120-1. Cassirer cites these ideas from the following work, Humboldt, Gesammelte Schriften (Berlin Academy) vol. VII, Pt. 1, pp. 46f.

field. It can be seen that this phenomenon spread from physics to psychology and has influenced language, biology, anthropology, etc. in what is called the Gestalt or holistic conceptual approach. This has allowed, indeed, forced linguists to look beyond the sound, the word, and the sentence to the context in which language occurs and consider this the unit that is to be studied; for language has meaning as well as form, it functions in a cultural matrix, not a vacuum. This realization that language is more than words and sounds, that it is an active force relating things and ideas is only one side of the coin. Anthropologists have come to see that cultural traits, and social customs are not the whole picture either but that language is the key and mediating force for them and that together language and culture traits can be seen as contributing to a cultural configuration, an integrated whole, each part a meaningful element in the total structure.

2.41 The unified theory of Pike.

In linguistic thought the above point of view has meant that the division set up by Bloomfield between form and meaning has had to be re-examined, that mechanists and mentalists have become less sharp in their divergences. Semantics has come into its own for it has been seen that it may not lie beyond the pale of structuralism. Indeed, this has meant that the structuralist's approach has been broadened to include the environment. The most ambitious work in this direction is the three volume work by Professor K. L. Pike, 1954-60, entitled Language in Relation to a Unified Theory of Human Behavior. Pike seeks to relate language and social behavior on a single continuum or within a single meaningful whole. Pike's primary aim, therefore,

is not to add to the linguistic-relativity hypothesis but to show that language and social activity are one and that they can be described as one unit. Pike's attempt, therefore, has been to formulate a unified theory of the structure of human behavior within which language appears as a special, though central, case. Thus, a church service can be considered a single unit of linguistic and social behavior encompassed by one unified theory. There is no direct attempt to determine the influence of language on behavior or vice versa although it does lay very basic groundwork for a study of this from a hitherto unexplored point of view — that of tagmemics.

2.42 Firth and context of situation.

Somewhat prior to Pike's work and of much less detail is the work of Professor J. R. Firth of the University of London who took the term "context of situation" first used by Malinowski and redefined it in his article "Personality and language in society." He saw context of situation as a "convenient abstraction at the social level of analysis" which could form the basis for the hierarchy of techniques needed as a groundwork for a statement of meaning. Meaning for Firth could be split up into its component parts much as light could be dispersed by a prism into a spectrum. " 'Context of situation' is best used as a suitable schematic construct to apply to language events, and that it is a group of related categories at a different level from grammatical categories but rather of the same abstract nature. A context of situation for linguistic work brings into relation the following categories:

A. The relevant features of participants: persons, personalities.

   (i) The verbal action of the participants.

   (ii) The non-verbal action of the participants.
B. The relevant objects.

C. The effect of the verbal action.  

Although Firth did not go into further detail before his death further delineation of the categories of situation has been attempted by Dr. J. Ellis in "On contextual meaning" to be published in the Firth Memorial Volume and Dr. M. A. K. Halliday has included 'context' and 'situation' as terms in his schematization of the field of linguistics in "Categories of the theory of grammar."  

2.43 Whorfian relativity today.

We have thus far seen how in America revived interest in the relationship of language to non-linguistic data which has had its beneficial effects in closing the gap between linguistics and the social sciences and how in Europe where this gap has never been as great, the Neo-Humboldtians sought to describe the structure of meaning by the field concept and that in both cases the origin of their thinking can be traced to Humboldt, Herder and ultimately to Hamann.

But what of Whorf's ideas today? Are they a live issue in linguistics any longer or were they soon forgotten after his premature death in 1941? We have but to look at the literature of the last decade which has appeared in the fields of linguistics, social psychology, social anthropology and philosophy to see that his ideas are neither dead nor forgotten but have continued to command interest and cause new research to be initiated especially in the area of psycholinguistics and ethnolinguistics. The interest the linguistic-relativity hypothesis still commands can be judged by the fact that in 1954 in Chicago a conference of eminent linguists, anthropologists, and psychologists assembled

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to discuss and assess Whorf's ideas.\textsuperscript{38}

2.431 Fishman's four levels.

Before we look at any of these writings let us examine in more detail the arguments Whorf marshalled to support his hypothesis. In this respect Fishman has given us a useful classification at least in his dichotomy between lexical and grammatical differences and we shall follow this classification for the presentation of Whorf's linguistic examples.

Fishman sees Whorf's arguments for linguistic-relativity as existing on four levels. Level one is called the language-language level and consists of linguistic codability and cultural reflections. By linguistic codability is meant the ease or facility with which a language names and categorizes certain aspects of its environment and by cultural reflection is meant the easily observed fact that reflected in the language will be the physical environment of the language users. "Languages differ 'in the same ways' as the general cultures or surrounding environments of their speakers differ."\textsuperscript{39} At this level Fishman's distinction between lexical and grammatical differences is made, level one being concerned only with the lexical store or semantic structure not with the grammatical structure as such. Thus the essential problem is one of

\textsuperscript{38}The results of the Chicago conference are found in H. Hoijer, 1954, \textit{Language and Culture}, Chicago: University of Chicago Press.

\textsuperscript{39}Fishman, 1960, p. 326. Cf. the viewpoint of Humboldt mentioned earlier which says that languages differ from one another in the same way and to the same extent as those who use them.
What does the language encode and what does it ignore. Some languages can encode a portion of their environment more easily than others due to having more specific terms at hand. Fishman gives the example of the German Gemütlichkeit. "Thus the fact that the German language does have the term Gemütlichkeit does make it easier for Germans to be aware of and to express this phenomenon. Americans can also struggle toward a circumlocutious formulation of this concept but the very fact that it is a struggle may mean that the concept is less clearly formulated and less aptly as well as less frequently expressed."  

Whorf cites many examples of linguistic codability and cultural reflection and along with them in catalogue fashion lists other differences (grammatical) not in all cases furthering his argument and apparently failing to

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41 Fishman, 1960, p. 327.
see this distinction as one which could be used to his advantage. For instance, Whorf cites the case of Eskimo\(^{42}\) with three words for snow where English has only one; English with three words (pilot, airplane, fly) where Hopi has one for these three items; Hopi's two words for water (as to whether it is moving or stationary) for the one in English; Hopi's lack of an exact equivalent for English 'speed' or 'rapid' which must be expressed by the use of 'very' or an intensifier plus a verb of motion; Navaho's two terms for black for the one in English; Navaho's weak distinction for green and blue for the two distinct terms in English; and other examples given by other writers such as the profusion of terms for horse in Arabic (no generic term) to the English one or the large number of terms for cow in Wintu compared to the English one. From these examples and many more that could be added it is obvious that for these examples there is a cultural relevance for these differences, e.g. the Eskimo is more concerned with snow than the average speaker of English and the Arab and Wintu are more concerned with horses and cows respectively than most English speakers. This differentiation in vocabulary at the lexical level allows speakers of these languages to be more precise about certain aspects of their environment and thus communication is more easily achieved. But as can be pointed out this does not mean that these differences cannot be expressed in the other language. At this level of lexical language-language differences nothing so grandiose as a world view is involved.\(^{43}\)

\(^{42}\)The examples from Hopi and Eskimo are taken from B. L. Whorf, 1950, Four Articles in Metalinguistics, Washington: Statement Department, p. 4ff.

\(^{43}\)Although this has never been tested experimentally it is assumed that language differences in the magnitude of a world view do not reside in one term (even though at times Whorf seems to imply this) but are the aggregate of the total language.
Level two is still dealing with lexical items as opposed to grammatical but encompasses the non-linguistic aspects of behavior as well. Fishman thus labels it "linguistic codifiability and behavioral concomitants." It is the level of language-non-language behavior. The area of most frequent experimentation has been color categories. Sophisticated experimentation at this level has been done by Brown and Lenneberg 1954 and Lenneberg 1953 and 1957. Conclusions from these experiments clearly indicated that colors which are culturally encoded, that is named with a single word within a language, have a "shorter response latency" than those colors that are not culturally encoded, that do not have a single word name but require a phrase or circumlocution to be described by the users of that particular language. Lenneberg confirms this also in an experiment where subjects were to remember a color presented along with others after a time lapse. This experiment shows that highly codifiable colors were remembered more quickly and that there is a line of codability from high to low among colors for any language which correlates with easy to difficult in learning their names. Lenneberg, therefore, concluded that "there is good evidence that the shape of word frequency distributions over stimulus continua regulates the ease with which a person learns to use a word correctly."44 This concept should be useful in first and second language learning "...for it basically pertains not to language usage per se but to concept formation as such."45

Level three as described by Fishman is called "linguistic structure and its cultural concomitants." By linguistic structure is meant grammatical items

44Fishman, 1960, p. 329.

from the lexicon and their syntax. Whorf and Sapir both cited language
differences from the lexical as well as the grammatical but their most pervasive
statements, those purporting to deal with \textit{Weltanschaunungen}, are drawn from
linguistic items of a purely grammatical nature. In identifying the grammatical
as opposed to lexical Fishman is not clear in his use of the term 'structure'.
He is not clear as to what level of analysis the term 'structure' applies to.
Is it morphological structure or syntactic structure that is being considered?
It is obviously not phonologic structure. Sapir and Whorf whom Fishman quotes
are of some help but one is not always certain of their meaning due to the
generality of their terms, e.g. Sapir 1919, "tyrannical hold that linguistic
form has upon our orientation of the world" and Whorf 1940, "organized ...by
the \textit{linguistic systems} (in other words, the grammar) of each language is not
merely a reproducing instrument". We are left to our own interpretation of
the term 'the grammar' which I take to mean the morphology and syntax of a
language, the rules and regulations for governing language items. As has been
mentioned Whorf places more emphasis on grammatical structure after his contact
with Sapir. And we see the reason for this in Sapir's writings, especially
\textit{Language}, where he makes much of structure in language. The refinement in
Whorf's argument, as Fishman puts it, being one from "diffuse and unsystematic
lexical analysis to more focussed and interrelated grammatical analysis."\textsuperscript{46}
Whorf does not seem to make a conscious distinction of this point and may not
have seen it as useful for his argument.

Differences revealed by linguistic structure and its cultural con-
comitants are listed by Whorf, Lee, Hoijer and others and consist of such
features as the following: Chinese has no singular or plural, no relative
clauses whereas English does; other languages have singular, dual, trial, and

\textsuperscript{46}Fishman, 1960, p.331.
plural whereas English has only singular and plural. One may ask, where the cultural concomitants of such grammatical differences are. It is only fair to say that for the most part they lie with analytical and perceptive powers of the analyst. If one goes on to say that grammatical differences affect mental outlook or Weltanschauung the greatest drawback for such arguments is their susceptibility to being selectively chosen and given biased interpretations. However, we should cite some examples in order to evaluate these attempts to describe linguistic and cultural differences which are so often intuitively sensed. Hoijer in writing about the Navaho reasons that "...the Navaho verb links the actor to actions which are defined as pertaining to classes of beings. Thus it would appear that people merely 'participate in' or 'get involved in' somehow pre-existing classes of actions rather than serve as the initiators of actions. Hoijer interprets these grammatical characteristics as being consistent with the 'passivity' and 'fatefulness' of Navaho life and mythology in which individuals adjust to a universe that is given."47 In the same vein Whorf finds in Nootka a connection between the absence of noun-verb distinctions and a monistic view of nature.48

It should be pointed out that the efforts of Whorf, Lee, and Hoijer to establish a grammatical cultural correlation must not be equated with purely mentalistic attempts to prove that musicalness in Italian is a result of the light melodious nature of that language or that German stiffness is related to the heavy quality of the German language. Whorf and others are much advanced over the latter and if still relying on intuition and insight it is on a very

47 Fishman, 1960, p. 332.

48 Whorf, 1950, pp. 18-23.
much firmer basis linguistically and anthropologically. Anthropological studies of national character should be of considerable interest to linguists seeking to plumb the depths of language-culture relationships.

Level four is named "Linguistic structure and its behavioral concomitants". This level (as with level two) might be said to have been created by Fishman (himself a psychologist) to satisfy psychologists. He says of this level that it is the most difficult to demonstrate and experiment and at the same time conceptually and methodologically superior to the other three. Only one experiment, according to Fishman, has so far been done at this level. The experiment by Carroll and Cassagrande (1958) is referred to as Experiment II. Carroll and Cassagrande were concerned to find out whether Navaho subjects would be predisposed due to particular verb forms in their language to categorize objects on the basis of their physical attributes (flexibility, flatness, etc.) rather than color. Therefore, subjects were presented with two objects that differed from each other in two respects (color and shape) and then presented with a third object similar to each of the original two in one of the relevant characteristics. If the original pair had been a blue rope and a yellow stick the third object would have been either a yellow rope or a blue stick, the assumption being that the Navaho subject would choose those objects most alike on the basis of shape and the English on the basis of color. The results from the Navaho group showed a definite preference for the predicted choices. Since Navaho verb forms provide for shape and form and English do not it was assumed that this feature of the Navaho language would affect the relative potency or order of emergence of the following concepts -- color, size, shape or form, and number in the Navaho speaking child. The experiment was conducted on three groups of children, Navaho dominant Navaho, English dominant Navaho and English speaking Boston middle class.
The first two groups gave clear preference for the predicted choice-the Navaho dominant child making choices on the basis of form and shape and the English dominant child making choices as to color. The Boston middle class, however, seemed more Navaho than the Navaho, an embarrassment which might be explained by the fact that middle class children show preferences of form to color which may in turn be due to more exposure to toys e.g. puzzles, form boards, etc. which force the child to make associations on the basis of form. It could also be argued that whereas Navaho is a language in which similarities of form are noticed (in other words it operates under a linguistic determinism at this point), English is neutral; it being as easy for the child learning English to make choices for similar color as for similar shape. Certainly on this point there is no formal aspect of English which would predispose the child one way or the other.

To sum up Fishman has devised a chart of the four levels as follows:

<table>
<thead>
<tr>
<th>Data of language characteristics</th>
<th>Data of cognitive behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Language data (&quot;cultural themes&quot;)</td>
</tr>
<tr>
<td>Lexical or &quot;Semantic&quot; characteristics</td>
<td>Level 1</td>
</tr>
<tr>
<td>Grammatical characteristics</td>
<td>Level 3</td>
</tr>
</tbody>
</table>

As shown by the diagram linguistic relativity experimentation is dealing with two main facts -- characteristics of a language or languages and behavior of the speakers of the language or languages. The first is cut again to reveal a lexical/grammatical distinction and the second to reveal verbal behavior as such (often interpreted in terms of cultural themes or Weltanschauungen) and individual behavior which is other than verbal in nature.
The conclusions of Brown, Carroll, Cassagrande, Lenneberg and others as well as those of the participants of the 1953 Chicago conference on the Whorf hypothesis agree in at least one aspect, that it is not a question of what a language can or cannot express but one of what is expressed with more facility. In the findings of the 1953 conference Hockett writes, "Languages differ not so much as to what can be said in them, but rather as to what it is relatively easy to say. In this connection it is worthy to note that the history of Western logic and science, from Aristotle down, constitutes not so much the story of scholars hemmed in and misled by the nature of their specific languages as the story of a long and successful struggle against inherited linguistic limitations." 49 It is but another step to the statement that any linguistic system is completely adequate to any of the situations of its users or potentially so. Lenneberg reiterates this same thought, originally made by Sapir that "a basic maxim in linguistics is that any thing can be expressed in any language. (Cf. Sapir, the Grammarian and His Language, Selected Writings of Edward Sapir, pp. 153-4.) It is assumed here that any vocabulary can be expanded." 50

Where language differences reside and which are the most influential has by no means general agreement. Whorf and his followers felt they could illustrate from the grammar of a language differences of the most far reaching and influential kind, e.g. world view. Hockett observes that "the most precisely definable differences between languages are also the most trivial from the Whorfian point of view. The more important and ostensible difference is


from this point of view, the harder to pin down... The impact of inherited linguistic pattern or activity is, in general, least important in the most practical contexts, and most important in such goings-on as story-telling, religion and philosophizing."\(^{51}\)

But did Whorf's approach of a suggested dichotomy between 'obvious' and 'hard to pin down' best explain the differences? Gastil and others (Neo-Humboldtians) in the last decade do not think so and have shifted the emphasis from "correlates between formal and analytical features or linguistic and cultural variables" to "semantic structures" or in the words of the Neo-Humboldtians "semantic fields". (This very useful concept for teaching meaning will be developed as "semantic domain" in this thesis in 6.) Gastil goes on, "'Words' are structured into systems of words, not in dictionaries, but in the unconscious of the users of the language concerned. We can abstract systems of color terms, of kinship terms, of terms for shapes of lines, or of terms for positive intellectual valuation in any language at any time or in any corpus of written or recorded materials. These are not absolute or conscious structures, but abstractions of use in analyzing the 'semantic code' (as distinct from the phonemic or syntactic codes) of a language. Such fields are probably of the same order of reality as concepts of 'social structure' or 'cultural pattern' (e.g. Benedict), or 'cultural configuration.'\(^{52}\) No one in

\(^{51}\) Hoijer, 1954, p. 122-23.

\(^{52}\) R. Gastil, 1959a, Language and modernization: A comparative analysis of Persian and English texts, Harvard University, Center for International Affairs, pp. 20-22.
the Whorfian camp has defined the distinctions referred to by Hoijer and called grammatical and lexical by Fishman beyond the point of saying that the lexical hold no world-view differences and that the grammatical (if differences along the lines of a world view do exist) do carry such differences. It would seem for the purposes of language teaching that the dichotomy between lexical and grammatical is less productive than a consideration of some form of the semantic field theory for all items. This does not mean that items will be treated in isolation but observed as exerting influence in the nature of a semantic field and having dominance over semantic space.

Fishman, as a psychologist, has the following to say as far as semantic codifiability, non-translatability and selective codifiability are concerned. They "pertain not so much to all-or-none differences between languages as to differences in relative ease or facility of equivalent designation." Thus, the argument that there is no word in English for _______ undercuts itself for the proponent usually goes on to render in English the meaning of _______. No matter how imperfectly or circuitously.

Therefore, today among psychologists, linguists and anthropologists there is a general backing away from radical Whorfian relativity. No one is coming forward to back such an extreme view that would state one's interpretations of the world about him were entirely relative to and determined by

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53 The notion of semantic space comes from a conversation with Dr. Sara C. Gudschinsky who feels that semantic space may exist in the same way that phonetic space does. The analogy being drawn to show that as a phoneme and its allophones cover a given piece of phonetic space so the meaning of a word will cover a given piece of semantic space in such a way that although different languages may categorize experience and the external environment differently the semantic space is adequately covered in both cases.

54 Fishman, 1960, p. 335.
one's language for this would deny the possibility of translation or of even learning another language, two activities which men do with a great deal of accuracy and taste in spite of the linguistic differences and difficulties. It would seem that the determining aspect of language although affecting some of our cognitive behavior is but a moderately powerful factor and one that can be counteracted at that.

2.432 The linguistic grid.

At this point Weisgerber's conception of a Zwischenwelt helps to illustrate the manner in which language impresses a particular semantic structure or grid on non-linguistic data. Each language is its own peculiar intercepting force between perception, cognition and expression and non-linguistic data. This structuring is of a highly arbitrary nature and consequently the conventions for this structuring are not the same for any two languages. At this point we are also involved with the structure of culture for the structure of culture and the semantic grid of a language in many cases are two sides of the same coin. Since a child in learning the language, learns both of these structures at the same time it is extremely difficult for one to acquire a mental differentiation.

An example of the way in which language intervenes between perception and reality is the arbitrary nature of structuring of the stars in the night sky. "Each cultural area... developed its own classification with nearly no correspondence either with reality or with the terminological structuring of this field outside of that cultural area. Weisgerber might say that the boy who heard the word Orion could not help but ask, "What is Orion?", and then have explained to him how various stars taken together made a pattern which looked like a giant hunter. He then looked through the Zwischenwelt at the heavens, not simply at the heavens 'as they are'."

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55Gastil, 1959a, p. 16.
There can, of course, be seen varying degrees of interference where the semantic grid is fairly transparent or of little influence, for instance, in the case of table, chair, one, two, etc. Here the item under consideration is fairly concrete or objective and the constant availability and observability of the non-linguistic element tends to lessen the possible effects of linguistic determinism. Another area in which language structures reality in a manner agreed upon by nearly all literate languages is the field of natural science and to some extent technology.  

Gastil concludes, "It is then, in areas other than the most concrete and scientific that linguistic determinism will be a real force, and these fields constitute most of life. Let us consider the field of ta'arof, as this is handled by the semantic structure of English and Persian. This field is structured and divided more absolutely by English than Persian, and in fact is a 'field' only in terms of the Persian language. A Persian or an American does not simply see social action, record it, and repeat it accurately. He sees the action in terms of his linguistically acquired knowledge, classifies it linguistically, and acts in terms of what he perceives through this linguistic screen. What an American might call 'insincerity', 'formality', 'politeness', or 'generosity' under different conditions, the Persian calls ta'arof, and in Iran this may be the most useful designation. But when an Iranian in America complains of losing his watch because he was trying in the best spirit of ta'arof to be friendly by offering it to an admirer, we realize that he has failed properly to differentiate the field of 'ta'arof' as this must be done  

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Gastil, 1959a, p. 17. Gastil gives the following reasons for this. "1) That is its conscious goal and purpose, and 2) its language is primarily universal, originating, in modern times, from the same base in a few European languages."
in American English. The American sees 'politeness' and 'generosity' as the field determinants of the friendly insistent offer. Otherwise he would see only 'insincerity' or 'formality', which are not friendly and therefore 'obviously' impossible interpretations. He accepts the watch. The Iranian conceives the field as one, as at the same time polite and formal, generous and insincere. (This is not true, but if he had to translate what he sees, it would be all he could say.) He will probably not accept."57 This is but one example which could be multiplied many times over between any two languages of what Carroll and others would call differences in categorization of a field of social activity.

2.433 Carroll's four hypotheses.

Perhaps the most influential spokesman in the field of language and cognition is John Carroll of Harvard, a psychologist, but greatly interested in linguistics. Carroll had had an extended acquaintance with Whorf before the latter's death and has since edited Whorf's works. Besides this he has continued his interest in linguistic relativity as is shown by his writing. It is Carroll who has most recently attempted a summary of the linguistic-relativity hypothesis and an application of these findings to the teaching of a foreign language.

In his article "Linguistic relativity, contrastive linguistics, and language learning," Carroll reviews the possible positions the linguistic-relativity hypothesis might take outlining three such positions ranging from radical determinism to neutral or no determinism followed by a fourth which he feels lies closest to the facts of the matter. This fourth is his own.

He begins by stating an extreme view which says that because of the extreme determinism of language structure and categorizing the speaker of one

57Gastil, 1959a, pp. 17, 16.
language would not be able to acquire the mental outlook implied by another language. Thus it would follow that another language could only be partially taken on by the learner and superficially at that. True bilingualism would be impossible and any kind of exact translation from one language to another would be a contradiction in terms. Although there have been some adherents to this view either in part or in whole there are no serious advocates of it today. Although Whorf at times may have indicated a view as extreme as this it is very doubtful, had he lived, that he would have continued in this direction to its ultimate radical end.

If on the other hand we admit a less strict view such that learning a new language and learning a new "mental outlook" went hand in hand in the learning process we might be justified in saying that the learning of a second language could be enhanced if the student could be helped to attain the "mental outlook" associated with the second language. It follows then that bilinguals could exist and a true bilingual would tend to switch "mental outlooks" as he switches from one language to another. But still, due to the fact that language structure and mental outlook are bound up, completely accurate translation from one language to another would be impossible.

One alternative to these two linguistic-relativity hypotheses is what Carroll calls the linguistic neutrality hypothesis "which would assert that mental operations and other behavior are independent of the language in which they are carried out." Therefore, the teacher of a second language could ignore teaching the 'mental outlook' of a language and assume that the learner would carry over to the second language the mental operations he already possessed. "Indeed, he would assume that the new language would provide merely a new vehicle for expressing the ideas and emotions already expressible in the learner's native
language. Under this theory, also, both true bilingualism and accurate translations between languages would be conceived to be attainable.\textsuperscript{58} Carroll does not attempt further elucidation or defence, for, indeed, so naive a view in light of present linguistic, psychological and anthropological knowledge is indefensible. It is unfortunately, albeit unvoiced, the implicit view that much of language teaching is still based on.

Carroll himself, however, subscribes to none of the above but has instead formulated an hypothesis of his own which is based on the evidence at hand from psycho-linguistic tests already described.\textsuperscript{59} He concludes that "At the present time we must draw the conclusion that no satisfactory evidence exists for thinking that languages reflect particular world views. Indeed, the evidence from common knowledge would seem to point in the opposite direction, namely, to the effect that any world-view can be expressed in any language. When we consider the variety of philosophical positions that have been propounded in any one of the major world languages with no apparent difficulties arising from the languages themselves, the notion that languages predetermine these positions seems like a contradiction...."

"In fact, with a few possible exceptions all languages seem sufficiently flexible to embrace any new science, technology, or philosophy. Whatever its world view may be, the Navaho language has adapted itself to modern medical terminology and thinking, and this has happened despite the fact that certain groups of Navahos have been highly resistant, on principle, to the introduction of modern medical terminology."\textsuperscript{60}


\textsuperscript{59}The two experiments as found in Carroll and Cassagrande, 1958.

\textsuperscript{60}Carroll, 1963, p. 11.
Carroll's hypothesis does not go beyond the evidence supplied by his own experiments and those of others and is to that extent limited and developmental. It states that "Insofar as languages differ in the ways they encode objective experience, language users tend to sort out and distinguish experience differently according to the categories provided by their respective languages. These cognitions will tend to have certain effects on behavior. The speakers of one language, for example, may tend to ignore differences which are regularly noticed by the speakers of another language. This is not to say that they always ignore them, for these differences can indeed be recognized and talked about in any language, but they are differences which are not always salient in their experience." 61

2.44 Summary and implications for language teaching.

At present we have a small group of American linguists, anthropologists and psychologists coming to a position somewhat like the above hypothesis of Carroll's, a less extreme form of determinism if one can still apply the term. Certainly a less radical form of determinism will prove much more fruitful in laying bare, for the language teacher, the problems faced in teaching a foreign language -- in leading the student into the new language and culture. Although language structure does not in and of itself conceal a world view or mental outlook the culture of that language does, thus bringing to the fore the question

61Carroll, 1963, pp. 12-13. Associated with this cultural anthropologists see the same set of phenomena occurring as between various cultures. "Linguistic relativity must take account of social complexity. It will not suffice to contrast the cognitive practices of one nation with those of another. We are likely to find that a manner of perceiving, thinking, and speaking that characterizes the majority in one society is found in only a minority of another society. When we know the psychology of children, of psychotics, of bureaucrats, of creative artists, I shall be very much surprised if there will not be some segment of our society to match whatever strange cognitive modes the ethno-linguist may turn up." Brown, 1958, p. 258.
of culture in language teaching. Should the second language be taught using first language culture and second language linguistic forms? If so are we really teaching the second language in the fullest sense of that term or in any sense of that term?

As the linguistic-relativity hypothesis now stands what are the implications for language teaching? First, it means that a well thought out and sound teaching program can only be built on the comparison of the two languages involved -- in this case a comparison of their lexicons which also implies a phonological comparison and a grammatical comparison as well. The comparison of the two languages will reveal that the codification of a given range of experience differs from one language to the next, one language having a more highly differentiated codification than the other. From our knowledge of language learning in young children, as the mother tongue is being learned these differences in codification are also learned -- automatically acquired -- and the young child learns to pay attention to whatever discriminations are required by his language. Carroll's developmental hypothesis of linguistic relativity asserts "merely that the process of learning these discriminations requires the speakers of the language with the more highly differentiated referential system for any given range of experience to pay more attention to these aspects of experience, and that this increased amount of attention can have certain effects on behavior over and above acts of communication."

Secondly these differences in codification must be recognized and classified in respect to the target language as convergent, divergent, or non-congruent. What does this imply for language teaching? Apart from the word order of a language (the rules for combining linguistic elements which to some extent may

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62 Carroll, 1963, p. 16.
embody a system of codification of experience) an individual who is to learn another language must be taught to observe and codify experience as nearly as possible in the same manner as the native speaker. But this in itself is not enough for the learner already possesses a language which will cause interference with the new observational and codificational patterns presented in the new language. The linguist, therefore, must classify the symbols of these experiences in a way that will allow the learner the greatest amount of freedom to enter the new system of codification of experience.

Convergent, divergent and non-congruent elements provide the simplest classification and can be used in a teaching situation to point up contrastive differences to the learner. Relative to the native language of the learner a convergent phenomena is one in which the referents of two or more symbols in the native language are represented by a smaller number of symbols in the second language. Likewise divergent phenomena are the reverse of this, i.e. the second language contains a larger number of symbols than the first for the same external referent or non-linguistic experience. Both of these differences are significant for the learner and as Carroll says, "the divergent ones are probably more critical for him as a speaker, while the convergent ones are more critical for him as a hearer." 65

63 For the most comprehensive present-day treatment of the phenomena of interference see Uriel Weinreich, 1953, Languages in Contact, New York: Linguistic Circle of New York.

64 Carroll, 1963, p. 16.

65 Cf. Weinreich, 1953, pp. 1, 3, 5, 7-14, 47 ff. Carroll quotes the following paradigm from Weinreich as an example of convergent phenomena. "Often two existing semantemes, X and Y, of one language are merged on the model of another language, where the combined content of X and Y is represented by a single sign, Z." p. 48.
Another difference not covered by the above distinctions made by convergent and divergent phenomena is what I have called non-congruencies and which Carroll calls zero representation. He gives the following example, "There is no word for the concept too (as in too much) in Amharic, Persian, and Urdu. The concept must be expressed by a periphrasis. For example, in Persian, 'He was too late to catch the train' would be rendered approximately as 'He came that amount late that he didn't catch the train.' Contrastive linguistics must therefore be particularly watchful for apparent 'holes' in the representational system of a language.

"The interest here is in semantic differences between the referential systems of languages. Contrastive linguistics must study differences in meaning as well as in form. It must study morphological, syntactical, and lexical phenomena at least as much as it studies phonological ones..."66

The contrastive study and consequent classification of a language must, therefore, also account for the non-congruencies or "holes" in the representational system of the target language in relation to the source language.

In making application of the above distinctions to the language teaching situation how will the teacher go about the teaching of divergent differences for instances?

Carroll considers divergent phenomena the most difficult to learn because the learner must make a selective response while for a convergent difference only an interpretative response is necessary. To solve this problem Carroll has suggested the use of the psychological concept of set. Psychologists have used this concept in classifying responses to verbal stimuli in what

is known as the controlled association test. The encoding of meaning can be regarded as a response guided by a particular set. For example the native speaker of English learning to use the German equivalent of to go will be required to differentiate within what he has heretofore called one semantic area (meaning of one word) as to whether the going in German is of one mode or the other. The learner is presented with a variety of situations representing different modes of travel and is asked to respond using the proper travel-mode word. 'Set' in this sense is semantic or contextual orientation of the individual. Meaning and context in the broadest sense being one at this point.

Carroll concludes his article with the following: "Divergent and convergent differences contrasts having been identified and described, foreign language teachers must develop special teaching techniques and materials to bring these contrasts to the attention of language learners and to allow them to form appropriate habitual sets incorporating them in speaking and hearing behavior.

"According to the present view of linguistic relativity, mental operations are largely independent of the language in which they take place, although they may undergo certain transformations as the individual passes from one language to another. It would seem that true bilingualism is possible for the


68 Carroll, 1963, p. 11. Carroll's sets in the following cases resemble to some degree the linguistic fields of Gastil and Weisgerber (and my semantic domain of 6.), "We can establish in a subject person, through verbal instructions, a set to give opposites or 'contrast' responses wherever possible. The series of stimuli white, poor, light, and butterfly will then elicit black, rich, heavy or dark, and moth respectively. A set to give synonyms would cause the elicitation, let us say, of snowy, indigent, bright, and insect, to the same series of stimuli." p. 17.
individual who has learned to manage these transformations. Further, I believe that accurate translation is, in principle, possible (provided the text being translated is free of ambiguities) if the translator is properly aware of differences in linguistic codification and takes account of these in preparing his translation.

"The contrasts between languages do not add up to differences in mental outlook or Weltanschauung, nor is any world-view inextricably bound with any particular language. Those who may be alarmed about the spread of English, or of any other language, may be assured that there is insufficient evidence for thinking that such a language bears within itself, like a Trojan horse, a particular world view, but if they do have one, it is more likely to have arisen from social and historical factors which have nothing to do with language."69

The history and development of the linguistic relativity hypothesis indicate that a certain amount of maturity and perhaps objective detachment has been attained since the hypothesis was stated by Whorf in the late 30's. We may safely credit Whorf with the task of bringing this facet of language study to the attention of linguists as well as psychologists, anthropologists and philosophers which has resulted in many joint endeavors on the part of the four mentioned disciplines. In fact, it could accurately be said that Whorf's provocative hypothesis has given a major assist to a foundering interdisciplinary study known for some years as ethnolinguistics and more recently as sociolinguistics.

2.5 The coalescence of two disciplines.

Since the two major disciplines usually seen as having a joint area of overlapping interest are linguistics and social anthropology, it is not unusual that

the term ethnolinguistics has found common currency as a name for this hybrid field of study, part linguistics and part anthropology. But as with all new fields, their existence being realized by both parents, a rash of names results which tends to confuse the issue that there is but one hybrid field under discussion. Metalinguistics, ethnolinguistics, and sociolinguistics have resulted and taken as a group might be preferred by linguists whereas anthropologists tend to prefer anthropological linguistics or linguistic anthropology. Of the three names first mentioned metalinguistics seems not to have caught on probably due to its confusion with the philosophical term metalanguage. Ethnolinguistics as a closely allied term seems to have had the longest history, but if Hymes suggestion that ethnology as a term is losing ground among anthropologists this might account for the present-day use of


71 Hymes, 1963, p. 78, "Both orders have checkered precedent through ad hoc coinage, e.g., Lowie, Kroeber, Emmeneau, and probably others have used 'linguistic anthropologist' in some context during the past generation; Voegelin and others have made 'anthropological linguist' well known, and Herskovits uses both in the first part of his textbook Man and His Works (New York, 1949), as do Danehy, Hockett, Pittenger in The First Five Minutes (Ithaca: Paul Martinseau, 1960)."

72 Ibid., p. 77, "Scattered examples show 'ethnological philology' in England as early as the 1850's (Latham, Cull), and 'linguistic ethology' somewhat later in William Dwight Whitney's writings. Coordinate terms, 'ethnology and philology', later 'linguistics and ethology', dominate until recently, (although Brinton did use 'linguistic anthropology' for a major division). Although Bloomfield referred to the 'ethnolinguistic school' ("Why a Linguistic Society?", Language 1.1-52 (1925)) and Malinowski had spoken of urgent need for an 'Ethnolinguistic theory' to guide field work (Classificatory Particles in the language of Kiriwina, Bulletin of the School of Oriental (and African) Studies, vol. 1, part 4 (1920), p. 69), such syntactically more intimate terms have become prevalent only since the Second World War."
sociolinguistics. Sociolinguistics should prove more acceptable to a larger audience due to the broader meaning of the word 'socio'.

Psycholinguistics although used by Hymes as another variant for sociolinguistics and the general area seems to be another distinct hybrid area on a parallel with sociolinguistics which has resulted from the cross-fertilization of linguistics and psychology. And while psycholinguistics may overlap in some cases with sociolinguistics, it has a well established role already, dealing with the psychological aspects of language.

Sociolinguistics and its associated areas has laid the necessary groundwork for a more realistic statement of the relation of linguistic factors to thinking and cognition; of linguistic factors to non-linguistic behavior; and linguistic factors to national character and mental outlook. All this greatly contributes to a clarification of the manner in which language is learned as a first language and how a second can more effectively be learned as well. Highlighted by the research in sociolinguistics is the fact of the central role language plays in transmitting culture and the pivotal position cultural context plays in teaching a second language.

73 Used by several papers at the Ninth International Congress of Linguists, Massachusetts Institute of Technology, 1962; and also by the Center for Research in Languages and Linguistics, University of California for their National Conference on Sociolinguistics, held in May, 1964, at which the following papers were given: J. L. Fischer, "Syntax and social structure: Truk and Ponape"; John J. Gumperz, "On the ethnology of linguistic change"; Einar Haugen, "Linguistics and language planning"; Henry H. Hoenigswald, "A proposal for the study of folk-linguistics"; Dell Hymes, "Two types of linguistic relativity: Some examples from Amerindian ethnography"; Gerald Kelley, "The status of Hindi as a Lingua Franca"; William Labov, "Hyper-correction by the Lower Middle Class as a factor in linguistic change"; Raven McDavid, "Dialect differences and social differences in an urban society"; Jose Pedro Rona, "Social and cultural status of Guarani in Paraguay"; and William Samarín, "Self-annulling prestige factors among speakers of a Creole language".
3.0 The psychological basis for language learning and interference.

3.1 Theories of learning.

Pursuant to the discussion of the phenomenon of interference referred to in 2.432 and 2.44 and forming a framework for 4.0, 5.0, and 6.0 will be the selection of a theory of learning. According to E. R. Hilgard learning theories can be grouped into two major families. The two families are the stimulus-response theories and cognitive theories.¹ Throughout this section for the purposes of brevity we will refer to the stimulus-response theories as S - R and the cognitive as C.

3.11 Stimulus-response and cognitive theories of learning.

The S - R and C theories each represent a good number of specific adaptations making the subdivisions numerous and complicated.² It should, however, be made clear that these differences are purely of an interpretational preference not a disputation of the data, once the observations have been established and accepted. Therefore, identical data in a learning situation as observed by the psychologists of both camps can be agreed upon but each has his own preference of interpretation. "All theorists accept all the facts," is the way Hilgard puts it. Issues on which the stimulus-response and cognitive theorists divide should be outlined, however, as they give perspective and definition needed to understand the interpretative preferences of the theorists.


²In this connection mention should be made of such well-known S - R psychologists as Thorndike, Skinner, Guthrie and Hull, and Tolman, C theorist as Lewin, and gestalt psychologists. However, functionalism, psychodynamics, and the probabilistic theories do not readily come under either of the two major families and in that sense the S - R / C dicyotomy cannot adequately claim to describe all theories of the psychology of learning. (See Hilgard, 1956, Chapter 1.)
3.111 Peripheral versus central intermediaries.

The issue of "peripheral" versus "central" intermediaries in behavior sequence point up an operational difference whereby the S - R theorist "tends to believe that some sort of chained muscular responses, linked perhaps by fractional anticipatory goal responses, serve to keep a rat running to a distant feed box. The cognitive theorist, on the other hand, more freely infers central brain processes, such as memories or expectations, as integrators of goal-seeking behavior." As Hilgard goes on to point out, these two interpretations of behavior depend in each case upon inferences of observed behavior which are not directly verifiable in either case; thus under the circumstances one's preference of interpretation is tied to the larger systematic preferences.

3.112 Acquisition of habits versus acquisition of cognitive structures.

The issue of acquisition of habits versus acquisition of cognitive structures is perhaps a more illuminating difference but here we should be careful to realize that we do not merely have a case of two different situations and therefore two different types of learning but two situations both interpreted differently but with internal consistency by the two camps. Therefore the S - R and C theorists come up with different answers to the question, What is learned? The S - R theorists say habits are learned and the C theorists say cognitive structures. Habit, says Hilgard, "appeals to common sense. We all know that we develop smooth-running skills by practising them; what we learn is responses. But the second answer also appeals to common sense; if we locate a candy store from one starting point, we find it from another because we 'know where it is'; what we learn is facts. If all habits were highly mechanical and stereotyped, variable non-habitual behavior would force us to

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3Hilgard, 1956, p. 9-10.
admit cognitive structures as part, at least, of what is learned. But the stimulus-response psychologist is satisfied that he can deduce from the laws of habit formation the behavior that the cognitive theorist believes supports his interpretation. Each theory has its own self-consistent answer and again one is forced back to a wider systemic approach.

3.113 Trial and error versus insight.

Trial and error versus insight in problem-solving again reveals a difference of interpretation. The S-R theorist sees the problem being solved by the learner assembling his habits from the past appropriate to the new problem, responding either according to the elements that the new problem has in common with familiar ones, or according to aspects of the new situation which are similar to situations met before. If these do not lead to solution, the learner resorts to trial and error, bringing out of his behavior repertory one response after another until the problem is solved. Thus the S-R theorist recognizes a form of insightful interplay in terms of the past experience of the learner. C theorists, on the other hand, insist there is no guarantee that the learner will be able to bring these past experiences to bear on the problem. Whereas the learner may solve the problem presented in one form he may fail if presented in another although both forms require the same past experience. "According to the cognitive theorist the preferred method of presentation permits a perceptual structuring leading to 'insight', that is, to the understanding of the essential relationships involved. The stimulus-response psychologist tends, by preference, to look to the past history of the learner for sources of solution, while the cognitive psychologist, by preference, looks to the contemporary structuring of the problem." Because of the

4 Hilgard, 1956, p. 10.
5 Ibid.
6 Ibid., p. 11.
differences in preference one should not infer that either branch of learning theory is blind to the total situation.

3.114 Summary.

These three difference areas in the theory of learning give us some feeling for the two major families. For the purposes of this thesis an adaptation of a stimulus-response theory will be used because of the ease and simplicity with which it can be stated in talking about language learning although one might wish for the freedom to be eclectic in the matter and use an S - R approach for the early rote aspects of language learning and a C approach for the perceptual generalizations demanded in other stages of language learning.

3.12 A definition of learning.

A definition of learning phrased in rigorous scientific language is not easy to find.

In general terms, however, psychologists do make attempts to define the learning process. For example, McGeoch and Irion in their book The Psychology of Human Learning say, "Learning, as we measure it, is a change in performance which occurs under the conditions of practice." It is the psychologist's job to delimit these changes in behavior and also to make an adequate statement of the conditions under which these changes take place. Hilgard gives the following definition of learning as a provisional one...

"Learning is the process by which an activity originates or is changed through reacting to an encountered situation, provided that the characteristics of the change in activity cannot be explained on the basis of native response

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tendencies, maturation, or temporary states of the organism (e.g. fatigue, drugs, etc.). Here again definitions of terms used create a problem for the psychologist but in all definitions there is agreement that learning results in a change in activity or performance of the subject under consideration.

Therefore, a basic definition of learning is not a major source of disagreement between learning theories. As has been stated, differences lie in interpretation of fact.

In a more precise definition of learning, however, certain factors must be dealt with such as learning in relation to native response tendencies, maturation, fatigue, functions of the nervous system, and problem solving and reasoning. In the following section on language learning a more specialized definition will be attempted.

3.2 Theory of language learning.

Following the general S - R theory of learning we will discuss aspects of the language learning situation in order to complete an adequate theory usable in a teaching situation. In the first instance a general statement needs to be made which will serve both for initial language learning (learning a first language or mother tongue) and secondary language learning (learning a second or foreign language). In the first instance a general statement will be made applicable to language learning in general and refinements added to account for the differences as found in primary and secondary language learning. Thus certain features of secondary language learning will be dealt with later by a more delicate level of analysis.

3.21 Primary and secondary language learning.

Primary language learning will be defined as it occurs in the young

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Hilgard, 1956, p.3.
child although apparent primary language learning does occur in other circumstances: e.g. relearning after adult aphaic insult and certain physio-psychological disorders. In the instance of primary language learning in the young child there are several factors to consider. While there is no doubt that the acquisition of a language readily fulfills the requirements of a learning situation within the framework of the S - R theory a maturational factor is also present. Whereas learning proper can be considered to be taking place, in that, for example, when the child sees a ball and points to it with or without vocalization, the adult responding to this stimulus provides the verbal response for the child which is imitated by the child. The young child does not need to be instructed to imitate nor to vocalize. The latter ability has been with him since the birth cry. Thus vocalization in the early months of life is part of a maturational process (native response tendency).

Osgood makes reference to his experiment in which during the first year of life recordings were made of the vocalizations of a single infant. 

"Approximately 10 minutes of vocal activity were recorded each week, partly of spontaneous vocalization and partly of responses to standard stimulus situations. The first observation of note was that within the data for the first two months of life may be found all of the speech sounds that the human vocal system can produce, including French vowels and trills, German umlaut and guttural sounds, and many that are only describable in phonetic symbols. This is in flat contradiction to the notion that the infant gradually 'becomes capable' of making various sounds. A more accurate statement would be that
the comparative frequencies of various speech sounds change as development proceeds... or that as frequently heard sounds are reinforced the potential range shrinks to the actual for a specific language. It may be that we are describing a state similar to that of cultural selectivity where it is not a question of what sounds can be produced but which ones can be produced with ease after the first language has been learned. What we might call linguistic acculturation in the young child, therefore, is taking place on a tabula rasa and to that extent no other later language learning will be the same for it will be learned in terms of the primary or other languages but always through a linguistic medium, consciously or unconsciously.

3.22 Language learning and acculturation.

The acquisition of the primary language is also an acculturation process which may or may not be the case in acquiring a secondary language. In fact, it very seldom is in the manner in which it is taught in most school situations. Allowed to live in a language community, learning the language and acculturation are achieved as one process. The separation of these two inseparable aspects of the social institutions of language usage, produces a very inferior and inadequate product of minimal utilitarian uses.

Charles Osgood, 1953, Method and Theory in Experimental Psychology, New York: Oxford University Press, p. 684. Another more recent study in this area is that of Ruth Hirsch Weir, 1962, Language in the Crib, The Hague: Mouton and Co., which is a case study of the pre-sleep monologues of a 2½ year old child and in which the author analyzes the phonology, morphology and syntax of these utterances.

This includes the Direct Method even though in this system it is maintained that the student is learning the second language as he learned the first. On the one point that the mind is no longer a blank piece of paper (tabula rasa) to be written on it is quite clear that learning a second language is in a different category from learning the mother tongue. The mediating role of the mother tongue cannot be ignored.
3.23 Three distinctions between primary and secondary language.

Thus primary language learning differs from secondary in these major aspects... It is not acquired by means of another mediating language; it always is accompanied and irrevocably integrated with the process of socio-cultural assimilation; and it has maturational patterns of sound and speech production (via mimicry) in its favor. While none of these are true for secondary language learning, (some of these contribute to an adverse phenomenon in second language learning known as interference phenomenon which will be dealt with under 3.3) there is nonetheless the possibility of writing a simple S - R formula covering all language learning situations.

3.24 Preliminary formulaic terms for a model of second language learning.

For purposes of this thesis in the following discussion certain additional letters will be used with the S - R designation for adaptive/designatory purposes. To arrive at a formula representing verbal activity, preliminary stages of S - R activity will be outlined showing the relation of object (o) to sign (s) and sign to assign (g). Thus in the build-up for the formula covering all language learning situations we can write a preliminary formula,

\[ S_o \rightarrow R_t \]

where \( S_o \) refers to the stimulus object defined by Osgood as "any pattern of stimulation which evokes reactions on the part of an organism"\(^{11}\) and \( R_t \) the total response behavior elicited by the \( S_o \). At this level of description the \( S_o \) can include stimuli as diverse as a gust of cold air, a dog's wet nose, or a toothache and is a stimulus in its own right.

\(^{11}\) Osgood, 1953, p. 691.
Verbal learning processes.

At the level of verbal discourse for the young child learning his first language, the object as stimulus appears to be all that is dealt with at first but soon there is another dimension to language that is incorporated into the language phenomenon and which has been called the sign. The definition and differentiation of object and sign may seem simple on the surface, the object being the concrete stuff and the sign its verbal designation used in its absence, yet it has nonetheless troubled philosophers for centuries and is becoming of increasing interest to psychologists and linguists. We are faced with the problem of determining the conditions under which a pattern of stimulation is a sign of something else and when it is not. Osgood cites the example of the child and the kitty.

"The little child may say 'kitty' when stimulated by that furry, four-legged object, but this is no guarantee that this noise represents anything to her. Now suppose the child's mother asks, 'Where is Kitty?' and she immediately begins searching... in the sunny corner of the porch, by the cat's dinner plate. Does 'kitty' now have meaning? Is it functioning as a sign? It would seem that such is the case: the child is responding to a stimulus that is not the object (to the word 'kitty') in a manner that is relevant to the object signified; the child's behavior is apparently organized and directed by some implicit process initiated by the word. We may even hear her repeating 'where's kitty' to herself while she hunts."\(^{12}\)

Object and sign.

Therefore a distinction between object and sign soon becomes a part of the language learning situation. Although the chronology of its manifestation is vastly different in the case of the very young child learning a first language.

\(^{12}\)Osgood, 1953, p. 690.
and a more mature student learning a second language the fact of this
difference needs to be provided for in the formula. Osgood makes a pro-
visional distinction by defining sign in the following manner: any pattern of
stimulation which is not \( S_0 \) and yet evokes reactions relevant to \( S_0 \).\(^{13}\) For the
conditions under which the definition of the sign pertain Osgood turns to
Morris' ideas on what he calls semiotic as found first in a paper entitled
"Foundations of the Theory of Signs" (1938) and later as developed in a book,
Signs, Language and Behavior (1946). In these writings Morris attempts to
describe what he calls the 'disposition' of the sign to elicit responses
previously elicited by the object. Osgood restates Morris' definition as
follows, "Any pattern of stimulation which is not the object becomes a sign of
the object if it produces in an organism a 'disposition' to make any of the
responses previously elicited by the object."\(^{14}\)

\(^{13}\) Osgood, 1953, p. 691.

\(^{14}\) Ibid., p. 693. Here Osgood gives the following symbolization of this
statement.

\[
\begin{align*}
\text{\( S_0 \)} & \quad \text{(disposition)} \\
\text{\( S \)} & \quad \text{\( S_0 \)} \\
\text{\( R \)} & \quad \text{\( R \)} \\
\text{\( R \)} & \quad \text{\( R \)} \\
\text{\( R \)} & \quad \text{\( R \)} \\
\text{\( R \)} & \quad \text{\( R \)} \\
\text{\( R \)} & \quad \text{\( R \)} \\
\text{\( R \)} & \quad \text{\( R \)} \\
\text{\( R \)} & \quad \text{\( R \)}
\end{align*}
\]

where \( S_0 \) is disposed to select any or all of the \( R^1 \ldots R^n \) responses. "In other
words, hammer is a sign of that object because it 'disposes' certain human
organisms to make responses which have previously been made to the hammer itself.
There is no requirement that the overt reactions originally elicited by the
object be made to the sign; the sign merely creates a disposition or set to
make such reactions, actual occurrence depending upon the concurrence of
supporting conditions."
Osgood refines in his own words this essentially Morrisian definition. "Whereas Morris links sign and object through partial identity of object-produced and disposition-produced behavior, we shall link sign and object through partial identity of the 'disposition' itself with the behavior elicited by the object. Words represent things because they produce some replica of the actual behavior toward these things. This is the crucial identification, the mechanism that ties signs to particular stimulus-objects and not to others. Stating the proposition formally, we may say: a pattern of stimulation which is not the object is a sign of the object if it evokes in an organism a mediating reaction, this (a) being some fractional part of the total behavior elicited by the object and (b) producing distinctive self-stimulation that mediates responses which would not occur without the previous association of non-object and object patterns of stimulation." Osgood has by the addition of (b) stipulated the necessary condition of learning lacking in Morris' formulation and thereby automatically excluded the possibility of instinctive behavior as sign stimuli. The response of warrior termites, for instance, to drumming does not depend on previous association with a breach in the nest therefore does not fulfil the requirement of (b) above.

In spite of the fact that a very large proportion of verbal signs used in normal communication are what Osgood has termed assigns, for this thesis

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15 'Disposition' becomes a weak point in The Osgood-Morris S - R Theory in that it cannot be got at for observations or explanations on empirical basis.


17 Ibid., p. 696. The assign is a further abstraction "which achieves its meaning indirectly through association with other signs rather than through direct association with stimulus-objects."
this distinction will not be needed because of the primary nature of the research. The more general term 'sign' will serve for all verbal signs.

3.252 S - R language learning.

Thus as a general formula for verbal communication the one previously cited for the sign stimulus will serve:

\[ S \rightarrow R_x \]

\[ S \rightarrow r_m \rightarrow s_m \rightarrow R_x \]

From a psychological point of view the above formula represents several distinct behavioral relations. Of the four mentioned by Osgood (as he interprets Morris' semiotic) there is one of particular interest to those dealing with the acquisition of language. It is that of the mediating relation that exists between the mediation process as a form of self-stimulation \((s_m)\) and the response sequences \((R_x)\) elicited. "This relation is composed of hierarchies of habits associating intervening variables with overt behavior; the relative strengths of such habits depend upon momentary contextual conditions and pervasive cultural factors which have influenced the reward systems in a particular society."\(^{18}\)

It will no doubt occur to the reader that there are a variety of responses that may be given (taking the larger view of language as social communication) but for the purposes of this discussion we will only be considering verbal.

3.253 Primary language learning.

For the young child learning his mother tongue the object is seen and the adult or other proficient user of the language provides the verbal response

\(^{18}\) Osgood, 1953, 698-9.
in naming the object. (Language like other cultural institutions depends for its perpetuation on being learned by the young and transmitted by the adult.) This is copied by the child and in the next instance the child will provide the correct verbal response on being presented with the object stimulus. The intervening step, present in the learning experience of the second language learner, is not present in the primary language learning situation of the young child. Nevertheless the formulae for these two learning situations in their simplest form can be symbolized as one:

\[ S \xrightarrow{a} R \]

This can be done with the recognition of appropriate modification for intervening steps in secondary language learning, to be dealt with in §3.27.


For those who begin to learn their second language beyond the formative years of the young child (birth to six years of age) there is considerable difference in the learning situation. Three of these differences have been outlined above. However, in an attempt to be more specific in this description one must take into consideration the fact that most second language learning begins in the school situation between the ages of 12 and 18. Let us look first at the differences resulting purely from age. As we have already mentioned earlier the learner has firmly acquired his first language by the time he begins the second and has gone on to acquire much of his total formal education through this medium. He has also achieved a high degree of acculturation, and with his physical growth has acquired a linguistic system, a language which must be accounted for in the learning of another, and to that extent will
find learning this second language different. Einar Haugen writing on the bilingual individual\(^{19}\) points out that the young child during the early years of growth appears to lose adaptability of the physical properties of the brain and consequently of many other physical aspects of the organism. He relates the following, "One American neurophysiologist reports discoveries made in operating on the brains of epileptics, tending to show that as people grow older, the language-learning centers in the brain harden. A child can substitute the right hemisphere of the brain for the left which normally controls speech, but older persons cannot do this: 'Once functional localization of acquired skills has been established, the early plasticity tends to disappear' (Penfield 1953, 206). There is certainly also a psycho-social factor involved in this receptivity of the child — what Ervin has referred to as the child's dependence on models, resulting from its identification with the people who satisfy its needs (Ervin 1954a). The greater readiness of children than of older persons to learn the language of their environment is associated with their craving for membership in the group of their contemporaries. Puberty, with its passage into adolescence, leads to a consolidation of personality which to some extent inhibits the kind of submission to a new norm that language learning requires."\(^{20}\)

3.27 A psychological model of second language learning.

In what way will these factors we have just discussed influence the learning process and hence the formulaic portrayal of second language learning?

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\(^{19}\)This term is here used as defined by U. Weinreich, 1953, Languages in Contact, New York: Linguistic Circle of New York, No. 1, p. 1, as any individual who speaks more than one language. This definition has gained wide recognition and is used in this sense by Haugen.

As we have implied previously there will be the mediating influence of the first language. This fact will need to be accounted for in the formula and will lead us to postulate intermediate steps on the S sequence for second language learning. To explicate the symbolization a diagramatic build-up will be employed. All symbolization will be done in terms of the sign-stimulus due to the academic and intellectual prior experience of the learner. In other words we will no longer mention the briefly touched on object-sign relationship overtly applicable to young children learning a primary language. Representation will in all cases unless otherwise stated be for verbal language learning situations rather than for written or other forms, e.g. gestural, emotive, etc. In a sense the following build-up is a diagram in reverse because as we will see farther on the simplest formulaic representation to be considered is the "ideal" (normal for first language production and reception) and in second language learning the most difficult to attain; therefore probably not the first to be acquired. This need not be the case sequentially although it can hardly be avoided quantitatively as we will be made aware of later. Let it suffice to say here that with realistic recognition of the value of situation in the teaching/learning model, the "ideal" can be made a part of early language learning and built upon to greater quantity as the learner goes on in his acquisition of the second language. This does not need to be a breakthrough as is implied by Belyayev in his book The Psychology of Teaching Second Languages or for that matter any traumatic experience of insight as to thinking in the language being learned.

The basic formula can thus be written $S_e \rightarrow R_e$, which is an abbreviated form of $S_{e_s} \rightarrow R_{e_x}$ where (e) represents the language being learned, English in this case, and (s) the type of stimulus, verbal sign with (x) representing the total response variation for any particular sign stimulus. We have but to reflect on the 'ideal' to realize that this in much of second language learning is truly ideal for a much different state of affairs actually prevails in the majority of second language learning. In the following expanded formula the same symbolic representation holds.

**Formulaic representation for second language learning both receptive and productive**

$$S_e \rightarrow r_p \rightarrow s_p \rightarrow R_{m_p} \rightarrow S_{m_p} \rightarrow r_{e_p} \rightarrow s_e \rightarrow R_e$$

The box shows the portion of the formula which is sub-vocal leaving the two end symbols to represent the ideal (or normal in first language) reception and production. The $S_e \rightarrow R_e$ sequence and its intermediate steps represented by small case (s) and (r) is a continuum arbitrarily segmented for purposes of analysis at what we are recognizing in the above formula as overt verbal expression and in which any $R$ can itself be the stimulus for a further response etc.

The above formula is actually composed of two abutting formulae each representing a distinct process in verbal communication 1) reception and 2) production. The receptive half of the formula may be extracted and written thus...

$$S_e \rightarrow r_p \rightarrow s_p \rightarrow R_{m_p}$$
and the productive half in this manner...

![Diagram](image)

In the symbolization for reception of verbal stimuli speakers of Persian will receive the sign stimulus which results in a response-stimulus sequence whereby the learner because of cultural overlap is enabled to convert the $S_e$ sign-stimulus to its stimulus identification in Persian $S_p$. This leads to the response meaning in Persian or an appropriate activity which ends the receptive side of the formula. The response meaning in Persian can be defined as the response indicating comprehension to the observer. This may take the form of a non-verbal manifestation, e.g. a smile, handshake, compliance with a request, etc. or a verbal production in which case the productive side of the formula operates.

In the productive formula there is an equal exchange of $S-R$ sequences. The learner's stimulus meaning\(^{22}\) in Persian can be described as the contextual matrix that contains the meaning of that particular linguistic stimulus. It is the mental formulation of the verbal response in Persian which the speaker wishes to produce in English that constitutes the stimulus meaning. This stimulus produces the translation response which is its own stimulus ($S_e$) the stimulus in English which becomes the response in English.

\(^{22}\)The terms stimulus-meaning and response-meaning were taken from E. Kleinjans, 1958, *A Descriptive-comparative Study Predicting Interference for Japanese in Learning Noun-head Modification Patterns*, unpublished Ph.D. dissertation, University of Michigan. For the purposes of this thesis the terms have, however, been redefined in my own words. Kleinjans' use of these terms lacks clarity and the total scheme inadequately explains the relationship of form, meaning, and distribution (FMD), used originally by Pike and Lado separately, to the $S-R$ formula.
To further explicate the equation we will carry through a normal greeting in English. Since this is the second or secondary language being learned we will symbolize it by $L_2$; the primary language that of the learner, Persian in our case, will be symbolized by $L_1$. The Afghan learner of English has "Hello" spoken to him. This then is the stimulus in English ($S_e$) whereupon due to cultural overlap and instructions the learner responds ($r_p$) which is itself a stimulus ($s_p$) translating the "Hello" to /salamalekum/ to which he gives the meaning response ($R_m$) of a smile or other recognition. The encounter ends here for the purposes of receptive language activity. The response-meaning and stimulus-meaning are essentially a meaningful contextual matrix in the $L_1$ for the learner of $L_2$. The beginning of the productive side is the stimulus-meaning or the appropriate verbal expression in Persian for that context.\(^{23}\)

This is then translated via cultural overlap and instruction to become the response in English ($r_e$), a subvocal formulation, which is its own stimulus ($s_e$) and produces the spoken response in English actualized as "Hello" the ($R_e$).

From received stimulus ($S_e$) in English to productive response ($R_e$) in English we have shown the intermediate steps necessary to explain the commutation process of $L_2$ to $L_1$ to $L_2$ in the learner. The following diagram is a summary of these steps with a break-down following.

\(^{23}\)This matrix is the source of interference on the productive side. Its replacement by cultural material in English is the goal of good language teaching. At this early stage of language learning the production of $L_2$ items by and large comes from an $L_1$ cultural meaning matrix.
Persian speaking individual learning English

Input

"Hello" \( S_e \)  \( \rightarrow \)  \( r_{sp} \)  \( \rightarrow \)  \( R_{sp} \)  \( \rightarrow \)  \( r_{se} \)  \( \rightarrow \)  \( R_e \) "Hello"

Output

Breakdown:

\( S_e \)  \( \rightarrow \)  \( R_{sp} \)  \( \rightarrow \)  \( R_{se} \)

\( S_e \)  No translating or other commuting process  \( \rightarrow \)  \( R_e \)

As the breakdown indicates there is the possibility of change in the learner as he acquires a greater amount of exposure to the \( L_2 \) where the intermediating steps will be superseded and as in the native speaker of \( L_2 \) the \( L_1 \) speaker will not only receive the stimulus \( (S_e) \) in English but produce an immediate response in English without reference to the \( L_1 \) meaning matrix \( (R_{sp}) \) as shown in the full formula. 24

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24 See John B. Carroll, 1953, The Study of Language. A Survey of Linguistics and Related Disciplines in America, Cambridge: Harvard University Press, p. 86 for his model of \( L_1 \) production and reception (sketched below) in terms of encoding and decoding. As a psychologist Carroll ties with this aspect of language manifestation the aspect of storage of language material. This aspect of language as revealed in aphasic studies of monolinguals and bilinguals, and in the phenomenon of switching between coordinate linguistic systems needs intensive study.
3.3 Interference phenomena defined.

3.31 General remarks.

One is not long in realizing either from his own experience of learning a second language or from his observations of others who have acquired a second language that there is an obvious correlation of the second with the first. Weinreich refers to these correlations in terms of an automatic conversion formula. "Insofar as such conversions are regular, they diminish the inter-dialectal gap and simplify the problem of the bilingual; to the extent that they are irregular, they present pitfalls. By following regular conversion patterns many a Frenchman has been tempted to use inconvenient as a noun in English, after the model of the French noun /skovenij/".25

The layman at the phonological level may think of this correlation as a foreign accent. He may even venture to say which language causes the foreign accent. This is due to observable phonological similarity between the acquired language and the mother tongue or the one predicted to be the mother tongue. For instance we often hear it said, "He has a French accent," meaning his first language is French and we recognize in his production of English the French manner of pronunciation rather than the English. Again the influence of the first language can show itself on the structure of the second by word order at the sentence, clause and group rank. A speaker of Persian learning English could well make a statement such as "He up (on) the mountain went," /u: baij a i ko: raft/ duplicating the word order in Persian but using English lexical items. Influence from the first language is not, however, limited to the phonological and grammatical level of language production only but also manifests itself at the lexical level in word meaning parameters.

This can be seen in the inaccurate and indiscriminate use an English speaker might make of the German verbs *gehen* and *fahren* since both translate in English as *go* although in German these two lexical items cover the entire range of "goingness" but are complementary units. The English speaker does not have the habit of making a distinction between going by foot and going in other ways hence the tendency to use one lexical item where a distinction between two is needed. It may accurately be said that all examples of deviation from the norm in second language production are in some way due to prior learning, and in the majority of cases due to the learning of the first language. It is therefore the influence of the first language already acquired that is so easily seen in the production of the second.

3.32 Transfer of training.

What actually is taking place? Why is there such pressure to produce a second linguistic medium in terms of the phonology, grammar and semantic grid of the first? Only partial answers are given by psychologists, and linguists up until the present have considered this to be out of their field. 26

26 In the area of pure or theoretical linguistics this attitude is no doubt justified (witness Bloomfield and followers with the gradual full circle to Pike). There is, however, as more and more linguists are coming to realize an area which is related to linguistics and on which their own research directly bears. These areas of coalescence between anthropology and linguistics and psychology and linguistics are coming to be known respectively as sociolinguistics and psycholinguistics with well defined areas of research and study in their own right. Evidence of this is seen in the recent publications: Sol Saporta (ed), 1961, Psycholinguistics: A Book of Readings, New York: Holt, Rinehart and Winston; Dell Hymes (ed), 1964, Language, Culture and Society: An Anthropological Reader, New York: Harper Row; J. A. Fishman (ed), 1965, Readings in the Sociology of Language, The Hague: Mouton and Co.; R. J. Goodell, 1964, "An ethnolinguistic bibliography with supporting material in linguistics and anthropology," Anthropological Linguistics 6:2:10-32; and Dell Hymes (ed), 1964, Language in Culture and Society: A Reader in Linguistics and Anthropology, New York: Harper and Row.
One of the answers given by psychologists for the influence of the first language upon the second is that transfer of training is taking place. Transfer of training is the general term referring to any type of transfer whether negative or positive. Transfer causing facilitation is positive transfer while transfer causing interference is negative transfer. Thus transfer of training is the effect of any prior learning upon present learning. McGeoch and Irion define this in the following manner: "Transfer of training occurs whenever the existence of a previously established habit has an influence upon the acquisition, performance, or relearning of a second habit." More general but nevertheless expressing the same idea is a statement by Woodworth, "Transfer means the carrying over of an act or way of acting from one performance to another," and another by Osgood, "Transfer refers to the effect of a preceding activity upon the learning of a given task."

While these definitions in general hold for all second language learning the manner in which they were formulated and the experimental design on which they are based do not in all cases fit the practical aspects of second language learning (e.g. retroactive inhibition and facilitation).

3.33 Similarity relations.

To begin with it would be well to examine in terms of second language learning the phenomena of similarity relations and their locus because it is on these relations that the resultant behavior is judged as negative or positive.

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29 Osgood, 1953, p. 520.
transfer. Psychologists have long noticed that the learning of one maze facilitates the learning of another, that the administration of one fill-in-the-answer sheet constitutes facilitation for the next and so on. It appears that rats 'learn how to learn mazes' and that students learn how to take short-answer objective type tests as well as many other types of activity. The exact locus of the similarity relations in these cases is not easy to specify in spite of the obvious over-all similarity involved and it is because of this that experimental design has taken certain directions for correction and while similarity relations are to that extent more easily pin-pointed they are by the same token less easily applicable to a wide range of learning phenomena. It is because of the locus specificity of similarity relations that the verbal learning experiments as conducted by McGeoch and McDonald, Hamilton, Gibson and others,30 are in need of reinterpretation to fit the second language teaching and learning situation. A definition of similarity relations between a first and second language will have to be written before the validity of transfer and retroaction can be assessed between any two languages or language groups. This is not easily done if one is to go beyond the formal aspects of language description and include within the analysis meaning and context.

Pike in Language in Relation to a Unified Theory of the Structure of Human Behavior31 and Lado in Linguistics Across Cultures32 employ the use of the


trilogy, form, meaning, distribution (FMD) in an attempt to define similarity relations for one language and more than one language respectively. We, however, have not used this approach.

The fact remains nevertheless as Weinreich says, "Great or small, the differences and similarities between the languages in contact must be exhaustively stated for every domain — phonic, grammatical, and lexical — as a prerequisite to an analysis of interference."33 Once again we should look at some of the defining factors of interference as Osgood sees them: "Depending upon the degrees of similarity within the materials being learned, interference is produced among them, resulting in both overt and implicit anticipatory and perseverative intrusions. Depending upon the degrees of similarity between the primary and intervening activities, there is interference between them, resulting in cumulative loss in retention of the learned materials through time."34

3.34 Osgood’s three empirical laws.

However, to clarify the problem from the psychologist’s viewpoint first we must look into the three empirical laws outlined by Osgood in Method and Theory in Experimental Psychology for which he makes the categorical claim that there are no exceptions. As has been implied above the similarity relations involved in these paradigms are specifiable.

The first can be stated in the following formula.

Empirical law I: Stimulus variation.

\( (S_1 \rightarrow R_1) (S_2 \rightarrow R_1) (S_1 \rightarrow R_1) \)

33Weinreich, 1953, p. 2.

34Osgood, 1953, p. 520.
"The experimental conditions subsumed under this paradigm are those in which the subject first practises the association between one stimulus and a given response, or a set of such associations, and is then either (a) tested for transfer of the same response to a new stimulus or (b) finally tested for retention of the first association following such interpolation. The transfer part of this paradigm will be recognized as the exact procedure used in measuring stimulus generalization. As will be recalled... the greater the similarity between practice and test stimulus, the greater the amount of positive transfer (generalization). This statement holds over a broad range of materials and conditions..."35

After a summary of the influence of retroaction in the above quotation Osgood reformulates the law for stimulus variation as follows: "When stimuli are varied and responses are functionally identical, positive transfer and retroactive facilitation are obtained, the magnitude of both increasing as the similarity among stimulus members increases."36

At this point it should be stated that in the variety of second language learning with which this thesis deals retroaction and its influence on forgetting are not involved since this state can only be considered to take place to any considerable degree either in the very young child where the first language has not yet been established or in the case of the adult where disuse of the first language has taken place for a great many years. Retroactive interference, therefore, will not be considered.

35 Osgood, 1953, p. 525.

36 Ibid., p. 526.
Empirical law II

Response variation: \((S_1 \rightarrow R_1; S_1 \rightarrow R_2; S_1 \rightarrow R_1)\)

"When stimuli are functionally identical and responses are varied, negative transfer and retroactive interference are obtained, the magnitude of both decreasing as similarity between the responses increases."\(^{37}\) In other words while there is always some interference when stimuli are held constant and for different responses it grows less as the difference between the responses grows less.

Empirical law III

Stimuli and responses simultaneously varied:

\((S_1 \rightarrow R_1; S_2 \rightarrow R_2; S_1 \rightarrow R_1)\)

"When both stimulus and response members are simultaneously varied, negative transfer and retroactive interference are obtained, the magnitude of both increasing as the stimulus similarity increases."\(^{38}\)

In second language learning this law is the most readily applicable holding in all cases from early beginners to advanced learners who have been isolated from the primary language for many years. The beginner because similarity and supposed similarity cause the greatest interference while differences cause comparatively less interference in spite of the difficulty of learning.

3.35 Functional similarity.

The question now to be asked is can we identify and define 'functionally similar', 'functionally different' and 'functionally identical' units for the

\(^{37}\)Osgood, 1953, p. 527.

\(^{38}\)Ibid., p. 529.
study of language including not only the description of language at the formal level but also at the level of context?

Perhaps at first we should not attempt a unified approach although one such attempt has been made by K. L. Pike in *Language in Relation to a Unified Theory of Human Behavior* but not on a psychological model of second language reception and production. Pike's approach has in its favor the tri-partite distinction of form, meaning, and distribution applied to linguistic and extra-linguistic behavior considered as a single continuum. Although human behavior in this way is considered to be one unit (linguistic and non-linguistic) we cannot adequately fit this approach to a behavioristic S - R model of verbal behavior. Pike views linguistic activity in terms of the tri-partite FMD whereas for our model we wish to view the stimulus from the point of view of linguistic and non-linguistic behavior and here the FMD grid seems inadequate. Inadequacy at this point is due to the duplication of a process for linguistic and again for non-linguistic phenomena. A one step, comprehensive grid is needed that encompasses linguistic and non-linguistic behavior in one term. This will be done to secure the unity of process within the learner of assessing similarities and differences between the first and second language as well as forming the basis for his generalizations about new items in the second language.

3.4 **Interference and S - R language learning.**

To accommodate this process of equation in our original model we have but to assign it to the response symbol immediately following the initial stimulus of both the receptive and productive formulas. These formulas can now be compared and by and large equated with Osgood's three empirical laws.
of transfer and retroaction. For the purposes of formulaic economy the terms first and second language will be written as \( L_1 \) and \( L_2 \) respectively. Thus we can equate these terms to subscript 1 and subscript 2 respectively in Osgood's paradigmatic expressions of the empirical laws of transfer and retroaction. From these laws we can see obvious application to the learning and teaching situation of a second language. This leads us to the formula already presented for second language learning but with alterations for transfer and interference.

First, let us reinterpret Osgood's three empirical laws in terms of second language learning omitting the aspect of interpolated learning and retroaction which as has been explained has no validity in the learning situation as we have defined it. Kleinjans has done this in the following words. "When stimuli are varied and responses are functionally identical facilitation occurs, the magnitude of which increases as the difference between the stimuli increases."\(^{39}\) This we can apply to reception of a second language and is a modified version of the stimulus variation paradigm of Osgood's first empirical law. We shall also quote Kleinjans for the adaptation of the empirical laws for production of verbal material. "When stimuli are functionally identical and the responses are varied negative transfer (interference) occurs, the magnitude decreasing as the similarity between responses increases."\(^{40}\) The productive aspects of second language learning are in this manner covered. In order to account for the total sequence of second language reception and production (in other words without thinking of them as two halves of a whole) Osgood's third law can also be utilized in all

\(^{39}\)Kleinjans, 1958, p. 67.

\(^{40}\)Ibid., p. 68.
respects but only if the S - R sequence is taken as a whole. This has been pointed out above when the third law was discussed.

Lado's statement in Linguistics Across Cultures to the effect that "We assume that the students who come in contact with a foreign language will find some features of it quite easy and others extremely difficult. Those elements that are similar to his native language will be simple for him and those elements that are different will be difficult." This statement is misleading if not meaningless in light of Osgood's empirical law III unless there is a way of defining similar and different. As we have seen, to make these definitions is not a simple task for it must be done at several levels of analysis.

It remains to rewrite the previously stated formulae of second language learning to include the linguistico-cultural grid which will be symbolized as (g). Thus the psychological model of second language learning in terms of L₁ and L₂ is as follows:

1. Reception of L₂
   
   \[ S_{L₂} \rightarrow R_{L₁} \rightarrow s_{L₁} \rightarrow R_{m_{L₁}} \]

2. Production of L₂
   
   \[ S_{m_{L₁}} \rightarrow R_{L₂} \rightarrow s_{L₂} \rightarrow R_{L₂} \]

3. Reception and production as one unit in L₂
   
   \[ S_{L₂} \rightarrow R_{L₁} \rightarrow s_{L₁} \rightarrow R_{m_{L₁}} \rightarrow S_{m_{L₁}} \rightarrow R_{L₂} \rightarrow s_{L₂} \rightarrow R_{L₂} \]

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41 Lado, 1957, p. 2.
(4) Ideal: Sub-vocal aspects removed.

$$S_{L_2} \rightarrow R_{L_2}$$

The use of the term 'interference' at this point will be redefined in light of linguistic and psychological usage. As one will note from the title of the thesis consideration is being given to the differences in the broadest sense culturally between the two linguistic systems of Afghan Persian and American English, differences which we are led to believe both from observation and from psychological experimentation are the cause of errors in the secondary language. In the particular instance of language teaching we see that errors are due to these differences and that this can be expressed in terms of interference. We will therefore use the term interference in any case where an error is caused by the difference in stimulus and response between English and Persian.

Our use of the term interference will then be confined to those manifestations of prior learning in $L_1$ on successive learning in $L_2$ and will not extend as McGeoch (1953) and Bugelski (1960) indicate to retroactive inhibition or reproductive interference.42

3.41 Borrowing and interference.

With less careful or specific reference to psychology Uriel Weinreich in his book *Languages in Contact* has used the term interference and defined it as follows: "The term interference implies the rearrangement of patterns that result from the introduction of foreign elements into the more highly structured domains of language, such as the bulk of the phonemic system, a large part of the morphology and syntax, and some areas of the vocabulary (kinship, color, weather, etc.)."43

42Bugelski, 1960, p. 262.

Rearrangement is a pivotal term with Weinreich for he goes on to say: "It would be an oversimplification to speak here of borrowing, or mere additions to an inventory. As Vogt puts it,'every enrichment or impoverishment of a system involves necessarily the reorganization of all the old distinctive oppositions of the system. To admit that a given element is simply added to the system which received it without consequence for this system would ruin the very concept of system.' In the more loosely patterned domains of a language some of the syntax, or vocabulary of an incidental nature -- 'borrowing' might properly be spoken of when the transfer of an element as such is to be stressed. But even there the possibility of ensuing rearrangements of patterns cannot be excluded."\(^4\) Weinreich rightly distinguishes between borrowing and interference making the former a subdivision of the latter. The interrelation of items within a system and the chain reaction caused when one of these items is altered is a phenomenon perceived by scholars at least as far back as von Humboldt. Lyons sums this up in terms of present-day German scholarship: "Trier looks upon the vocabulary of a language as a closely-knit system. But it is a system in fieri, not in esse. Not only do we find old forms disappearing and new forms appearing throughout the history of the language; the relations that hold between a given form and its 'Begriffverwandten' and give it its place in the system -- and hence its meaning -- are constantly changing. Any 'extension' in the meaning of one form involves a corresponding 'reduction' in the meaning of those forms to which it is 'begrifflich enger oder fernen benachbart'. Saussure is acknowledged as one of the chief influences in the development of Trier's thought, but criticized for his atomistic conception of historical linguistics.

Historical semantics, in which Trier is mainly interested, no less than descriptive semantics, must deal with systems, and not with isolated elements. A series of studies will 'freeze' the 'patterns' in the perpetually evolving vocabulary at different 'Sprachzustände' and compare these with one another. If successive periods are taken, less and less removed from one another in time, this technique of 'comparative statics' will come closer and closer to capturing the essential dynamic nature of the material, which, in von Humboldt's terms (which Trier quotes) is an *energeia*, not an *ergon*.

3.42 Mixture and interference.

In terms of actual language what does take place when one linguistic system influences the production and reception of a second? Is there any order of interference? Are all languages to be regarded alike in respect to the forces of interference? This problem and others related have received the attention of philosophers and philologists in one way or another for a long time. As far back as 1881 Whitney wrote in *The Transactions of the American Philological Society* of a scale of probability in what he referred to as language mixture. He felt that susceptibility to change and influence from one language to another could be ranged in a continuous series from the least susceptible, inflections and suffixes, to the most susceptible, nouns and proper names. Whitney went on to say that in language contact we did not get a new language \( \text{AB} \) but an introduction of language \( \text{A} \) onto language \( \text{B} \) according to the rating of morphemes along the continuum from most to least susceptible with the result of \( \text{A}^b \) or \( \text{B}^a \). In spite of the debatability of this approach it did stir interest and other linguists have

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followed suit. Weinreich makes the following statement: "It may be possible to range the morpheme classes of a language in a continuous series from the most structurally and syntagmatically integrated inflectional ending, through such 'grammatical words' as prepositions, articles, or auxiliary verbs, to full-fledged words like nouns, verbs, and adjectives, and on to independent adverbs and completely unintegrated interjections. Then this hypothesis might be set up: The fuller the integration of the morpheme, the less likelihood of its transfer. The confirmation of this hypothesis would be fully in keeping with the decisive role assigned to grammatical criteria, as the most conservative, in establishing genetic relationships among languages."^47

The one obstacle to acceptance of this hypothesis centers once again round the similarity concept. Equating the various domains of interference with the scale of adoption as Haugen calls it may be possible but only descriptive studies can tell us which direction the interference will go within a particular domain. Strength of influence phenomena cannot be deduced from amount of borrowing in one domain for there is little likelihood that the comparison will be commensurate. Before a meaningful comparison can be made it will first be necessary "to devise ways of formulating the degree of integratedness of a system." Weinreich goes on to say, "What can be stated without resort to quantification is the direction of interference. One can say on a descriptive basis that in a contact situation which we may designate AB, for instance, A has had no influence on B-phonemics, but has influenced B-vocabulary; on the contrary, B has also influenced A-vocabulary and some of the A-grammar. The existence of an 'algebra' for statements of this sort, however, does not mean that panchronic laws on the directions of interference

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47 Weinreich, 1953, p. 35 and footnote 22.
are ready to be formulated."

Of special interest to sociolinguists is the parallel question of acculturation faced by anthropologists. Can cultural elements be rated according to their transferability? The well known anthropologist, Ralph Linton, is quoted by Weinreich as saying, "'It seems...that, other things (e.g. prestige associations) being equal, certain sorts of culture elements are more easily transferable than others. Tangible objects such as tools, utensils, or ornaments are taken over with great ease, in fact they are usually the first things transferred in contact situations.... The transfer of elements which lack the concreteness and ready observability of objects is the most difficult of all.... In general, the more abstract the element, the more difficult the transfer.'

"In the future it may be feasible to formulate a theory of transferability as to function of structure comprehensive enough to cover both linguistic items and extralinguistic elements of culture."\(^{49}\)

3.5 The linguistico-cultural grid.

Before proceeding to the more specific aspects of interference as exemplified in the phonology and grammar of Persian and English a further note by way of definition should be made of linguistico-cultural grid (see also 6.2). By this term we mean to give detail to that aspect of language which relates form to meaning. The use of the term grid is necessary to signify the selective aspects of language in relation to total environmental features. Whorfian relativity is based on this aspect of language-culture relation since culture, too, selects from total environment. By select is meant the portrayal


\(^{49}\)Ibid., p. 35, footnote 23.
by language and culture as though a linguistically-cultural grid were placed over the total environmental spectrum to reveal only those particular features necessary to form a coherent, integrated meaningful whole. Ross and van den Haag in *The Fabric of Society* quote Margaret Mead on this point as follows: "... it is not any single item of child-rearing practice or of culturally patterned child behavior... which is significant in isolation. It is the way in which all these thousands of items, most of which are shared with other cultures, some of which are shared with all other cultures, are patterned or fitted together to make a whole." Kluckhohn writing in *The Policy Sciences* speaks to this same point, "The distinction between explicit culture and implicit culture is that of polar concepts, not of the all-or-none type. Reality, and not least cultural reality, appears to be a continuum rather than a set of neat watertight compartments which can be fitted precisely into intellectual categories. But we can seldom cope with the continuum as a whole, and the isolation and naming of certain contrastive sections of the continuum are highly useful. It follows, however, that the theoretical structure does not collapse with the production of doubtful or transitional cases. In a highly self-conscious culture like the American, which makes a business of studying itself, the proportion of the culture which is literally implicit in the sense of never having been overtly stated by any member of the society may be small. Yet only a trifling percentage of Americans could state even those implicit premises of our culture which have been abstracted out by social scientists. In the less self-conscious societies, the unconscious assumptions bulk large. They are what Whorf has called 'background phenomena'. What he says of language

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applies to many other aspects of culture: '... our psychic make-up is somehow adjusted to disregard whole realms of phenomena that are so all-pervasive as to seem irrelevant to our daily lives and needs. ... the phenomena of a language are to its own speakers largely... outside the critical consciousness and control of the speakers... .'

"The 'background phenomena' are of extraordinary importance in human action. Human behavior cannot be understood in terms of the organism-environment model unless this be made more complex. No socialized human being views his experience freshly. His very perceptions are screened and distorted by what he has consciously and unconsciously absorbed from his culture. Between the stimulus and the response there is always an intervening variable, unseen but powerful. This consists in the person's total appreceptive mass, which consists in large part of the more generalized cultural forms."51

Benedict, contemporary with Whorf, as well as Sapir, also expressed these views in her well known Patterns of Culture and The Chrysanthemum and the Sword.52

Our concept of the linguistico-cultural grid might be schematized as follows:

![Linguistico-cultural Grid](image)

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3.51 Cultural overlap.

Thus in the second language classroom we are asking our students to acquire a new linguistico-cultural grid through which their environment is to be observed and given meaningful interpretation. It is not the same world with new labels attached but a different world with new meanings and different interlocking associative fields of meaning for the labels.\(^5\) (The problem of coordinate or merging systems in the user of a primary and secondary language will be discussed below.) If these are different worlds so to speak how do we explain the fact that a second language can be learned at all? One of the best explanations comes from those who feel that "cultural overlap" is the answer. Lyons has written in *Structural Semantics* that cultural overlap "resides in the common features and situations" between two languages.\(^5\) "It is accepted that a particular language will reflect in its vocabulary the culture of the society for which it is the medium of expression. But between any two societies there will be a greater or less degree of cultural overlap. We cannot say in advance in what area of culture this will be, though anthropology, sociology and psychology may suggest some general features that may be assumed to be present in the 'Weltbild' of all societies. In accordance with the weaker interpretation of the Whorf hypothesis, it is assumed that it is via this cultural overlap that entry is made into the semantic system of another language, whether in learning it as a second language or for the purpose of scientific investigation of its vocabulary. We identify certain features of the cultures and certain situations as common and learn the lexical

\(^{5}E.~Sapir,~1929,~"The~status~of~Linguistics~as~a~science,"~Language~5.207-14,~p.~209.\)

\(^{5}Lyons,~1963,~p.~41.\)
items which are applied to them. It is such lexemes and expressions whose use we learn quickly and without difficulty.55

3.52 Cultural universals.

Anthropologists have to some extent indicated and recognized certain cultural phenomena that are manifest in all human society... cultural universals as they are called by some. Murdock shortly after the war wrote a résumé called "The Common Denominator of Cultures" in which he makes the statement that "The true universals of culture, then, are not identities in habit, in definable behavior, they are similarities in classification not in content. ... What cultures are found to have in common is a uniform system of classification, not a fund of identical elements. Despite immense diversity in behavioristic detail, all cultures are constructed according to a single plan -- the 'universal cultural pattern' as Wissler has so aptly termed it."56 Since these statements Murdock has authored a comprehensive work called Outline of World Cultures57 in which he provides a system of classification. For Murdock the one unifying element is on the level of communication. Language is possessed by all cultures; all languages have identical components, that is they are made up of the same kind of material. Although this has not been explored by anthropologists he also feels that all cultures must have similar components with the arrangements varying.

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57 --- et al., 1950, Outline of Cultural Materials, New Haven: Human Relations Area Files Inc.
Sapir felt different cultures had their commonality in that they are all basically an adjustment of the individual (individually and collectively) to his environment in an effort to achieve an equilibrated state, a unified and self-consistent attitude toward life, a "balanced, harmonious, self-satisfactory" rapport with the world at large.\(^5^8\) Other thinking on the subject since Sapir has tended toward the setting up of universal areas such as biological, psychic and social based on universal needs of the human organism. Linton makes the following statement: "There are no universal culture patterns, only a series of universal needs which each society has met in its own way."\(^5^9\) In spite of the seemingly negative attitude on universals Linton goes on to construct a list of units which he feels might serve as classificatory for all cultures: \(^6^0\)

1) item  
2) trait  
3) trait complex  
4) activity

Margaret Mead writing on national character has pointed out universal aspects which parallel in large measure those of Linton's. Of the psychic unity of mankind she says, "There are no known differences among races of men which

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\(^6^0\)Ibid., p. 397-98. Linton also gives a scale of units by McKern: 
1) Focus: determined as a series of rites similar in all respects.
2) Aspect: made up of focls with common elements.
3) Phase: composed of a series of aspects.
4) Base: composed of a series of phases.
either interfere with or facilitate the learning of cultural forms. Biologic similarity is manifest in maturational sequence, hand-eye coordination, capacity for symbolic behavior, perceptual invariants, etc.

Although there is no consensus of opinion or widespread acceptance of the above mentioned common aspects of man in society we can agree with Kluckhohn when he says, "Each culture is a precipitate of history from the materials supplied by human biology and the natural environment to which human organisms must make certain minimal adjustments for survival. The selectivity out of the potentialities afforded by human nature and physical surroundings and within the limits set by biological and physical nature is channelled by the historical process." 62

Cultural overlap, therefore, might be expected to be found anywhere in the whole range of social institutions common to man (depending on the two cultures involved). As Sapir has indicated these identities do not rest so much on the "objective world" as on "the world of social activity". The social role played by a lexeme is more important than its physical identification.

Whereas 'cultural overlap' is not a term anthropologists use it is a concept they implicitly accept since it is obvious that they feel they are able to talk about another culture in a meaningful manner in terms of that culture, and to make contrasts in terms of another.

3.6 Coordinate or compound linguistic systems.

Before going on to the specific manifestations of interference one

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62 Kluckhohn, 1951, p. 87.
psychological aspect of bilingualism needs further discussion. Does the bilingual possess two completely separate linguistic systems, an \(L_1\) and an \(L_2\)? Or is the \(L_2\) merged on the \(L_1\)? Does interference represent an attempt to keep two systems apart and thus become a problem of switching from one to the other?

While in all probability bilinguals will be distributed "along a continuum from a pure compound system to a pure coordinate system" theoretically at least three positions can be described. These are coordinate and compound (merging or convergent) existing at either extreme with what is known as partial merging of systems between these two. Weinreich in Languages in Contact first discussed these possibilities and Haugen summarizes them as follows: "(1) if English book and French livre are interpreted by the bilingual speaker as having different meanings, they are two distinct signs and belong to coexistent systems; (2) if they are interpreted as having the same meaning, they constitute a compound meaning and belong to a partially merged system; (3) if one of the two is not interpreted as referring to a non-language event at all, but only to a word in the other language, then there is a complete merger of the two systems with one of them subordinated to the other." The compound-coordinate hypothesis has received further development apart from Weinreich's Languages in Contact by Ervin and Osgood's "Second language learning and bilingualism" and Lambert and Fillenbaum's "Pilot study of aphasia among

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64 Ibid.
bilinguals." The latter gives a valuable evaluation of the hypothesis:

"This hypothesis is of value in understanding differences among bilinguals in their ease of switching from one language to the other, their control of interference from the other language in any verbal situation, and their abilities to think and behave appropriately in the different linguistic contexts. This hypothesis was extended in a study by Lambert, Havelka, and Crosby where it was concluded that the learning contexts in which the bilinguals two languages are acquired may well determine the functional independence of the languages. The more the learning contexts are "separated" either in time, cultural distinctiveness, or in distinctiveness of setting of habitual usage, the more likely it is that bilingual 'coordinates' will develop." 66

Psychologists as well as linguists both view the bilingual and his performance in his several languages in terms of his control of linguistic systems. From the point of view of applied linguistics the most important aspect of acquiring a second language is the ability to keep it separate from the first at all levels and in appropriate situations. It becomes very clear that learning the items of a second language apart from the system of that language or conversely as an extension of the first cannot be called learning a second language at all and success or failure in a second language is directly proportional to the extent one has progressed along the continuum from coordinate to compound. The school situation where a second language may very easily attain the position of linguistic extension of the first, especially if some form of the translation method is used, is a clear example of compound linguistic systems.

Whereas, on the other hand, when the second language is learned in a social situation where the second language is used in relation to social realia there will be less merging. A separate system will be built up, self-dependent and self perpetuating. The recursive and catalytic effects of learning upon learning, language upon language and all cultural interplay on culture growth is an interesting area for study and when pursued will produce rewarding insight into the study of mankind and his environment.
4.0 Some aspects of phonological interference.

The following section it may seem to some should not have been included in linguistics-cultural considerations of teaching a second language since no cultural ramifications of phonology are dealt with. The sounds of a language are not free of socio-cultural meaning (although a phonemic presentation might suggest this) but the breadth of analysis for a statement of this sort prevents its inclusion here but will hopefully some day be done. In spite of this it was felt necessary to make analysis of the sound systems of English and Persian 1) as a basis for the grammatical statements made in 5. (for notation purposes) and 2) as an indication of possible areas of interference pertinent to teaching pronunciation, i.e. comparison of phonemes and certain consonant clusters. This does not mean to imply that rhythm, intonation, and other prosodic features do not reveal contrasts and present problems in interference which are of paramount importance in the teaching of a second language or even that these are devoid of social and cultural significance, e.g. social role of dialect, accent, register, language itself, but that the former at the formal level does not deal with social facts and the latter combined with and growing out of a formal analysis is a field in itself little explored and involving the combined efforts of linguists and sociologists. It is evident that socio-cultural differences of very great importance are to be seen in the sounds and prosodies of a language but this involves an analysis of social structure far beyond the formal aspects of phonemes, rhythm, intonation, etc. and beyond the scope of this thesis. It would seem that this area is on the horizons of research as indicated by the farsighted and provocative monograph on the social implications of language use.

1The use of this term is along the lines of analysis of Fries and Pike and what is presented is as explained below.
by Dell H. Hymes, "The ethnography of speaking" and the equally provocative treatment of social role playing and its linguistic accompaniment in The Presentation of Self in Everyday Life by Erving Goffman.

4.1 Definition.

By phonological interference we mean the use of phonemes, and sequences of phonemes both in morphemes and across morpheme boundaries as well as intonational and other prosodic features of the $L_1$ in $L_2$ speech production. Phonological interference manifests itself when the phonological configuration of the $L_1$ emerges in the production of $L_2$ phonology, e.g. in individual phonemes, clusters of phonemes, morphemes and larger connected units. The emphasis on total phonological patterment is made because of the interrelation between phonemes within one system as discrete units and systems of units with their prosodies and configurational patterment. The $L_1$ is, therefore, seen as a governing factor in the acquisition of $L_2$, an influence of considerable force especially in the early weeks of $L_2$ learning, in certain personality types, and in the adult learner.

These statements are made on the assumption that the $L_1$ learner will transfer the automatic use of his phonological system as an integrated whole to the production of linguistic items of any comparable rank in the $L_2$. This, as we have implied in the preceding sections, results in interference depending on the extent and scope of differences and similarities. Another assumption made is that the bilingual (according to Weinreich, 1953) will possess coordinate rather than merging phonological systems (see 3.41 and 3.42) in his use of two languages. While the empirical data is lacking to substantiate this view,
there is evidence from aphasie studies and introspection of bilinguals such as linguists, psychologists, and writers who attest to the fact that coordinate systems do exist. Thus the bilingual is an accurate speaker of his L₂ to the extent he is able to shift from one linguistic system to the other, not only phonologically but grammatically and semantically as well. Weinreich makes the following statement: "The problem of phonie interference concerns the manner in which a speaker perceives and reproduces the sounds of one language, which might be designated secondary, in terms of another, to be called primary. Interference arises when a bilingual identifies a phoneme of the secondary system with one in the primary system and, in reproducing it, subject it to the phonetic rules of the primary language."²

As the theoretical discussion has shown there are in reality two distinct sound systems coming in contact, with the L₂ learner as the locus of that contact. The learner must acquire the second system and in so doing acquire an independent, integrated, self-consistent sound system separate from the first and with as little influence from the first as possible. It is evident that the L₂ speaker on entering the L₂ community of speakers will be understood in direct proportion to how exactly he approximates the native speakers. In the process of acquiring the sound system of the second language the learner will experience interference from the first language to a greater or lesser degree depending on the differences between the two systems. Thus the problem becomes one of ascertaining similarities and differences and assessing their magnitude. These differences or similarities may exist in the form of new phonemes which the first language does not have, but which may be confused with phonemes in the second

language which are similar, allophonic, or non-distinctive. Similar phonemes and functionally identical phonemes create a problem as well as those completely new. One aspect of this Weinreich has labelled 'overdifferentiation' and gives the following illustration. "The foreigner's over-differentiation is also immaterial to the listener; the unilingual Russian listener cannot notice that an Italian is treating the allophones [e] as in (Russian) [p'et'] 'to sing', and [ɛ], as in (Russian) [n'ɛt'] 'no', as separate phonemes. On the other hand, the under-differentiation of phonemes invariably leads to a unilingual listener's disorientation, even if it is a minor one and is offset by the context."3 Similarly the English speaker will not hear the over-differentiation the Persian speaker may seek to make by employing a back velar and palatal /k/.

Fries in his book Teaching and Learning English as a Foreign Language makes the following statement about phonic interference. "First of all we must assume that practically every 'sound' of a foreign language differs in some respect from any sound in our own language. The ... speaker who comes to learn English will not only have to learn a few obvious new sounds..., he will have to learn a new mode of speech production. ...The chief problems arise out of the contrasting patterning of the sounds of the two languages. ...The human vocal apparatus can make thousands of different sounds, and the phonetician can isolate and describe these sounds. But out of this almost limitless number of different sounds, no language that we know uses as contrastive sound features to distinguish meanings more than fifty or sixty, and no two languages that we know use the same set."4


As a first step to describing areas of interference the phonemes of the two sound systems will be compared. This may be done by constructing two charts identical in presentation with points of articulation horizontally listed (front points of vocal apparatus to the left of the page) and air stream variations vertically (complete interruption at the top of the page and decreasing at the bottom). The use of this type of chart does not, of course, give us a complete picture of the sound systems in question but it does give us a necessary first approximation from which further comparisons can be made. The use of the emic approach is self-evident, there being no necessity for greater detail of a non-phonemic, non-contrastive nature except as there is seen in the comparison of the two systems where one system has a contrast and the other does not.

The two charts that follow give in terms of a common point of reference the two systems of Afghan Persian and American English. (For a definition of the particular Afghan Persian and American English used see 1.0 Introduction.) The proof of phonemicization is dispensed with.

---

5 This comparison will not include a description of sound production which belongs more to methodology.
4.2 The Phonemes of Persian and English.

4.2.1 Persian and English Vowels.

**Persian (8)**

<table>
<thead>
<tr>
<th></th>
<th>Front</th>
<th>Back</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>i:</td>
<td>u:</td>
</tr>
<tr>
<td>i</td>
<td>e:</td>
<td>o:</td>
</tr>
<tr>
<td>Low</td>
<td>a</td>
<td>a:</td>
</tr>
</tbody>
</table>

Diphthongs: (5)

- /ai/
- /au/
- /ai: / oi:
- (aiu) infrequent, formal
- /ui/

**English (11)**

<table>
<thead>
<tr>
<th></th>
<th>Front</th>
<th>Back</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>i:</td>
<td>u:</td>
</tr>
<tr>
<td>i</td>
<td>e:</td>
<td>o:</td>
</tr>
<tr>
<td>Low</td>
<td>a</td>
<td>a:</td>
</tr>
</tbody>
</table>

Diphthongs: (5)

- /ai/
- /au/
- /oi/
- /oi/
### 4.22 Persian and English Consonants.

<table>
<thead>
<tr>
<th>Persian (22)</th>
<th>Bi-labial</th>
<th>Labio-dental</th>
<th>Inter-dental</th>
<th>Alveo-dental</th>
<th>Alveo-palatal</th>
<th>Palatal</th>
<th>Back velar</th>
<th>Pharyngeal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stops</td>
<td>p</td>
<td>t</td>
<td>c</td>
<td>k</td>
<td>q</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>v b</td>
<td>v d</td>
<td>v j</td>
<td>v g</td>
<td>v x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fricatives</td>
<td>f (v)</td>
<td>s</td>
<td>x</td>
<td></td>
<td>(b)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>v v m</td>
<td>v n</td>
<td>v l</td>
<td>v r</td>
<td>v y</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nasals</td>
<td>m</td>
<td>m</td>
<td>v</td>
<td>v</td>
<td>v x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laterals</td>
<td>l</td>
<td>l</td>
<td>l</td>
<td>l</td>
<td>l</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flap</td>
<td></td>
<td>r</td>
<td></td>
<td></td>
<td>y</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semi-vowels</td>
<td>w</td>
<td></td>
<td></td>
<td></td>
<td>y</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>English (24)</th>
<th>Bi-labial</th>
<th>Labio-dental</th>
<th>Inter-dental</th>
<th>Alveo-dental</th>
<th>Alveo-palatal</th>
<th>Palatal</th>
<th>Back velar</th>
<th>Pharyngeal</th>
</tr>
</thead>
<tbody>
<tr>
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<td>t</td>
<td>c</td>
<td>k</td>
<td>q</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>v b</td>
<td>v d</td>
<td>v j</td>
<td>v g</td>
<td>v x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fricatives</td>
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<td>v z</td>
<td>v z</td>
<td>v z</td>
<td>v z</td>
<td>v g</td>
<td>v h</td>
<td></td>
</tr>
<tr>
<td></td>
<td>v m n</td>
<td>v n</td>
<td>v l</td>
<td>v r</td>
<td>v y</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>m</td>
<td>m</td>
<td>v</td>
<td>v</td>
<td>v x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>l</td>
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<td></td>
<td></td>
</tr>
<tr>
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<td></td>
<td>r</td>
<td></td>
<td></td>
<td>y</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semi-vowels</td>
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<td></td>
<td></td>
<td></td>
<td>y</td>
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<td></td>
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</tbody>
</table>
### Persian

#### Vowels: (8)

<table>
<thead>
<tr>
<th>Vowel</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>/i/</td>
<td>/i:n/ 'this' /di:d/ 'saw' /ki:/ 'who'</td>
</tr>
<tr>
<td>/ɛ/</td>
<td>/im'roz/ 'today' /di:s/ 'hand' /ki:/ 'that'</td>
</tr>
<tr>
<td>/æ/</td>
<td>/a:/l/ 'cardamom' /se:r/ 'full' /se:/ 'three'</td>
</tr>
<tr>
<td>/u:/</td>
<td>/a:st/ 'is' /yak/ 'one' /a:ge/ 'if'</td>
</tr>
<tr>
<td>/u:/</td>
<td>/u:nja/ 'there' /bu:s/ 'was' /cu:/ 'giddy-up'</td>
</tr>
<tr>
<td>/u:/</td>
<td>/um:ri/ 'age' /pu:l/ 'bridge' /du:/ 'two'</td>
</tr>
<tr>
<td>/o:/</td>
<td>/o:bi/ 'Obah' /so:b/ 'morning' /ko:/ 'mountain'</td>
</tr>
<tr>
<td>/a:/</td>
<td>/a:smain/ 'sky' /ma:r/ 'snake' /ra:/ 'spirit'</td>
</tr>
</tbody>
</table>

#### Diphthongs: (4)

<table>
<thead>
<tr>
<th>Vowel</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ai/</td>
<td>/kai/ 'when' /xa:ri/ 'peace' /pa:l/ 'tendon'</td>
</tr>
<tr>
<td>/ai/</td>
<td>/o:i/ 'tea' /ma:ri/ 'fish' /pa:i/ 'foot'</td>
</tr>
<tr>
<td>/u:i/</td>
<td>/bu:i/ 'smell' /mu:i/ 'hair' /ru:i/ 'face'</td>
</tr>
<tr>
<td>/au:/</td>
<td>/a:u:/ 'new' /ga:u:/ 'cow' /pau:/ 'pound'</td>
</tr>
</tbody>
</table>

#### Consonants: (23)

<table>
<thead>
<tr>
<th>Consonant</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>/p/</td>
<td>/pake/ 'fan' /to:p/ 'ball' /pu:ri/ 'full', 'complete'</td>
</tr>
<tr>
<td>/b/</td>
<td>/baim/ 'roof' /lab/ 'lip' /se:b/ 'apple'</td>
</tr>
<tr>
<td>/m/</td>
<td>/ma:ng/ 'fool' /ma/ 'I' /ma/ 'also'</td>
</tr>
<tr>
<td>/w/</td>
<td>/wa:ri/ 'once' /a:wa:ri/ 'smooth' /a:wal/ 'first'</td>
</tr>
<tr>
<td>/f/</td>
<td>/fai/ 'rat' /safar/ 'trip' /saf/ 'line'</td>
</tr>
<tr>
<td>/s/</td>
<td>/sa:ri/ 'starling' /ba:st/ 'tied' /ba:s/ 'enough'</td>
</tr>
<tr>
<td>/z/</td>
<td>/za:ri/ 'poison' /ba:zu:/ 'arm' /ba:z/ 'hawk'</td>
</tr>
<tr>
<td>/t/</td>
<td>/ta:r/ 'thread' /buta/ 'seedling' /but/ 'idol'</td>
</tr>
</tbody>
</table>
### Consonants: Persian, cont’d.

<table>
<thead>
<tr>
<th>Sound</th>
<th>Example 1</th>
<th>Example 2</th>
<th>Example 3</th>
<th>Example 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>/d/</td>
<td>/daːr/ 'gallows'</td>
<td>/buːdaː/ 'Buddha'</td>
<td>/buːd/ 'was'</td>
<td></td>
</tr>
<tr>
<td>/n/</td>
<td>/naːr/ 'dam'</td>
<td>/naːnæː/ 'mint'</td>
<td>/naːn/ 'bread'</td>
<td></td>
</tr>
<tr>
<td>/l/</td>
<td>/laːrɪs/ 'truck'</td>
<td>/laːlæː/ 'elder brother'</td>
<td>/laːl/ 'ruby'</td>
<td></td>
</tr>
<tr>
<td>/r/</td>
<td>/raː/ 'road'</td>
<td>/zaːræ/ 'injury'</td>
<td>/zaːr/ 'gold'</td>
<td></td>
</tr>
<tr>
<td>/q/</td>
<td>/caːr/ 'four'</td>
<td>/muːræː/ 'ant'</td>
<td>/muːræ/ 'pepper'</td>
<td></td>
</tr>
<tr>
<td>/ʒ/</td>
<td>/jaːr/ 'shout'</td>
<td>/aːˌʃɪn/ 'pilgrim'</td>
<td>/aːʃ/ 'ivory'</td>
<td></td>
</tr>
<tr>
<td>/ʒ/</td>
<td>/Naːr/ 'city'</td>
<td>/riːnuː/ 'root'</td>
<td>/riːn/ 'beard'</td>
<td></td>
</tr>
<tr>
<td>/ʒ/</td>
<td>/aːdaːr/ 'dragon'</td>
<td>/daː/ 'castle'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/ʒ/</td>
<td>/yaːr/ 'friend'</td>
<td>/biːyaːr/ 'very'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/k/</td>
<td>/kaːr/ 'work'</td>
<td>/baːkar/ 'brown sugar'</td>
<td>/baːk/ 'doubt'</td>
<td></td>
</tr>
<tr>
<td>/ʃ/</td>
<td>/gaːs/ 'swing'</td>
<td>/aːf/ 'if'</td>
<td>/aːʃ/ 'dog'</td>
<td></td>
</tr>
<tr>
<td>/n/</td>
<td>/aːɡæː/ 'colored'</td>
<td>/sæŋ/ 'stone'</td>
<td>/baːŋ/ 'bank'</td>
<td></td>
</tr>
<tr>
<td>/ŋ/</td>
<td>/Baːr/ 'hole'</td>
<td>/baːˈwain/ 'gardener'</td>
<td>/baːŋ/ 'garden'</td>
<td></td>
</tr>
<tr>
<td>/x/</td>
<td>/xaːr/ 'thorn'</td>
<td>/baːˈsaːt/ 'private'</td>
<td>/baː/ 'tough'</td>
<td></td>
</tr>
<tr>
<td>/q/</td>
<td>/qaːr/ 'anger'</td>
<td>/baːqɪ/ 'evil'</td>
<td>/baːq/ 'split'</td>
<td></td>
</tr>
</tbody>
</table>

### English

#### Vowels: (11)

<table>
<thead>
<tr>
<th>Sound</th>
<th>Example 1</th>
<th>Example 2</th>
<th>Example 3</th>
<th>Example 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>/iː/</td>
<td>/ɪt/ 'eat'</td>
<td>/ɪst/ 'feet'</td>
<td>/bɪ/ 'bee'</td>
<td></td>
</tr>
<tr>
<td>/ɪ/</td>
<td>/ɪn/ 'in'</td>
<td>/ɪn/ 'sin'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/eɪ/</td>
<td>/eɪt/ 'eight'</td>
<td>/leɪt/ 'late'</td>
<td>/leɪ/ 'lay'</td>
<td></td>
</tr>
<tr>
<td>/ɛ/</td>
<td>/ɛn/ 'end'</td>
<td>/ɛnt/ 'lend'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/æ/</td>
<td>/æt/ 'at'</td>
<td>/kæt/ 'cat'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/e/</td>
<td>/ɛp/ 'up'</td>
<td>/bet/ 'but'</td>
<td>/te/ 'the'</td>
<td></td>
</tr>
<tr>
<td>/ə/</td>
<td>/ət/ 'art'</td>
<td>/kət/ 'cart'</td>
<td>/kə/ 'car'</td>
<td></td>
</tr>
</tbody>
</table>
(Vowels: English, cont'd.)

<table>
<thead>
<tr>
<th>Vowel</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>/u/</td>
<td>/bust/  'boot' /dus/  'do'</td>
</tr>
<tr>
<td>/u/</td>
<td>/buk/  'book' /kuk/  'cook'</td>
</tr>
<tr>
<td>/oi/</td>
<td>/oit/  'eat' /goit/  'goat' /got/  'go'</td>
</tr>
<tr>
<td>/ai/</td>
<td>/ait/  'ought' /bait/  'bought' /sai/  'saw'</td>
</tr>
</tbody>
</table>

Diphthongs: (3)

<table>
<thead>
<tr>
<th>Diphthong</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>/aɪ/</td>
<td>/aɪs/  'eyes' /vais/  'vice' /vai/  'vie'</td>
</tr>
<tr>
<td>/au/</td>
<td>/aut/  'out' /haus/  'house' /nau/  'now'</td>
</tr>
<tr>
<td>/oi/</td>
<td>/oil/  'oil' /boil/  'boil' /boi/  'boy'</td>
</tr>
</tbody>
</table>

Consonants: (24)

<table>
<thead>
<tr>
<th>Consonant</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>/p/</td>
<td>/pal/  'pal' /apt/  'apt' /eɪp/  'ape'</td>
</tr>
<tr>
<td>/t/</td>
<td>/tal/  'tall' /tætl/  'tattle' /bæl/  'tab'</td>
</tr>
<tr>
<td>/m/</td>
<td>/mail/  'mail' /praɪmp/  'prompt' /bzæm/  'bomb'</td>
</tr>
<tr>
<td>/w/</td>
<td>/waɪl/  'wall' /weɪt/  'wait'</td>
</tr>
<tr>
<td>/f/</td>
<td>/faɪl/  'fall' /afte/  'after' /læf/  'laugh'</td>
</tr>
<tr>
<td>/s/</td>
<td>/saɪ/  'saw' /fast/  'fast' /æs/  'ass'</td>
</tr>
<tr>
<td>/z/</td>
<td>/zeɪt/  'zeit' /iz/  'is' /fɪzl/  'fizzle'</td>
</tr>
<tr>
<td>/t/</td>
<td>/tal/  'tall' /tætl/  'tattle' /bæl/  'bat'</td>
</tr>
<tr>
<td>/d/</td>
<td>/daɪl/  'dall' /adal/  'addle' /æd/  'add'</td>
</tr>
<tr>
<td>/n/</td>
<td>/næt/  'not' /ænt/  'aunt' /bæn/  'ban'</td>
</tr>
<tr>
<td>/l/</td>
<td>/læl/  'loll' /oɪld/  'old' /æl/  'all'</td>
</tr>
<tr>
<td>/r/</td>
<td>/raɪ/  'raw' /bɜrd/  'bard' /ær/  'are'</td>
</tr>
<tr>
<td>/s/</td>
<td>/sæp/  'shop' /pæş/  'patch'</td>
</tr>
<tr>
<td>/j/</td>
<td>/jeɪ/  'jug' /jeɪ/  'judge'</td>
</tr>
<tr>
<td>/ʃ/</td>
<td>/ʃet/  'shut' /bʊl/  'bush'</td>
</tr>
<tr>
<td>Sound</td>
<td>Word 1</td>
</tr>
<tr>
<td>-------</td>
<td>---------</td>
</tr>
<tr>
<td>/n/</td>
<td>/a2er/</td>
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<td>/ple3er/</td>
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<tr>
<td>/y/</td>
<td>/yes/</td>
</tr>
<tr>
<td></td>
<td>/yu:/</td>
</tr>
<tr>
<td>/k/</td>
<td>/ka:l/</td>
</tr>
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<tr>
<td></td>
<td>/buk/</td>
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<td>/heit/</td>
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<td>/vost/</td>
</tr>
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<td>/t/</td>
<td>/tin/</td>
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<td>/wit/</td>
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<td>/fifts/</td>
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<tr>
<td>/s/</td>
<td>/sen/</td>
</tr>
<tr>
<td></td>
<td>/ba:te/</td>
</tr>
<tr>
<td></td>
<td>/ba:/</td>
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</tbody>
</table>
4.3 **Vowels in Isolation.**

With reference to the preceding charts and lists of phonemes in Persian and English it should be pointed out by way of explanation that within the vowel systems of the two languages there is more cause for interference than meets the eye from the charts. In Persian the vowel oppositions are weighted very much differently due to the fact that allophones of /i/ and /a/ in Persian are actual phonemes in English, e.g. the allophones of one phoneme in Persian are exponents of two different phonemes in English. The following examples from Persian make this clear.

<table>
<thead>
<tr>
<th>English Phonemes</th>
<th>Examples of these appearing as Persian allophones</th>
</tr>
</thead>
<tbody>
<tr>
<td>/i/ /e/</td>
<td></td>
</tr>
<tr>
<td>[imroz]</td>
<td>[emroz]</td>
</tr>
<tr>
<td>[dist]</td>
<td>[dest]</td>
</tr>
<tr>
<td>[bisyaır]</td>
<td>[besyaır]</td>
</tr>
<tr>
<td>[bali]</td>
<td>[bale]</td>
</tr>
<tr>
<td>/e/ /æː/</td>
<td></td>
</tr>
<tr>
<td>[mex]</td>
<td>[æːx]</td>
</tr>
<tr>
<td>[Sex]</td>
<td>[æːx]</td>
</tr>
</tbody>
</table>

Therefore the phonemic oppositions /i/ - /e/ and /æː/ - /æː/ present a problem for the Afghan learning English due to the fact we have what John B. Carroll calls a divergent difference; the learner must learn to separate two phonological items in the L₂ which he had formerly considered one in the L₁.
The opposition in English, /a/ - /a/, does not occur as phonemic in Persian thus requiring the learner of English to make this distinction which he heretofore has considered one phoneme. The native speaker of English will hear both /a/ and /a/ in different words in Persian as well as in different pronunciations of the same word on different occasions. The allophonic nature of the /a/ phoneme in Persian is probably questionable since the placement of the phoneme would almost certainly have to be made farther front than the /a/ and somewhat back from the /a/ in English. I would not call it a stable vowel from that point of view. Nevertheless from the point of view of reception and production of English where a distinction must be made the learner is confronted with a divergent difference which requires the separation of sounds formerly conceived as one unit.

The above shows the relationship of the low vowels in both English and Persian revealing the divergence of the Afghan /a/ to /a/ and /a/. (x is used to distinguish the two phonemes written as /a/.)
4.4 Consonants in isolation.

From a contrastive study of the two charts one can see that non-congruencies lie in the following areas:

1) /t/ - /d/. For the Persian speaker the point of articulation of /t/ and /d/ is more to the front of the mouth and varies from a position halfway between the alveolar ridge and the back of the teeth to something at times approximating an interdental stop. In the latter position there will often be some slight friction on articulation. This does not present a serious teaching problem and in the event the Persian speaker fails to acquire an accurate /t/-/d/ production in English the native speaker of English will not confuse it with any other phoneme. As Lado has pointed out: "The stop feature of /t/ in contrast to the fricitive feature of /θ/ is dominant over the difference in point of articulation between these two phonemes. The /t/ articulated with the tongue tip between the teeth, but still as a stop, remains a /t/. And when the point of articulation is alveolar but /t/ is pronounced as a fricative, it becomes /θ/." 

2) The Persian back velar stop /q/ does not occur in English and if ever used in the production of English would go unnoticed except by the trained linguist. It is probably never used since Persian also has the velar stop /k/ and the /k/-/g/ opposition as in English; therefore no problem is encountered.

3) No inter-dental fricatives occur in Persian. In the diagrams

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6Phonemes that are not mentioned in the above numbered analysis are considered functionally identical. We have, therefore, purposely used the term non-congruencies rather than differences.

7This statement is based on research done by the author in Kabul, Afghanistan.

below (phoneme positions are based on the relative positions of the charts above) we see that the Persian speaker must move from a phonemic field in which no /t/ exists (an empty field) to one in which it is distinct from /t/, /s/, and /f/.

\[ \begin{array}{c}
\text{Persian} \\
\frac{f}{t} \quad \frac{t}{s} \\
\end{array} \quad \begin{array}{c}
\text{English} \\
\frac{f}{t} \quad \frac{t}{s} \\
\end{array} \]

We might ask why the Persian speaker hears /t/ instead of /s/ in attempting to construct the above English field which includes the new phoneme /t/. As Lado\(^9\) and others have pointed out interference from one sound system to another occurs in the relationship of whole to part rather than part to part; therefore, on the systemic level we see the entire phonemic system in Persian coming to influence the one phoneme in English at the unit level. Thus the answer to the above problem lies in the field of /t/ which is empty in Persian. In filling this field the Persian speaker chooses /t/ instead of /s/ due to the fact that /t/ in Persian is closer to /\check{t}/ than /s/ in both manner and point of articulation. Persian /\check{t}/ as we have seen while being post-dental and even interdental at times remains a stop in manner of articulation, but its phonemic feature of position and the fact that it can have a fricative quality tips the scales in the direction of /t/ in production and reception of the /\check{t}/ phoneme on the part of the Afghan learner.

The same relationship occurs for the voiced counterpart of /\check{t}/, /\check{s}/, where /\check{s}/ becomes the interfering unit.

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4) The Persian phoneme /v/\(^{10}\) occurs very rarely and only as a register variant of /f/, e.g. /afda/, /avda/ - 'seventeen'.\(^{11}\) Its recognition by Persian speakers on a register basis rather than its use as an allophonic variant accounts for its correct use in English without any interference with /f/ as to recognition or production. A register variant is distinguished from an allophonic variant by the fact that it is externalized by the speaker as a variant for a known social usage.

5) Persian /x/ and /g/, not required in English, cause no interference in English production and fall in the same category with the other back velar stop /q/.

6) The Persian phoneme /h/, speaking from a literary point of view, has two forms whose only justification for separation in present-day usage rests on the written forms remaining in the alphabet. These forms are referred to as /he:/ hasti/ / and /he:/ havan/ and are readily understood and interpreted as the phoneme /h/ in English. The manner and point of articulation in Persian has no effect in English where variation would be interpreted as a non-phonemic variant. C. T. Hodge\(^{12}\) and Abdul Ghafur Farhadi\(^{13}\) both relegate the Persian /h/ to a formal style or literary register.

\(^{10}\)The use of /v/ correlates to a social register and a more literary form of the language. It is more or less an acquired phoneme and because of its self-conscious status in the sound system it cannot be classed as a variant of /f/ but as a separate phoneme used in a particular register.


\(^{12}\)Ibid.

7) From the above charts it would appear that English has the phoneme \(/n/\) and that Persian does not. The phoneme \(/n/\) while occurring in Persian is always followed by \(/g/\) and occurs only in syllable final position, e.g. \(/\text{sang}/\ 'rock', /\text{girang}/\ 'heavy', /\text{rang}/\ 'color' and is, therefore, in this analysis being considered an allophone of \(/n/\). For this reason it does not appear on the chart. We would now rewrite the examples using the phonemic symbols of Persian in the following manner \(/\text{sang}/, /\text{girang}/\ and /\text{rang}/\ since whenever \(/n/\) is followed by \(/g/\) it gets the value of \(/n/\). Because of this a pronunciation problem in English for the Afghan student occurs with items of the following type, /\text{tin}/, /\text{sin}/, /\text{ban}/, /\text{-in}/, where there is no final \(/g/\). The Persian speaking student will automatically in the above examples produce a final \(/g/\) rendering our examples /\text{ting}/, /\text{sing}/, etc. (The cases in English where \(/n/\) is followed by \(/g/\) are only across syllable boundaries, e.g. /\text{finge}/, /\text{lainge}/, /\text{ange}/.) This problem is further compounded in writing by the fact that such words as /\text{sin}/, /\text{ban}/, /\text{rin}/, etc. are all spelled with orthographic representation 'ng' as 'sing', 'bang', 'ring', etc. giving the Persian speaker further corroboration for what he feels is linguistically necessary, i.e. the production of the final velar stop following the \(/g/\). (See Appendix A for a consideration of interference in reading, writing, and other culturally conditioned conventions at this level.)

8) The slight forwarding of /l/ in Persian presents no distinctive difference in English and consequently no problem.

9) The production of an American retro-fixed /r/ in English does present some difficulty for the Persian speaker since he is accustomed to a flapped /r/ in a more forward position (alveolar) and will transfer this to English production causing an interference problem.
10) All other consonantal phonemes are functionally identical for English and Persian.

4.5 Consonant clusters.

In learning a new language the L₂ learner must not only be able to recognize and produce new sounds in isolation but what is infinitely more important recognize and produce these phonemes as they appear in combinations in the flow of normal discourse. In these environments their production is greatly altered for they are influenced by the phonemes coming before and following after as well as by the tone level, intonation and rhythm. Interference from the L₁ to L₂ can and does occur at all of these points.

It is not enough just to map out the phonemes of two languages and compare the separate phonemes because while conceivably two languages could exist with identical phonemes their combinations would be different and cause interference of a very profound degree. One area of interference at the deeper level is in the consonant clusters of both the L₁ and L₂.

4.51 Theoretical and statistical material for Persian consonant clusters.

Several studies of consonant clusters in English have been done. One of the earliest ones is found in G. C. Fries' Teaching and Learning English as a Foreign Language. The two other analyses of consonant clusters consulted revealed omissions in each other as well as in the one by G. C. Fries.

14 Fries, 1945, pp. 17-20.

The work of Fries forms the basis for our study although the format is that of Woodhead. The aim of our study of consonant clusters was to ascertain the total extent of combinatorial possibilities in English words initially and finally. We are concerned with consonant clusters, initial and final, occurring in any orthographic word and not limiting ourselves to the monosyllable or monosyllabic word. This does not include a study of clusters across word boundaries or medial clusters as it was felt that these were not high enough in frequency and constitute a low incidence of interference. It was, however, felt that a comparison of consonant clusters of the kind attempted here would reveal further extensions of transfer from L₁ to L₂ that a comparison of phonemes in isolation would not.

Fries makes the following statement about phonemes vs. phoneme clusters:

"Ease of pronunciation or difficulty of pronunciation and ease or difficulty of discrimination in hearing are matters primarily of the 'patterning' of the sounds in a new language rather than matters of the articulation of the sounds per se."\(^{16}\) And again, "Each language has not only its own set of distinctive sound features; it also has only a limited number of characteristic sequences of consonants and vowels which make up the structural pattern of the syllables and words. From this fact arises the importance of finding the 'position' in which the distinctive sounds can occur, and the 'clusters' which they form."\(^{17}\)

The investigation of consonant clusters by Fries, in line with the above quotation, is constructed on a pre- and post-vocalic basis of the single morpheme word and in the case of post-vocalic utterances on the basis of the inflectional affixes, /z/, /s/, /d/, and /t/.

\(^{16}\) Fries, 1945, pp. 16-17.

\(^{17}\) Ibid., p. 16.
The charts and lists which follow for Persian are done on the same format and according to the same principles as those for English.

4.511 **Consonant-vowel sequences in the monosyllable in Persian and English.**

<table>
<thead>
<tr>
<th>Persian</th>
<th>English</th>
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<tbody>
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<td>v</td>
<td>v</td>
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<tr>
<td>cv</td>
<td>cv</td>
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<td>voc</td>
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<td>vcc</td>
<td>vccc</td>
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<tr>
<td>vcccc</td>
<td>vcccc</td>
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</table>

It should be kept in mind that this chart only points up the possibilities within the syllable whereas in the word of one or more syllables other combinations of a more complex nature will arise. Nevertheless the above combinations cover the range of possibilities necessary in determining differences within initial and final clusters between the two languages. In the Persian column 'ccv' has been deleted on the grounds that its occurrence is relegated to consonant plus /w/ or /y/ only and for reasons explained under 4.52.
4.512 A List of Consonant Clusters (Initial and Final) in Persian.\(^1\)

<table>
<thead>
<tr>
<th>Ref. No.</th>
<th>Initial</th>
<th>Vowel</th>
<th>Final</th>
<th>Ref. No.</th>
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</tbody>
</table>

\(^1\) Although words of one syllable were of primary interest, in order to include all consonant clusters words of more than one syllable were included as well.
Key to "A List of Consonant Clusters (initial and final) in Persian."

<table>
<thead>
<tr>
<th>Ref. No.</th>
<th>Initial</th>
<th>Ref. No.</th>
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Two charts of consonant clusters in Persian.

Persian: Initial Consonant Clusters

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**Persian: Final Consonant Clusters**

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<td>ks</td>
</tr>
<tr>
<td><strong>x</strong></td>
<td>ġm</td>
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| **q** | }
Description of initial consonant clusters in Persian.

A note is necessary about the formation of consonant clusters in Persian. First, the initial clusters, it will be observed, are of only two kinds: those with /w/ as final element and those with /y/ as final element. In both cases the legitimacy of these combinations as consonant clusters can be called in question depending on the criteria used in establishing them. In the first case, that of clusters with /w/ as final element (c + /w/), the first and second consonants fall together only in rapid speech. Thus, it depends entirely on what type of speech one chooses to analyse, whether /sawasl/ or /sawal/ is heard, etc. This phenomenon could possibly be described on the formal-informal axis but this writer has not gathered statistics with that in mind, i.e. the retention of the cvcv sequence being formal and the ccv, informal.

All of the consonant clusters listed, as can be seen from the following list, involve the reduction and loss of a vowel in the first syllable. It can also be stated that this reduction only occurs before the low, back vowel /ai/. An equation stating this relationship can be formulated thus c + /w/ + /ai/.

It should be noted from the following chart that there is one curious exception to the above mentioned vowel change (reduction) as seen in number 6. Here the form /xwair/ is an occurrence (the only one known to this author, corroborated by Perhadi (1955)) of an older form still in common use today in Afghan Persian. This form was common in Middle Persian as were other words with an initial /xw-/ but all of these words have lost the /w/ in Iranian Persian, even our example in question, which has become /xair/ along with /xandam/ 'read', /xistan/ 'wish', and others. Only /xwair/ remains in Afghan Persian. This one occurrence of /xw-/ which is not the result of a reduction of a vowel, i.e. cvcv to ccv, as in the other five examples below does not invalidate our general statement about initial consonant clusters in Persian.
A List of Persian Consonant Clusters Resulting from Vowel Reduction before /a:/

<table>
<thead>
<tr>
<th>Reduced form</th>
</tr>
</thead>
</table>
| /swaːl/      | /swaiː/ 'question'  
| /dwaːzda/    | /dwaːzda/ 'twelve'  
| /luwaːb/     | /lwaːb/ 'sauce'  
| /jwaːb/      | /jwaːb/ 'answer'  
| /koːhaː/     | /kwaː/ 'mountains'  
| /w/          | /xwaːr/ 'sister'  

The following are other examples of the above clusters.

1) /swaiː/ 'ride'  
2) /swaiːn/ 'lime'  
3) /jwaːris/ 'corn'  
4) /jwaːrn/ 'young'  
5) /xaːstan/ 'wish'  

Reduction of Middle-Persian /w/ has occurred in these cases. (See explanation above.)

For further discussion on this point see Farhadi, 1955, pp. 28-29.
In the second case, consonant plus /y/ (c + /y/), we are again by
the use of different criteria able to question the validity of any cluster
listed as being a legitimate consonant cluster. If we choose to consider the
/y/ phoneme as a high front vowel /i:/ then we can accurately transcribe all of
our examples as cvv or more accurately, cvvc, for syllabification always occurs
between the vowels.

The following list gives the transcription with consonant cluster
followed by the transcription with double vowel. Note again here as in the
case of consonant clusters with /w/ as second element that the phoneme /ai/
follows the two consonants. Likewise we can write an equation for this
relationship: c + /y/ + /ai/. Both equations, that of /w/ and /y/, combine
to this (c + w/y + a).

1) /uyaːː/ /piːsæː/ 'onion'
2) /byaː/ /biːsæː/ 'camel'
3) /myaːːya/ /myːsəː/ 'he is coming'
4) /fyuːːsæ/ /fiːsæː/ 'fuse' (English borrowing)
5) /dyuːː/ /diːsæː/ 'villages'
6) /nyaːl/ /niːsæː/ 'shrub'
7) /lyaːf/ /liːsæːf/ 'quilt'
8) /syuːː/ /siːsæː/ 'black'
9) /zyaːt/ /ziːsæː/ 'much'
10) /ryaːːsaːt/ /riːsəːsæːt/ 'president's office'
11) /zyaːː/ /ziːsæː/ 'Shia' (religious sect)
12) /gyaː/ /giːsæː/ 'plant'
13) /xyaːːnaː/ /xiːsəːnæː/ 'sister-in-law'
14) /xyaːːl/ /xiːsæːl/ 'thought'
Therefore, in both cases listed in the chart, we can quite clearly cast doubt on the validity of saying that Persian has any legitimate initial consonant clusters. Certainly the two cases are of a special nature and not on a par with such examples in English as /sp/, /sk/, /bl/, etc. Thus for the initial consonant clusters appearing in English we may expect the Afghan student to have some difficulty, and in fact he does with rather consistent patterning. In the absence of a word beginning with two consonants in Persian he is left with the possibility of ov, vo and vco as initial combinations. The pronunciation problem is predictable. The Persian speaking Afghan student will pronounce play as /pale:/ or /pele:/, school /sakusl/ or /askusl/, etc. The automatic conversion of an initial consonant cluster in the L2 to either a vowel consonant or a consonant vowel is a direct result of interference at the out-of-awareness level of speech production for this is where the strong, learned influence of the consonant-vowel sequence operates in language. It is this automatic conversion that speaks so clearly for force or energia that is language in its systemic sense and which has to be dealt with as interference phenomena when it exerts its influence in the production and reception of another language.

With this in mind we should be able to support this position by citing examples in Persian of naturalized borrowed words with initial consonant clusters. Here interference is a legitimate force in bringing into line any lexical item not exhibiting the normal pattern, in this case a pronunciation pattern growing out of the cv structure of the initial syllable. The following borrowed words in Afghan Persian are fully integrated and enjoy wide usage. Note the resulting cv or vc sequence and resyllabification that has come about by their normalization in Persian.
We may now compare the above with native members of the language:

<table>
<thead>
<tr>
<th>Borrowed Item</th>
<th>Naturalized Form</th>
<th>Syllables and cv sequences</th>
</tr>
</thead>
<tbody>
<tr>
<td>'sport'</td>
<td>ccvcc</td>
<td>/sipoirt/ cv/cvccc</td>
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<tr>
<td>'school'</td>
<td>ccvc</td>
<td>/sikusl/ cv/cvc</td>
</tr>
<tr>
<td>'stadium'</td>
<td>ccvovc</td>
<td>/isto:dylum/ vo/cva/cvo</td>
</tr>
<tr>
<td>'stove'</td>
<td>ccvc</td>
<td>/istosp/ vo/cvo</td>
</tr>
</tbody>
</table>

In every case the borrowed word has been naturalized to either a cv or vc structure in the first syllable which has in all cases necessitated the resyllabification of the item in question. In the short list of native Persian items we see the same pattern in the initial syllable namely that of cv(o) or vc. The above examples strongly suggest that the unsophisticated speaker of Persian senses no ccv structure of the initial syllable in any lexical item. He automatically adapts any borrowed item to this pattern. The status, therefore, of the two instances of initial consonant clusters in Persian, namely that of (c f /w/ /y/), is questionable for it apparently exerts no interference influence on the native speaker in the naturalization process of new items in the language and as we have said the presence of /w/ and /y/ come under scrutiny for other reasons.
# Statistical material for English consonant clusters.

## A List of Consonant Clusters (Initial and Final) in English

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<th>Vowel</th>
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20. The layout of these charts has been based on one similar by J. Woodhead, Phonetics Department, University of Leeds. By 'extensions' is meant words of more than one syllable. These were included since a complete list of initial and final consonant clusters could not otherwise be made.
## Key to "A List of Consonant Clusters (Initial and Final) in English."

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21 In the following lists of words one asterisk (*) will indicate rare or only examples and two asterisks (**) will indicate foreign origin of recent borrowing.
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Two charts of consonant clusters in English.

**ENGLISH: INITIAL CONSONANT CLUSTERS**

| pb | mw | fs | z | t | d | n | l | r | c | j | ś | ż | y | k | g | n | h | v | t | t |
|----|----|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| pw | bw | l | br | py | by | my |
| sp | sm | sw | sf | st | sn | sl | sy | sk |
| tw | tr | ty | dy | ny |
| šw | šr |
| kw | ki | kr | ky |
| gw | gl | gr |
| hw | hy | wy |
| tw | tr | ty |

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ENGLISH: FINAL CONSONANT CLUSTERS

|    | pb | bm | w | f | s | z | t | d | n | l | r | c | j | s | z | y | k | g | n | h | v | t | t |
| pb |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| bm |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| w  | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| f  | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f |
| s  | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s |
| z  | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z |
| t  | t | t | t | t | t | t | t | t | t | t | t | t | t | t | t | t | t | t | t | t | t | t | t | t | t |
| d  | d | d | d | d | d | d | d | d | d | d | d | d | d | d | d | d | d | d | d | d | d | d | d | d | d |
| n  | n | n | n | n | n | n | n | n | n | n | n | n | n | n | n | n | n | n | n | n | n | n | n | n | n |
| l  | l | l | l | l | l | l | l | l | l | l | l | l | l | l | l | l | l | l | l | l | l | l | l | l | l |
| r  | r | r | r | r | r | r | r | r | r | r | r | r | r | r | r | r | r | r | r | r | r | r | r | r | r |
| c  | c | c | c | c | c | c | c | c | c | c | c | c | c | c | c | c | c | c | c | c | c | c | c | c | c |
| j  | j | j | j | j | j | j | j | j | j | j | j | j | j | j | j | j | j | j | j | j | j | j | j | j | j |
| s  | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s |
| z  | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z | z |
| y  | y | y | y | y | y | y | y | y | y | y | y | y | y | y | y | y | y | y | y | y | y | y | y | y | y |
| k  | k | k | k | k | k | k | k | k | k | k | k | k | k | k | k | k | k | k | k | k | k | k | k | k | k |
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| v  | v | v | v | v | v | v | v | v | v | v | v | v | v | v | v | v | v | v | v | v | v | v | v | v | v |
| t  | t | t | t | t | t | t | t | t | t | t | t | t | t | t | t | t | t | t | t | t | t | t | t | t | t |
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4.54 Comment on final consonant clusters.

A comparison of the statistical material on Persian and English consonant clusters reveals combinations of up to four in English but only two in Persian (see 4.511, 4.514, and 4.533). This fact, from the evidence gained in teaching English in Afghanistan by both British and American programs, does not result in interference of any proportion worth mention. Once established, the final voc pattern in Persian permits expansion (additional consonants) allowing the production of up to four in English with facility. It will be noted from the charts in 4.514 and 4.533 that the coverage for Persian is of no discernible pattern in contrast to English. The chart for final consonant clusters in Persian could no doubt be expanded with additional examples further corroborating the scatter patterning of final sequences.
5.0 Grammatical interference.

5.1 Grammatical theory: Preliminary.

The following discussion of some of the grammatical differences between Persian and English assumes that interference is a factor to be dealt with as a result of differences. Statements about the grammar of Persian are based on An Outline of the Analysis of Persian by A. A. Samandari, Afghan Persian by C. T. Hodge, et al., Kabul Persian by J. C. Wilson, Jr.\(^1\) and a synthesis of these descriptions. Our analysis will be exemplificatory rather than textual. The approach will be largely that of the neo-Firthian school as defined and elucidated by M. A. K. Halliday in "Categories of the theory of grammar."\(^2\)

5.11 The scope.

Only selected areas of differences will be discussed. Since the thesis does not attempt to deal with an analysis of grammar per se it was felt that any attempt at a comprehensive description would be out of place and add unnecessarily to the length of the thesis. Therefore, attention will be concentrated on differences rather than on systematic analysis although this is presupposed and has made possible the statement of differences that will follow.

5.12 Basic assumptions

In talking about grammatical differences the following assumptions are made for both Persian and English as in fact they are for all languages:

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1) language is patterned, 2) language is made up of units, and 3) units reflect this patterning in their arrangement or sequential manifestation. Halliday has set up, in his linguistic theory, three levels of analysis, namely the level of substance, the level of form, and the level of situation. These three are related by two interlevels, that of phonology-graphology relating the level of substance to the level of form and the interlevel of context relating the level of form to the level of situation.

- Phonetics
  - Substance: Phononic
  - Graphic
- Linguistics
  - Form: Phonology, Grammar, Graphology, Lexis
  - Situation: Context, Extra-textual features

As can be seen from the above diagram, at the level of substance there are two kinds, graphic and phononic from which the phonology and graphology derive and materialize. At the level of form grammar and lexis appear and at the level of situation relevant non-language aspects of utterances (substance and form) are defined.

In general this thesis has followed the above scheme. There will be no attempt to justify the use of the above mentioned theory nor to explain the choice of the theoretical categories both of which are outside the scope of this thesis.

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3 M. A. K. Halliday, 1961, pp. 244-45. The following chart is from p. 244.

4 For this aspect of linguistic theory see Halliday, 1961, and also Geraldine I. May and Elisabeth Ingram in consultation with R. D. Huddleston, (programmed by), 1964, M. A. K. Halliday Categories of the Theory of Grammar, (c) M. A. K. Halliday and The School of Applied Linguistics, University of Edinburgh.
5.13 The level of grammar.

We shall deal with the level of grammar which is defined by Halliday as follows, "Grammar is that level of linguistic form at which operate closed systems. Since a system is by definition closed, the use of the term 'closed' here is a mnemonic device; but since 'system' alone will be used as the name of one of the four fundamental grammatical categories... it is useful to retain 'closed system' when referring to the system as the crucial criterion for distinguishing grammar from lexis.

A closed system is a set of terms with these characteristics:

(a) the number of terms is finite: they can be listed as A B C D, and all other items E... are outside the system.

(b) each term is exclusive of all the others: a given term A cannot be identical with B or C or D.

(c) if a new term is added to the system this changes the meaning of all the others."^5

The four fundamental categories of grammar considered adequate for a general linguistic theory are unit, structure, class, and system and of these, unit is unique in that it does not vary in delicacy.

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^5Halliday, 1961, pp. 246-47. A further distinction as shown by the above diagram is between grammar and lexis. "Any part of linguistic form which is not concerned with the operation of closed systems belongs to the level of lexis. The distinction between closed system patterns and open set patterns in language is in fact a cline; but the theory has to treat them as two distinct types of pattern requiring different categories. For this reason General Linguistic theory must here provide both a theory of grammar and a theory of lexis, and also a means of relating the two. A description depending on General Linguistic theory will need to separate the descriptions of the two levels both from each other and from the description of their interrelations." p. 247.
5.131 Scale of delicacy.

By delicacy is meant depth of detail or further cut of descriptive categorization. Thus scale of delicacy accounts for variability of likeness in terms of a scale the most general endpoint of which states what is common to the largest number of items, ignoring the more detailed distinctions. The more general distinctions are considered as primary elements at the primary degree of delicacy. Progressively more detailed differentiations are accounted for by what is known as secondary delicacy. These distinctions ideally should be made until there are no more that yield further differentiations. In this section on grammatical differences we will not attempt to reach this ultimate endpoint of detail but will nevertheless deal with a degree of secondary delicacy detailed enough to reveal relevant differences for teaching purposes. In comparative-descriptive grammatical theory it has been noted by S. K. Verma that convergence between two linguistic systems occurs with greatest similarity at primary degree of delicacy and shows greatest divergence as deeper cuts of delicacy are made. We will, therefore, be interested in differences which occur at primary delicacy exactly because they will at a further degree of delicacy produce more or further revelations of this difference. This does not imply that areas of convergence at primary delicacy will not show differences at a deeper level of delicacy.

5.132 Basis for grammatical comparison.

Here again the problem of "difference" and "sameness" needs to be

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qualified for in any comparison we must state what the properties are that unite items as same and what properties separate them as different. Between two languages this problem becomes apparent at all levels and at the level of grammar is handled by the categories established for that level. These theoretical abstractions are general enough to be applicable to all languages; hence a comparative statement of their units, structures, classes and systems becomes possible if we make our primary correspondence at the highest level of abstraction.

As W. S. Allen puts it, "The problem is to establish a framework of grammatical analysis within which categories set up for one language can be rigorously identified with those set up for another language and so given the same label. Without such a framework there is the danger that the same term (e.g. 'ablative' or 'perfect') may be given to functionally incomparable categories (or comparable only in a vague or notional manner)."\(^8\) The same label is of course no problem as long as we are defining our labels intra-linguistically for each language and then extracting an abstract category or categories with properties common to both languages. This state of affairs forces us to look for functional equivalence of abstract categories as a basis for coalescence of categories and thus a basis for comparison. This would not be possible if we could not go beyond form to establish functional equivalence at the level of situation. Ellis feels that "comparison of formal meaning is ultimately dependent upon some identification other than formal, since this by definition is always intra-linguistic, whereas contextual meaning relates to extra-linguistic situation. Such terminal points of the formal framework as sentence,

and language itself, are identifiable as corresponding only in relation to situation, and hence the other formal elements within the framework are identifiable ultimately so too. Thus the formal criterion is ultimately dependent on the contextual. 9

**Culture**

The above figure represents the relationship between form and situation for a meaningful linguistic utterance whereby utterance W operates in situation X of culture A, and utterance Z operates in situation Y of culture B. Situation X and Y overlap to the extent that we can say that utterance W and Z share the same situation and are translation equivalents. This is done by establishing relevant features of situation X and Y as identical.

The utterance must be defined to encompass the largest unit of grammar, the sentence, which can be expounded by a word or any other unit of grammar.

At the level of situation we again must have an adequate theoretical framework as a basis for any comparison of meaning which must ultimately be based on the assumption of cultural overlap. 10 (See 3.5 ff. of this thesis for a fuller discussion.)

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10. I take this term from J. Lyons, 1965, Structural Semantics. See pp. 41, 71, 82 for development of this concept.
5.2 Interference at the level of grammar: a provisional definition.

Grammatical interference occurs when in the area of language defined above as grammar, these closed systems of $L_1$ are transferred to the production of closed systems of $L_2$. Weinreich cites the following examples of grammatical interference: "Interference of [grammatical] relations can be of several types.

(1) The replica of the relation of another language explicitly conveys an unintended meaning. Example: A German speaker says in English this woman loves the man on the model of German diese Frau liebt der Mann, intending to communicate the message 'the man loves this woman', but producing the opposite effect.

(2) The replica of the relation of another language violates an existing relation pattern, producing nonsense or a statement which is understandable by implication. Example: A German speaker says in English yesterday came he on the model of German gestern kam er, meaning 'he came yesterday'. A third type, which constitutes interference only theoretically, consists in the unnecessary imposition of a relation to a language where no obligatory relations exist in the equivalent domain. For example, if a native English speaker were to maintain the English-type word order of SUBJECT + VERB + OBJECT in his Russian speech, this would be superfluously monotonous, but would not violate Russian grammar.\(^1\) Weinreich systematizes these grammatical interferences as those of order, modulation, agreement and dependence.

On this same point Lado makes the following observation "... that the grammatical structure of the native language tends to be transferred to the foreign language. The student tends to transfer the sentence forms, modification devices, the number, gender, and case patterns of his native language.\(^2\)


5.3 The category and unit structure of Afghan Persian.

Unit as one of the four previously mentioned categories of the Hallidayan theory of grammar has the following subdivisions for English which will also serve for the description of Persian. They are in order of rank from highest to lowest as follows:

Sentence
Clause
Group
Word
Morpheme

This then is a hierarchy in which each (except the lowest) of the five units listed will consist of one or more than one of the units next below. These then become available as labels for stretches of language (utterances) in both English and Persian and form the base for a description at the primary level of delicacy. These labels, however, are defined independently for each language, internally consistent for each linguistic system. Only when this is done can a legitimate comparison be made, free from the influence of one system on the other. As Ellis has so clearly stated comparison between two linguistic systems must make reference to something beyond formal meaning in order to establish two units as being analogous for comparative purposes. As he suggested, this can only be done at the level of situation where we can establish that a certain unit of language A will operate in the 'same', overlapping situation of language B. The following diagram attempts to show this relationship and to account for meaning on the basis of linguistico-cultural overlap.
The diagram in making reference to the linguistico-cultural grid refers the reader to 1.32, 3.5, 5.3, and 6.33 where fuller explanations are made. Let it suffice here to say that the grid pictured in 6.33 is for this diagram the same although of different diagramatic shape and being dealt with in more detail and less general frame of reference. The use of circles refers to linguistico-cultural correspondence from near total correspondence (○) to total lack of correspondence ○ ○ between two linguistic or cultural (linguistico-cultural) items.

Since the sentence is the highest unit recognized as having independence, we will talk in terms of the utterance as given and the sentence as one utterance. We may call all others in the unit category utterances as well. The sentence from a distributional point of view is the maximum unit of grammatical description of analysis. Robins states, "Therefore, the sentence is conveniently taken as the largest unit of grammatical analysis and the upper limit of structural statement at the grammatical level. Certain consequences
follow from this. A sentence is by definition grammatically complete (the alleged 'incomplete or elliptical' situationally tied sentences are complete in those situations); it may, therefore, be preceded and followed by indefinite pause or silence, together with those phonetic features associated in each language with prepausal position. ...More briefly a sentence may be called a potentially complete utterance. This congruence between the grammatical and phonological levels, though it is potential rather than always actual, is an additional characteristic of the status of the sentence as a structural unit.  

In Hallidayan terms the sentence is made up of one or more of the units next below on the rank scale.

5.31 Primary structure of the sentence.

As has been mentioned in more general reference the elements of the sentence are made up of the unit next below on the rank scale, the clause, and that there is a one to one relation, i.e. one clause equals one element in sentence structure.

5.311 Sentence types.

Persian sentences have two defining relationships, that of dependence (or presupposition) and coordination. While their operation is of value to list briefly no great amount of space will be devoted to them, as differences with English are not outstanding. The relationships of clauses within the

---

sentence are as follows:  

1) Dependence:

/// aga xubu sutra bud /// tanxari biland mara biti ///  
'if good clean was wage high me give'

2) Coordination:

/// man no kar bu dum /// wa huma pe nxis mat bud ///  
'I servant was and you bearer were'

In the example for dependence only a representative sentence is given and the first clause is dependent on the second or presupposes it.  

3) Simple sentence:

/// man raftum ///  
'I went'

4) Compound sentence:

/// man zanga zade /// os darwazara wa z kard ///  
'I bell rang and door open did'

/// asha tei rej na madis /// man raftum ///  
'because didn't come you I left'

Here we are introducing the symbol α to stand for an independent or free clause

---

14 The following boundary markers are in current use at the Department of Applied Linguistics, University of Edinburgh: /// ....... /// sentence;  
/// ........ /// clause; [ ...... ] R/S clause (Rank-shifted);  
[ ...... ] interrupting clause; [ ...... ] interrupting group; [ ...... ] R/S group; / ...... / word or morpheme.

15 See Samandari, 1964, where he states that the relationship in coordination is one of presupposition and recursion as well. He therefore allows the following equation: Dependence-presupposition, non-transitive, recursive $A_1B = B_2C = C_3D$ (but not $A_1B = A_2C$); coordination-presupposition, transitive, recursive $X_1Y = Y_2Z = X_3Z$. 
as seen in a simple sentence or as seen linked in a compound sentence. The bound clause is represented by the symbol $\beta$. The symbol $\&$ stands for linkage. In Persian as in English the elements at sentence rank are $\alpha$, $\&\alpha$, $\beta$, and $\&\beta$.

The above non-context defined sentences, together with the one following, illustrate the most frequent possibilities for elements of the compound sentence in Persian:

5) Included clause.

```plaintext
\[\text{\textbackslash ma: di\textbackslash sab \&\text{"pas am inke: aimadand\text{"} rafte\text{"w\text{"}}}\\]

'we last night after that they came left'
```

The following general remarks on the above sentence types should be made. In unlinked coordinate sentences ($\alpha \& \alpha$) linkage is a feature of intonation. Although the sequence ($\beta \alpha$) and ($\alpha \beta$) are both possible ($\beta \alpha$) is more common. In coordination sequence linkage of and in relation to one another is as follows: $\alpha$ precedes $\&\alpha$ and $\beta$ precedes $\&\beta$. $<$ $>$ indicate interruption of one element by another. Discontinuity is seen where either $\alpha$ or $\beta$ may be interrupted by another $\beta$ element but not by another $\alpha$.

5.312 Dependent elements.

Within the element $\beta$ further cuts in delicacy are possible. Three main divisions at the secondary degree of delicacy are made. Samandari calls these secondary elements the "three term system of vector of dependence" whose exponents are additioning clauses ($\& \beta$), conditioning clauses ($\alpha \beta$), and reported clauses ($\beta \beta$).

The analysis of $\beta$ at the secondary degree of delicacy reveals significant differences in conditioning and reported clauses. Since they are a system
of three their significant differences can only be understood in light of their relation to each other.

Additioning clauses (\(+\beta\)) are defined as being introduced by the initial element \(/k1/\), inability to precede \(\alpha\) (it may interrupt or follow) and distinguished from a rank-shifted clause by the absence of terminal defining \(/i/\) in the preceding primary element of clause structure which is expounded by a nominal group. (Primary elements of clause structure and rank-shift will be defined later.)

\[+\beta\]

///landan <<k1 busesrgtarin Nari dunyaist>> dar

'London that biggest city of world is in

inglistan gara:ir da:rad///

England place has'

Conditioning clauses (\(x\beta\)) are defined as being introduced by an adjunct (a class of words expounding the primary element of clause structure \(A\)), and able to precede or interrupt \(\alpha\). While the structure of these dependent clauses may not seem unusually different from English their exponents are of a considerable difference. Note the following example:

\[x\beta\]

///aga suma: mra me:xaste:/>/ ba suma: kosmak me:kardum///

'if you me were asking to you help I were giving'

If you had asked me, I would have helped you.

However, since our interest at this point is in the structure of the sentence and the relationships of its elements \(\alpha\) and \(\beta\), let it suffice to say here that a difference exists in the exponents of the primary element in clause structure. The past progressive (simple past durative in Samandari's work)\(^{16}\)

\[^{16}\text{Samandari, 1964, p. 72.}\]
is used in both the conditioning clause and the free clause to denote the meaning to contrary-to-factness.

Reported clauses in Persian are of two kinds, active reported \((\alpha \beta)\) and reflective reported \((\alpha \beta^r)\).

Examples: \((\alpha \beta)\)

1) \(/\text{guft/mari\'z astum//}\) 
   \(\alpha : \beta\)
   'he said sick I am'

2) \(/\text{guft/\text{ki yang mariz astum//}}\) 
   \(\alpha : \beta\)
   'he said that sick I am'

3) \(/\text{guft/\text{ki mariz ast///}}\) 
   \(\alpha : \beta\)
   'he said that sick he is'

Numbers 1) and 2) are identical except for /\text{ki/} which is optional and number 3) is less common than the other two. All the above examples can be translated into English as the indirect form \(/\text{He said//he was sick}//\) leaving the first example to stand also for the direct as well. Here direct and indirect are used to designate the two kinds of reported clause in English, e.g. \(/\text{He said//"I am sick."}//\) and \(/\text{He said//he was sick}//\) Because of the coalescence of two forms in English to one in Persian it is questionable whether the direct-indirect opposition of Samandari is a legitimate one. The construction of the reported clause \((\alpha \beta)\) in Persian is conditioned by the class of exponent of the verbal group \((\text{Vgp})\) in the \(\alpha\) clause at \(P\) (predicator place in the structure of the clause). The reason for making this statement is shown in the following table of alignment.
Reporting clause ($\beta$) in English and Persian

\[ \alpha \quad \beta^d \quad \alpha \quad \beta^a \]

He said, "I am sick." \[ \leftrightarrow \] //u/ guft/(ki) mariz astum_PP//

\[ \alpha \quad \beta^i \quad \alpha \quad \beta^a \]

He said he was sick. \[ \leftrightarrow \] //u/ guft/(ki) mariz ast_PP//

Since the active reported form ($\beta^a$) in Persian is used in both cases of direct and indirect reported ($\beta^d$) ($\beta^i$) in English and the active indirect form ($\beta^i$) is often ambiguous when a second party is referred to, i.e. someone other than the speaker, the opposition direct-indirect of Samandari is misleading, different from English, and used in quite a different manner. To avoid ambiguity, in English, direct and indirect are different as to form and this is correlated with meaning and use. In Persian to disambiguate the indirect-active form from the possibility that a second person was being referred to the direct-active would be used.\(^{17}\) Thus in Persian two possibilities of reported clause are seen ($\beta^a$) and ($\beta^i$), the former with a subdivision ($\beta^a$) and ($\beta^ad$) made on a common-less common axis. $\beta^a$ are those reported clauses which follow the class of words expounding Vgp in $\alpha$ clause structure, e.g. /guftan/ 'speak', /puirsiidan/ 'ask', etc. and ($\beta^i$) are those clauses which follow another class of words at P in the structure of $\alpha$, e.g. /tasavok kardan/ 'decide', /xaistan/ 'want', /tasavoir kardan/ 'think', etc.

---

One other aspect of the coordinate sentence in Persian, already referred to in the above chart as $\alpha \subset \alpha$, needs mention, i.e. the extension of meaning and of formal structure of the one verbal element either forward or backward to include and serve by implication the other clause of the coordinate sentence. This is called by Huddleston\textsuperscript{18} and by Samandari\textsuperscript{19} a zeugmatic feature of clause structure.


\textsuperscript{19}Samandari, 1964, p. 22.
The zeugmatic feature of sentence structure is not unknown in English but its manifestation in exponence is different at the clause rank and the limitations of its anaphoric or cataphoric nature are different.

5.32 Primary elements of clause structure.

Primary elements of the clause in Persian (which is that unit between sentence and group on the rank scale) are adequately accounted for by the following constituents: Subject (S); Object (O); Adjunct (A); Complement (C); and Predicator (P). While these five primary elements are the same in name for English (see Halliday's theory of grammar) and Persian (based on the same theory) they are nonetheless independent of one another based in each case on a self-consistent description of the language in question and are themselves abstractions. The fact that there are five elements in clause structure in both languages may be related to their common Indo-European heritage.

The description of the primary elements of clause structure is dependent on the analysis of the group, or unit next below on the rank scale, thus we will talk about the exponents of primary elements in terms of the groups that operate in them.

---

Primary Elements and Groups Operating in Clause Structure

<table>
<thead>
<tr>
<th>Clause elements</th>
<th>A</th>
<th>S</th>
<th>C</th>
<th>O</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>Agp</td>
<td>Ngp</td>
<td>Rgp</td>
<td>Vgp</td>
<td></td>
</tr>
</tbody>
</table>

Occurrences in clause: \( \sim/0 \quad 1/0 \quad 1/0 \quad 1 \)

Exponents: \( 1,2^+ \quad 1,2^+ \quad 1,2^+ \quad 1 \)

In the above chart the number of occurrences of exponents of the primary elements of clause structure are listed: at A, any number or none; at S one or none; at C one or none; at O one or none; and at P one.

There are instances of utterances without P but they are special and will not be dealt with in this description. A full description of Persian would then need to include an element Z at clause rank for these items (what we will call minor in the verbal group at P). The number of exponents filling primary elements A, S, C, O, P may be one, two, or more than two in all cases except the P element which has a one to one exponent.
Combinations and Sequences of Elements of Clause Structure

<table>
<thead>
<tr>
<th>P</th>
<th>raftum</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>I went</td>
</tr>
<tr>
<td>O</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td></td>
</tr>
</tbody>
</table>

| S | 
| O | 
| C | 
| A | 

| S | 
| O | 
| C | 
| A | 

| S | 
| O | 
| C | 
| A | 

| S | 
| O | 
| C | 
| A | 

| S | 
| O | 
| C | 
| A | 

| S | 
| O | 
| C | 
| A | 

| S | 
| O | 
| C | 
| A | 

| S | 
| O | 
| C | 
| A | 

| S | 
| O | 
| C | 
| A | 

21 Samandari, 1964, p. 30. Our chart although basically that of Samandari has been adapted to Afghan Persian in matters of transcription and certain vocabulary.
From the above table we can make the following statements about the combination and sequence of primary elements of Persian clause structure:

1) P is the final element in clause structure except where for emphasis it may precede the final element.\(^{22}\)
2) C when present stands next to P and precedes it.
3) O when present precedes C when present which stands next to and precedes P.
4) S, O, and A are in free distribution to each other, preceding P and preceding C when present.

The particular sequence of elements is, apart from a formal description, context defined as is their probability. Secondary elements at O are as follows: \(O^r\) and \(O^r\). \(O^r\) is marked for specificity and \(O^r\) is not, the marker being the bound morpheme suffix /ra/ (after items ending in a vowel) or /-a/ (after items ending in a consonant).

5.321 The concept of rankshift.

When any group (Ngp, Vgp, etc.) expounding an element of primary clause structure (S, O, P, etc.) is filled by a clause rather than a group (or word) we say that the clause is rankshifted. In Halliday’s words, “The theory allows for downward ‘rankshift’: The transfer of a (formal realisation of a) given unit to a lower rank.”\(^{23}\) An example of this is the following sentence where a clause is operating at S in clause structure:

---

\(^{22}\)Note that in spoken Persian this rule is abrogated by the possibility of P preceding A of time or place and the imperative where P may be either the final element of two; the first element of two; or the medial element of three. See Samandari, 1964, p. 34 for examples.

\(^{23}\)Halliday, 1961, p. 251.
Rankshifting may take place at 0 as well as at primary elements of Hgp structure, namely Q and H. These elements of Hgp structure will be explained below.

However, between Persian and English we do not see in the operation of higher units at lower on the rank scale any differences in concept. The differences are all inherent in the different ordering of primary elements of clause structure and the student sees the concept of rankshift in English as analogous to that in Persian given the differences in place ordering in the clause.

5.322 Systems operating in clause structure.

Systems operating in clause structure can be defined as the System of Position (which we will look at in some detail); System of Transitivity (which we will not consider since it presents no differences not already inherent in the placement of primary elements of clause structure); System of Linkage (and Discontinuity) (which has been adequately covered above under sentence types); and the System of Binding (which will be briefly mentioned).

Of the systems operating in clause structure the most innocuous in appearance and yet troublesome in practice is that of the affirmative-interrogative opposition (actually a secondary system which will be shown below schematically). In spoken Persian the interrogative is distinguished from the affirmative by either a question word or rising intonation. To indicate the interrogative in writing, where intonation is used in speech, a question marker /aýa:/ (with no other function in the language) precedes the normal
indicative word order. This is a double system extending to sentences other than those in which a question word is used, i.e. /ki/ 'who', /kusi/ 'which', etc., all of which operate very much as the question word operates in English. Thus the Afghan student has but two types of sentence structure, those with a question word and those in the normal indicative word order. This causes considerably interference because in English he must learn to use word order as a means of indicating the interrogative.

The System of P Position in Persian yields three categories: P as fixed in final position; P absent; and P as non-final element, designated respectively normal, minor, and emphatic.

System of P Position

\[
\begin{align*}
\text{Clause:} & \\
\text{normal} & \rightarrow \text{affirmative} \\
\text{minor} & \rightarrow \text{interrogative} \\
\text{emphatic} & \rightarrow \text{emphatic} \\
\text{Persian:} & \\
\text{spoken} & \rightarrow \text{question word} \\
\text{written} & \rightarrow \text{question marker} \\
\text{English:} & \\
\text{spoken} & \rightarrow \text{question word} \\
\text{written} & \rightarrow \text{word order}
\end{align*}
\]

As has been indicated earlier, for emphasis the P element in clause structure may not be the final element. When this occurs P will be next to the final element.
The System of Binding has been alluded to under sentence types where the dependent clause (β element) is bound to the independent (α element) by an exponent of one of the primary elements of clause structure. Thus we may find the binding element to be an exponent of A, S, O, or P. These will not be exemplified here since the use of these elements structurally does not carry differences of any magnitude. In this instance the differences lie more with the situation in which these structures can or cannot be used.

5.33 Primary elements of group structure.

We will consider briefly the nominal group (Ngp) occurring at S, O, and A in clause structure and the verbal group (Vgp) which operates at P in clause structure. There are also occurrences of adverbial group (Agp) which will not be dealt with here.

5.331 Nominal group (Ngp): primary elements.

The Ngp elements are Head (H), Modifier (M), and Qualifier (Q). Their sequence is fixed, that is, they are place ordered, the same exponent with no morphological changes can occur in all three places. Samandari gives the following example of this using the morpheme /du/ 'two':

\[
\begin{array}{ccc}
M & /du\ nafar\ amadand/ \\
H & /du\ bestar\ az\ yak\ ast/ \\
Q & /kitabi\ du\ bestar\ ast/ \\
\end{array}
\]

\[
\begin{array}{c}
M \quad H \quad Q \\
/bestari\ nu\ sebi\ Mirin\ biti/ \\
Best\ apple\ sweet\ give.
\end{array}
\]

There are secondary divisions or qualifications of categorization for all three elements and the classes of morphemes which fill these are in themselves different from English as well as being ordered differently. We will discuss the subdivisions at M. There are three, Demonstratives (d) Numerals (n) and Weights and measures (w), and their occurrence is in that order.

\[ \begin{array}{ccc}
M & H & Q \\
\text{d} & \text{n} & \text{w} \\
\end{array} \]

/faqat se: pau maska/
only three pound butter

Subdivisions of d reveal a further place ordering of elements all demonstratives or qualifying adjectives, e.g. 1) /tana/ 'only', /faqat/ 'just'; 2) /is/ 'this', /a:n/ 'that'; 3) /cini:n/ 'like this', /ci:/ 'what', /kudam/ 'which', etc. For purposes of description they may be designated \( d_1, d_2, \) and \( d_3 \).

The following exemplificatory sentence shows the subdivisions of d in relation to n and w and in turn to H and Q.

\[ \begin{array}{ccc}
Mgp & & \\
\hline
M & H & Q \\
\text{d} & \text{n} & \text{w} \\
\hline
\text{d}_1 & \text{d}_2 & \text{d}_3 \\
\end{array} \]

/faqat isin cinisn du pau maska: safe:di biti/
just this like two pound butter white give
Within the secondary element \( n \) there are two possible elements, the first being a choice of either an ordinal + the superlative suffix \( /i\text{s}n/ \) or a comparative adjective + the superlative suffix \( /i\text{s}n/ \), and the second being a cardinal number. (Ordinals without \( /i\text{s}n/ \) are expounded at \( Q \).) The following diagram illustrates this chain and choice sequence:

\[
\begin{array}{c}
\text{M} \\
\hline
n_1 \\
\hline
n_2
\end{array}
\]

Exponents of \( n \) are as follows: \( n_1 \) - '/xulatari/ 'biggest', '/bestari/ 'best'; \( n_2 \) - '/awali/ 'first', '/duwum/ 'second'; \( n_2 \) - '/yak/ 'one', '/du/ 'two', etc. The following Ngp illustrates this relation of \( n_1 \) to \( n_2 \):

\[
\begin{array}{c}
\text{M} \\
\hline
n_1 \\
\hline
n_2
\end{array}
\]

There are no subdivisions of \( w \); the following are examples of items occurring in this spot:

- '/ki\text{lo}/ 'kilo', '/mit/ 'meter', '/pau/ 'pound'
- '/ca\text{rak}/ '4 pounds', '/si\text{r}/ '16 pounds', etc.

The primary element \( H \) in nominal group structure if followed by \( Q \) has the bound morpheme \( /i/ \) and the qualifier(s) \( Q \) (for each \( Q \) there is one \( /i/ \) and there may potentially be an infinite number of such items expounding \( Q \).
Example: /xaːne/:25 safe'di birə'dari man/
house white brother my
'my brother's white house'

As has been mentioned above, at Q, an unlimited number of qualifying items may appear as a string following H, each connected to the preceding by the bound morpheme /i/. By 'qualifying items' we mean to include rankshifted nominal groups as well as single adjectival, enumerative, and substantive items and when present the possessive pronoun or a rankshifted clause as terminal in the string. The R/SCL may follow an element or elements of the string but is more often the only exponent of Q.

Diagramatically:

```
Q
Q1 ___________ Q2
a o s R/SNgp R/SCL or Poss.
```

Exponents at Q1:

- a (adjectivals) - /surx/ 'red', /buzurq/ 'big', etc.
- o (ordinals) - /awal/ 'first', /duwam/ 'second', etc.
- s (substantives) - /kaːr/ 'work', /risāzī/ 'arithmetic', etc.

We are further able to say that Q1 may be final or non-final. Non-final is recognized by the presence of the bound morpheme /i/26 and final is recognized by the presence of the bound morpheme /e:/ on adding the bound morpheme /i/.

25 Words ending in a vowel, e.g. /xaːne/ on adding the bound morpheme /i/ reduce to /e:/ as final vowel phoneme.

26 It should be noted that while in Afghan Persian the bound morpheme connector /i/ appears the same in speech it is two different items in writing which come from a common source in Middle Persian. In Iranian Persian, however, they are not only different in printing but also in pronunciation.
either marked or unmarked. Marked final $Q_1$ is expounded by the indefinite
marker /i/. 

Diagrammatically:

\[
\begin{array}{c|c|c}
\text{Marked} & \text{Final} & \text{Unmarked or /ra/ (refer to 0)} \\
/i/ & \text{indefinite} & \text{connector}
\end{array}
\]

Examples at $Q_1$:

'house white (a) bought (I)'

'house white bought (I)'

Non-final: /xane: sase:di: man/
'house white my'

Examples of $Q_2$ as final element:

/kitabi xubi rafiqi bara: dari tui/
'book good friend brother you'

The good book of your brother's friend.

/kasi ke: diro:z a:mad imjast/
'person who yesterday came here is'

$H \quad Q \quad (R/SCL)$

The R/SNgp operating at Q may appear as one of two or more elements of $Q_2$ or
the only element.

\[
\begin{array}{c|c|c|c|c}
\text{kitabi} & \text{xubi} & \text{rafiq} & \text{man} & \text{my friend's good book'}
\end{array}
\]

\[
\begin{array}{c|c|c}
H & Q & Q \quad (R/SNgp)
\end{array}
\]
/kitabi rafi'qi xu.bi man/

H Q Q

H Q (R/SN gp)

Other examples of Q:

/musidiri qalami masussi nasybulhukme: wilaiyiti kandahar/

head pen special governor province Kandahar

'Private Secretary of the governor of the Province of Kandahar'.

| H | Q | H | Q (R/SN gp) |
| H | Q (R/SN gp) | Q (R/SN gp) |

Samandari gives the following example:

/meswei duraxti sesbi Mirini dositi barasdari man/

fruit tree apple sweet friend brother my

'The fruit of the sweet-apple tree of my brother's friend.'

| H | Q | H | Q (R/SN gp) |
| H | Q (R/SN gp) | Q (R/SN gp) |
| H | Q (R/SN gp) |

Recursion in Ngp structure by means of the bound morpheme /i/ presents not only a teaching problem in word order which cannot be remedied by reversing the items and placing them before H, but also a problem in relationship. The bound morpheme /i/ is in the most general sense a connector. It translates
as 'of', the bound possessive morpheme /ː/, or has no lexical equivalent being carried by place in Ngp structure, e.g. /daraxti seibi Siriːn/ 'sweet-apple tree', /xaːneː man/ 'my house', etc.

The Persian speaking student may therefore be expected to generalize onto the English lexical item 'of' or the bound possessive morpheme /ː/ the uses that /ː/ has in Persian. This type of transfer leads to 'house of my' or 'the fruit's tree' or other ungrammatical sequences relating to the structure of the Ngp in Persian. We see the teaching problems of the Ngp in English arising from the differences of arrangement of primary and secondary elements in Persian and of the classes of items that fill these elements.

5.331 Systems in Ngp structure.

In the nominal group in Persian we find the following systems operating:
The system of number, the system of plurality, and the system of pronominals.

Within the Ngp there is no concord between the primary or secondary elements, number may be represented at H or within the ordinals at n but this is irrelevant within the Ngp. Examples of no concord within Ngp structure follow:

MH - /iːn xaːne/ /iːn xaːnahai/
      'this house'           'this houses'
HQ - /xaːneː xub/ /xaːnahaːi xub/
      'house good'           'houses good'

The relevancy for plurality at H and n resides between the Ngp and the verbal group (Vgp). There may be concord between the Ngp and the Vgp in the same clause (conditions to be explained below) or in other words between S and P in the same clause. Concord between S and P in the same clause occurs when the exponent of S is a class referring to persons (human beings), e.g. /iːn baca
maktab meirawad/ 'this boy goes to school' and /in bacaha: maktab meirawand/ 'this boys go to school'. To show respect to the person referred to, however, P can be plural although S is singular, e.g. /na:ybulhukuma ta:bri:f awardand/ 'the governor was so kind as to come'. The opposite occurs (S is plural but P is singular) when the exponent of S is a class referring to inanimate objects or animals when P remains singular even though S may be plural, e.g. /ru:i mes katab u kataba:ha: ast/ 'on the table are books and notebooks'.

Teaching concord within the Ngp and between Ngp and Vgp in English for the Afghan student will present a teaching problem for he will be asked to make distinctions within the Ngp he is not in the habit of making and between the Ngp and the Vgp he will find a different distribution of concord on a different basis of categorization.

The vestige of gender remaining in the English pronominals in the third person singular is also a difference to take account of for in Persian none exists at all. The existing distinctions within the Persian pronominal system between formal and informal do not exist in English and where the student goes from a system of distinctions to one in which they do not exist and moreover cannot be made, interference does not manifest itself. We are referring to the one form for 'you' in English and the two in Persian /tu/ and /numat/ which may be diagrammed for their formal/informal use as follows:

In the colloquial language there also occur forms of the secondary plural maha 'we', somaha 'you', which sometimes even penetrate into literature.

This holds with the following exception: /daistum meraftum/ 'I was going' etc. which Samandari, p. 56, suggests should be called two verbal groups.
for interference. Since English has no enclitic possibilities, we will not
give a great amount of space to description or example. In passing it
should be pointed out that teaching problems are possible in dealing with the
negative due to the strong tendency in Persian for the negative particle to
appear prior and adjacent to the Vgp whereas in English this is not necessarily
the case.

The use of the nominal element in the Vgp in Persian is for the speaker
of Persian a very ready means of creating a verbal element by employing a noun
or adjective with such verbs as /kardin/ 'do', /mudan/ 'become', /daidan/ 'give',
/giriftan/ 'take', /raftan/ 'go', /amadan/ 'come', /budan/ 'be', /dandan/ 'see',
etc. Wilson\textsuperscript{30} lists over 50 of these verbal groups (there are many more) of
which the following are representative.

\begin{tabular}{|l|l|}
\hline
Nominal element & Vgp \\
\hline
/fikir/ 'thought' & /fikir kardin/ 'to think' \\
/peš/ 'before' & /peš mudan/ 'to come (or go) forward' \\
/aš/ 'water' & /aš didan/ 'to water' \\
\hline
\end{tabular}

Examples of adding a nominal element to certain verb forms might in English be
compared to the conversion of adjectives and nouns to verb forms, e.g. water,
to water, 'he watered the flowers'; fire, to fire, 'he fired the stove'; red,
to redder, 'his face reddened with each word', etc. On the other hand the two-
word verb in English may be confused by the Persian speaking student, whereby he
will attempt to extend its construction along the lines of his own. Such verbal
units as look out, look up, put up, put out, etc. cause teaching problems in that
they may allow intervening elements under certain conditions as to certain of the
compound verbs in Persian but under different conditions. Two-word verbal

\textsuperscript{30} Wilson, 1960, pp. 63-6.
elements in English are best conceived of as being factors of a meaningful situation rather than being composed of two elements the sum of which equals the meaning of the two in isolation. While this may also be said for Persian there is also a real sense in which the elements (nominal plus verbal) are a sum of the two in combination.

As to a system of gender, there is none in Persian, and although only the vestiges of one still operate in English it is enough to give some occasion for interference, e.g. in the third person singular where English has a tripartite division and Persian has a one term system with no gender represented.

<table>
<thead>
<tr>
<th>English</th>
<th>Persian</th>
</tr>
</thead>
<tbody>
<tr>
<td>m. he</td>
<td>/ut/ 'he, she, it'</td>
</tr>
<tr>
<td>f. she</td>
<td></td>
</tr>
<tr>
<td>n. it</td>
<td></td>
</tr>
</tbody>
</table>

This difference is what Carroll\(^{31}\) calls a divergent difference since \(L_1\) has one term and \(L_2\) has three. We are asking the student to make three distinctions by using three linguistic symbols where he previously used only one.

As has been implied at the beginning of this section formal features of the verbal group reveal differences with a small potential of interference for the teaching situation whereas the situational employment of these forms reveals marked differences in many cases due to skewing on the semantic level. An example of this is the employment of the verb 'want, wish' plus dependent clause with the subjunctive where in English the simple present progressive would be used, e.g.

<table>
<thead>
<tr>
<th>Persian</th>
<th>Situation</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ma meixayum ke:</td>
<td>Airport, two passengers waiting for their flight to leave. One asks the others, Where are you going?</td>
<td>'I'm going to London.'</td>
</tr>
<tr>
<td>landam burum/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>'I want that London I should go.'</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Another example of tense shift:

<table>
<thead>
<tr>
<th>Persian</th>
<th>Situation</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>/a:mad/</td>
<td>A group of children are awaiting the arrival of guests. Those in the yard on seeing the guest come into view in the distance call to those in the house...</td>
<td>He's coming. 'They're coming.'</td>
</tr>
<tr>
<td>'He came.'</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Here a change of tense for a common situation would suggest a difference in point of view toward the event being described between the two languages.

<table>
<thead>
<tr>
<th>Persian</th>
<th>Situation</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ci: $ud/</td>
<td>There is an accident. A bus hits a cyclist and the bicycle is run over by the bus. 'What happened?'</td>
<td>'The bus ran over the bicycle.'</td>
</tr>
<tr>
<td>/ba:skil zeiri</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sarwees $ud/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>'What happened?'</td>
<td>The bicycle became under the bus.'</td>
<td></td>
</tr>
<tr>
<td>/ci: $ud/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/pi:sla Nikista $ud, as me:z aftaid/</td>
<td>A cup lies broken on the kitchen floor. There are two children standing nearby as the mother enters.</td>
<td>'What happened?' 'The cup fell on the floor.' ('Who broke it?')</td>
</tr>
</tbody>
</table>

The above two examples are more a shift of point-of-view than tense since it would seem that a social code of etiquette is operating here. In both examples direct reference to the person causing the damage is not made either by the one asking about the incident or by the one giving information. This phenomenon in Afghan culture has wider ramifications involving several (perhaps many) kinds of interpersonal relationships, e.g. husband-wife, employer-employee, teacher-student, police-pedestrian, etc. where deference is paid to the person causing the accident or involved in it in such a way that direct reference is not made to those
involved. It is usually very clear who is involved but this remains an implicit understanding between the participants. Persian can, of course, cover the situation where the direct reference to the agent is made, i.e. 'Who broke the cup?', but this is certainly not a usual pattern of comment on a situation of this nature.

A further illustration of the lack of personal reference is seen in the following example:

<table>
<thead>
<tr>
<th>Persian</th>
<th>Situation</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>/paissa ba ka'ir ast/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>'Money is needed.'</td>
<td>Son to father or servant to employer: Money for some personal need.</td>
<td>'I need money.'</td>
</tr>
</tbody>
</table>

The cross-cultural implications of this are immediately seen as being important since in American culture direct reference is the usual pattern (the ultimate question 'Who broke the cup?' would be asked) and it is thought proper to admit involvement. This difference between cultural meanings of a situation could render the Afghan student impotent in a similar situation in American culture (and conversely an American rude and impolite in Afghan culture) if he has not learned the social meaning of the situation in which he is speaking. It would mean that he is using an Afghan social code but with English utterances. It should not be overlooked that there are verbal conventions in English for 'saving face' but employed by different participants and in different situations. Thus what appears to be a grammatical difference at one level may, when viewed for similarity via situation, find a more far-reaching socio-cultural explanation attached and at this point social anthropology and sociology should provide insight into the question. This aspect of meaning will be dealt with in 6. as
cultural meaning but we might add that to the extent the cultural meanings of an utterance differ to that extent we are not talking about the same situation although the physical objects may be equated.

<table>
<thead>
<tr>
<th>Persian</th>
<th>Situation</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>/agar awaː xusb baːʃa</td>
<td>Discussing the possibilities of a picnic.</td>
<td>'If the weather is nice, we will have a picnic.'</td>
</tr>
<tr>
<td>maː roːsi juːma meːla</td>
<td></td>
<td></td>
</tr>
<tr>
<td>rasheım raf't/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>'If the weather should be good, we will go on a picnic Friday.'</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Again the Persian presents a difference in tense involving point-of-view in that the subjunctive is used for a future time when probability is uncertain whereas in English the present is used. The Persian suggesting that if the weather (looking to the future from the present) should be good there will be a picnic; whereas the English suggests that if the weather (looking at the future as if it were present) is good there will be a picnic.

5.4 Situation and linguistic differences.

As we have seen from the previous example, formal differences are not the only ones the student deals with in his acquisition of a foreign language. He must also deal with the meaningful use of form and structure in a social situation. This we conceive to be the goal of language teaching.

Naive suggestions have been made that in foreign language teaching we are essentially teaching structural (by which they mean grammar) differences. The following quotation from Lado is a case in point. "All of these [units and patterns of linguistic structure] can be summed up in the general observation that where the native language of the student and the foreign language differ
structurally there is a learning problem and the nature and description of the problem depend on the comparison of the two language structures... Learning the problems, that is, the structural matters that differ between the two languages, is learning the foreign language. The non-problems will be picked up by exposure to the foreign language and transferred from the native language.\(^\text{32}\)

To say the least this statement is an oversimplification and has contributed to a fallacy now rampant in the foreign language classroom, namely that we are teaching the language if we are teaching structural differences. A structural comparison as we have seen does not reveal all (only a small portion) of the differences students must master in learning a foreign language. We must not assume either that "differences" are all that needs to be taught. If we were certain as to what a "difference" is between two languages this approach would have some validity, but this is not the case for we are ever presented with the task of assessing what is similar and different between any two languages. Criteria for this delineation of similar and different elements are not well understood either by linguists or psychologists. Added to this is the fact that differences in the area of use, i.e. what structures and lexical items are used in what situations must be the overriding criterion for the construction of teaching materials. This fact is woefully underestimated if not ignored by the Lado fallacy.

Because of this in the next section we will explore the field of use of certain lexical items in Persian and their glossed 'equivalents' in English taken from the series of texts now in use in the schools of Afghanistan.

6.0 Linguistic-cultural interference at the lexical level.

6.1 A definition of lexical interference and preliminary statements.

In the same way that we can make reference and provisional definition for phonological and grammatical interference so we can also refer to lexical interference. This will be defined as the transference of the instantial, potential and cultural contextual meaning (expanded below) of an item or items in $L_1$ in the production of $L_2$ discourse. This definition only applies to the use of lexical items in connected discourse, i.e. when the subject is exercising his capacity for language in $L_2$. Capacity for language includes all those mental capabilities for perception and abstraction evident in the developing child and the adult whereby perceptual invariants, preoperational intuitive thinking, concrete operational thinking, and formal propositional thinking in the linguistic sense are acquired and used.

Contextual meaning must be taken to include instantial, potential and cultural meaning as defined below in this chapter. Contextual meaning as a basic concept is seen as a relationship between form and situation and is based on statements of J. R. Firth and the further writing on the subject by M. A. K. Halliday and J. O. Ellis. The concept of context presupposes Halliday's classification of the levels of linguistic analysis (see 1.32 and 5.12 above) and other theoretical categories and scales (e.g. the concept of delicacy) integrated by Halliday into his scales and originally used


by A. McIntosh as well as instance and potential contextual meaning incorporated by Ellis into his theory of contextual meaning but originally used by McIntosh.) (See 1.32 above for a fuller discussion of contextual meaning.)

6.2 Further comments on the linguistico-cultural grid.

Although prior reference has been made to the linguistico-cultural grid (see 1.32, 3.5, 5.3) a recapitulation and expansion will be made here as it is at the lexical level that this concept has its most comprehensive application. The statements that follow bring together ideas put forth in the three above mentioned sections of the thesis.

Starting as it were from the outside and working in we may begin by making statements about culture. Culture may be said to consist of "a set of inter-related, partially arbitrary expectations, understandings, beliefs or agreements, shared by the members of some social group, which can be shown to influence (or to have influenced) the behavior of some members of that group."3 This statement by Bock, an anthropologist specializing in the correlates between language structure and social structure, nevertheless has still defined culture in line with the older more classical definitions. (See 1.41 for a reference to these definitions.) Book recognizing the interrelationship between language and culture defines culture in a manner that would also equally well serve for language. Thus it seems that we must in one sense include language in culture but in another sense we cannot talk about culture without language for apart from what is so-called material culture language serves as the vehicle for both the overt expression and transmission of cultural material.

The thesis has to this point attempted to give necessary background for the significance of language acquisition and use in the second language situation. My concern here is to make further general remarks on the possibilities of the organization or networks of the linguistico-cultural grid.

As shown in chapter 2 there is a long history of thought and research on the relationship of language to thought and perception and as this relates to social man in his environment. Whorf has essentially taken the position that language dictates our thought and actions, whereas others, Bernstein for one, have taken the opposite view that the social role dictates language. It would seem that both views concern the same thing -- what we have called the linguistico-cultural grid. These interpenetrating networks are realized via social selection of linguistic items both linguistically and extra-linguistically defined. Sapir with characteristic insight and clarity of expression sees language as "completely interpenetrating" with all direct experience.

It seems clear from these present-day discussions (see in 2. remarks by Carroll, perhaps the most intimately acquainted and knowledgeable assessor of Whorf’s ideas as they relate to research in language and thought today) of the total range of linguistic relativity that the following stand is reasonable and in line with current thinking in linguistics, sociology, psychology and anthropology, namely that language and culture interpenetrate... the former providing the particular social milieu and the latter providing the material of expression, a circular relationship but also interpenetrating and interacting. Although up

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to very recently language has not been viewed by sociologists as anything more than another cultural institution, such as family or religion, language is now being reexamined as a social force and a defining influence between the biological and socio-cultural orders. With the link between these two orders coming into the fore for investigation not only by linguists but other disciplines, Bernstein feels that "the clarification of this link and the resultant theories may well have consequences for control as exciting as the progress in our understanding of the genetic code." The new look at language by sociologists and sociolinguists also imputes to language this unique role by seeing it as either "an integrating or divisive phenomenon; as the major process through which a culture is transmitted; the bearer of the social genes." It is the individual as locus of this interpenetration who must be seen as the unaware partner in linguistic and social interplay and also as innovator and changer... creator and originator. Our view is that a somewhat less extreme view of linguistic relativity will more realistically represent the facts, e.g.


A fuller listing of references in my "Ethnolinguistic bibliography with supporting material in linguistics and anthropology" which appears as an appendix in this thesis can be found for this convergence of disciplines but the following references indicate the direction and extent of some of the research:


that man can and does take an objective look at his linguistic and social world and is also capable of understanding and entering actively into another linguistic and cultural milieu. This does not deny the constraints of language and society on the individual as he unselfconsciously operates in a sociolinguistic complex; it only attempts to show the inadequacy of a view which ignores man's essential control over both.

6.3 The corpus under discussion.

The corpus of material analyses for lexical differences consisted of all new and different lexical items used in the eight texts, Afghans Learn English, (see 1.33 for fuller reference). These lexical items had been alphabetically glossed with their Persian equivalents at the end of each text in which they were introduced. They totalled 1098 items. The use of the term equivalent here only includes the equivalence for that item in the context where it is introduced in the text. This will be more fully explained. All items were given what the editor, translator, and teachers considered to be the translation equivalent for that item in the particular context and subsequent use in the text. The assumption was that the item would be used consistently in this sense or meaning and glossed anew if it were used in a different sense. Since different senses of one item did occur in the corpus we found items in English with two or more translations or different items in English with the same translation. It is these differences that we are concerned with here because they reveal with sharper contrast the significance of interference of lexical items at the level of meaning.

6.31 Categories of the corpus.

All items were transposed onto 3 x 5 cards an example of which follows:
These some 1100 cards were then classified along two different axes,
1) the grammatical/lexical and 2) the presence or absence of surface congruence
between the English and Persian. We will discuss the first only briefly since
it was found to exclude differences worthy of mention by a division which proved
irrelevant to the purposes of the analysis.

The purposes of the analysis were to 1) ascertain the semantic domain
of all items and 2) assess the degree of non-congruence between these domains
in Persian and the glossed item in English. 3) to make groupings of items
along several axes such as convergent/divergent, related/unrelated and
synonymy/polysemy.

The basis for the grammatical/lexical division was based on the criteria
mentioned by Halliday in "Categories of the theory of grammar,"9 (see 5. for a
fuller treatment) where he points out the lack of any clear cut division between

the two categories. He suggests that a cline\textsuperscript{10} operates for all items between what are fully grammatical, e.g. items that are easily a part of a closed system such as 'this/that' (where the totality of their contrast can be accounted for in closed system grammar) and what are fully lexical, e.g. 'chair' or 'door' (where the totality of their contrast with other items can never be reached as a closed system; these particular examples are members, however, of an open set with common collocates). In the middle ground are such items as 'in, at, on' or 'if, seeing that, in case', or 'often, frequently, never' "where the number of possibilities is limited but large and the interaction of one choice with others is still fairly complex."	extsuperscript{11} In spite of the lack of a clear cut division between grammar and lexis they represent two distinct types of patterning which require different categories and although Halliday has provided a comprehensive theory of grammar he has only indicated the direction a theory of lexis should take.\textsuperscript{12} But further research and a tentative formulation of a theory of lexis has been attempted by J. M. Sinclair in "Beginning the study of lexis."\textsuperscript{13}

\textsuperscript{10}Halliday, 1961, p. 249, "A cline resembles a hierarchy in that it involves relation along a single dimension; but instead of being made up of a number of discrete terms a cline is a continuum carrying potentially infinite gradation."


\textsuperscript{12}Halliday, 1961, pp. 273-7.

As indicated above it was found that the formal categories of grammar and lexis did not divide the corpus into significantly different groups as to content, i.e. there were on the basis of a formal analysis such as outlined in 6.33 differences of like nature which needed to be accounted for in both. A categorization was therefore devised to divide the corpus according to surface congruency or lack of surface congruency. The criteria for surface congruence was then defined as translation equivalence in the broadest sense, i.e. the potential meaning as well as the instantial meaning of the items were the same. The addition of the term surface was necessary to indicate that this congruence is more apparent than real, in that any item glossed as the equivalent of another as the instantial meaning and with no greater potential still must be seen as diverging in its cultural meaning. As an example we may take the item 'apple' and its equivalent /æsːb/ as being translation equivalents, i.e. having surface congruence but with different cultural meanings as derived from their use by the participants of the respective cultures. Therefore, we propose to discuss three different types of meaning, instantial, potential, and cultural.

Before proceeding to the above mentioned point a further word should be said about semantic domain. This is conceived to be the interlocking domains of items between English and Persian. Semantic domain of an item is that item with its intra-language associates. All items of this study will not have a semantic domain but all will have a cultural range. It is possible for some items that difference will only lie in the cultural range, for example in the case of a physical object such as 'apple'.

Reference here must be made to the above use of *instantial* and *potential* meaning. The terms are taken from J. O. Ellis, "On contextual meaning"\(^{15}\) where they are used as follows, "The potential contextual meaning of a formal item is the range of possible contextual meanings of that item considered in abstraction from any text; its instantial contextual meaning is the actual meaning in a given instance of occurrence in a given place in a given text with a given situation."\(^{16}\) The terms contextual meaning, context, and situation are technical terms explained in 1.32 and defined in Ellis, "On contextual meaning."\(^{17}\) The use being made of instantial and potential meaning in this thesis is as follows. Instantial meaning will refer to the given instance of the lexical or grammatical item in the above mentioned texts; the potential meaning will refer to the total possible meanings of the items as given in the dictionary, in the case of Persian, Hafif's *English-Persian and Persian-English Dictionary*.\(^{18}\) All items were, therefore, checked first with the text to ascertain that their translation was correct (a small group of errors were found) and then examined to ascertain whether the potential meaning as given by the dictionary was in fact different from the instantial as used in the text and glossed... whether the dictionary entry listed other possible uses of that item. Because of the nature of the material, beginning texts relying heavily on concrete observable phenomena, this group of items with no other meaning than the


\(^{16}\) Ibid., p. 3.

\(^{17}\) Ibid., pp. 1-5.

one used in the corpus proved to be by far the larger portion of the corpus and will be dealt with as to their cultural usage with exemplification of their differences.

6.32 Points of view of the analysis.

As there are three possible viewpoints from which to analyse the material, I shall outline these and indicate the one that the thesis is concerned with. The English and its Persian equivalent on each card can be viewed from either the Persian learner’s point of view, or from the English-to-be-learned point of view or a combination of these two. We are only concerned with the first.

1) The Persian learner’s point of view. The English item to be learned is given a Persian equivalent for a particular situation as found in the texts. The instantial meaning of the Persian, however, is a part of a potential and cultural meaning which the average Afghan student at the seventh class possesses.

\[
\begin{align*}
E_1 & \quad P_1 \\
& \quad \downarrow \\
& \quad P_2 \\
& \quad P_3 \\
& \quad P_4 \\
& \quad \text{etc.} \quad \downarrow \\
\end{align*}
\]

Fig. 1

The implication being made from the above diagram is that the potential meaning in Persian is by association in use a part of the instantial meaning of the item, a fact which will tend to influence the way in which the equivalent in English is used. Although in the teaching situation we are by definition dealing with given instances of an item our goal is to impart potential meaning of the English item which in the early stages is unknown to the Afghan student allowing
this void in English to be filled by the potential meaning of its Persian equivalent. See Fig. 1.

2) English-to-be-learned point of view. The item in English likewise has an instanital and potential meaning, a potential meaning which can only be acquired from the correct use of its many instanital meanings. The acquisition of the potential meaning in any language learning situation is admittedly a slow process taking place over time and exposure to the item with its various collocates and set members as well as relevant situational features. In one sense this is a never ending process in any language and involves a process of categorization and generalization little understood. The language teacher's position should be one of attempting to build the potential meaning to a level of common usage in the second language as soon as possible by means of well chosen instances of its use. A diagram of this side of the learning process would be as follows:

\[ \text{Instantial} \rightarrow P_1 \quad P_2 \quad P_3 \quad P_4 \]

\[ \text{Potential} \]

\[ e_1 \rightarrow \ldots \rightarrow e_4 \]

\[ \text{etc.} \]

Fig. 2

\[ P_1 \] is the instanital translation equivalent for \( E_1 \) while \( P_2 \) etc. represent other and different possibilities of the potential meaning of the English item. This is another way of saying that the Persian equivalent of an item has the same instanital meaning but different potential meaning. Beyond a certain point of facility in the second language there is more economy in teaching, to dispense
with reference to $E_1$ etc. and teach $e_2$ etc. in terms of $E_{1*}, e_{3*}, e_{4*}$, in other words in the context of English.

3) A combination of 1) and 2) would show the coming together of similar English and Persian potential meanings in the one instance of equivalence, similar not identical since there is skewing due to linguistico-cultural differences as will be seen in linking, see 6.6.

![Diagram](image)

It is in figure 1 that we can speak of interference where the potential meaning of an item in Persian influences the attempted construction of the unknown potential of the English equivalent in a given instance. An attempt at generalization from one or a few instances of the English item inevitably results in interference of this type.

Since this discussion is concerned to show the interference from the first language to the secondary language no further discussion of the potential meaning in English will be given nor how it might interact with the potential of the Persian item in question or how they differ by contrast and comparison. Although both of these questions are worthy of further investigation they are beyond the scope of this thesis and must be considered as evidence indicating further research in this direction.
6.33 The method of analysis.

The corpus as has been mentioned was divided according to whether items manifested surface congruence or not. All cards were then marked as follows: surface congruence as 1 - 1 (one to one equivalence with no remaining differences in the English or Persian item) and lack of surface congruence as 1 + (either the English or the Persian or, as was more often the case, both had extensions of meaning not carried by the instantial use in question, in other words, their potential meaning was a different quantity from the instantial). The following examples will serve to illustrate these categories.

**Surface congruence (1 - 1):**
- night - شب
- house - خانه
- book - کتاب

**Lack of surface congruence (1 +):**
- tall - بی‌مره
- tell - که‌شن
- say - گفتن
- grandson - نوه‌دهان
- skin - پوست
- peel - پوست
- hull - پوست

We now have a three way division of meaning, instantial, potential, and cultural to apply to our two way division of congruence between items.

<table>
<thead>
<tr>
<th></th>
<th>1 - 1</th>
<th>1 +</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instantial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potential</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The discussion of differences in meaning (and use) between items in the corpus will be done in terms of the three levels instantial, potential, and cultural and their interrelationship can be shown in the following manner:

Potential

```
. ——> . ——> . ——> . ——> n
```

Cultural  Instantial

Socio-cultural milieu

It will be noticed that the diagram has no specification of internal relationships. This has been done because actual mental activity is difficult to observe from which to make valid deductions. It does not, however, seem out of line with psychological data that we may have 'n' number of instantial meanings which at the level of potential meaning are arranged for similarity or difference of meaning usage by the subject. Correlated with this will be the cultural usage of the item which will contribute to the construction of interrelationships at the cultural level. The instantial, potential, and cultural levels contain the material from which the linguistico-cultural grid is constructed for the total language and culture. The above three levels of meaning analysis must not be construed to represent the mental procedure for their actualization but to account for the data in the corpus and as observed in individuals using language. At this point of research in the area of meaning, meaning acquisition in the individual, and social or group meaning is fragmentary both in linguistics, psychology, and sociology; therefore, notional statements must be made by perceptive observers in all three fields that will
hopefully lead to models valid for empirical statements. It would seem also that the self observation of individuals, presented in the context of a consensus, should not be dismissed but used as a first step in establishing the direction research should take.

The following flow chart will indicate the categories of the analysis.

The English linguistico-cultural grid is placed on the Persian for instantial (I),
highlighting lack of congruence for cultural (C) and potential (P) meaning. In this case instantia meaning is very close to being congruent, a translation equivalent in the particular instance under consideration. The diagram also shows attendant items (nearby circles) for I, C, P in this hypothetical grid, items forming part of the semantic domain of the word-item in question. These are drawn lighter and as will be seen some overlap not at all while others do.

6.4 Divergent differences: one or more English items for one Persian (P 1 - E 1+).

Once all items of the corpus were on cards it became obvious that there were different items in English with identical Persian glosses. This type of difference has been referred to by Carroll\(^1\) (see 2. for fuller discussion) as a divergent difference, divergent from the Persian language or learner's point of view.

The examples discussed in this section will serve to illustrate this type of difference. As has previously been mentioned these differences range over the lexical/grammatical cline making those at either end of a considerable difference in order. Number 10 below deals with divergent grammatical differences in general and notes their difference from lexical.

The corpus, due to its size, cannot be considered as valid for predicting whether Persian makes more or less distinctions in its categorisation of experience than English, whether it is more differentiating in its nomenclature or less. If statements of this nature can be made they must be based on a wide gathering of data over the complete range of Persian usage. While this kind of research has not been done Gastil has attempted to study the use of certain concepts in Persian within the range of economics and government on the basis of

\(^1\)Carroll, 1965, pp. 17-18.
semantic fields and their relation to similar fields in English. He concludes tentatively, "There is a tendency for English field distinctions in the areas of discourse examined to be relatively undifferentiated in Persian. Although the English fields are occasionally paralleled in Persian by a multiplicity and diversity of synonyms these are not employed in an effort to create meaningful distinctions." It would seem to this writer that the importance of this statement lies not so much in the fact that Persian as compared to English makes fewer meaningful distinctions but that it reveals the basic assumption (which will be discussed later on) that word-items of a language do carry differences of a major character. That is, the word-item with its three levels of meaning, instantial, potential, and cultural or as Gastil and the Neo-Humboldtians would say with its semantic field involve the learner of another language in far deeper differences than Whorf and his followers were willing to admit, although they were not clear in their differentiation on this point between grammatical and lexical difference.

The point of view taken for the discussion of the above divergent differences is that word-items in a language have semantic domains or fields which stand out in the context of translation with which we are dealing. This fact causes the translator who can manipulate both English and Persian as communicative systems to gloss for two different items in English only one in Persian. These differences represent a difference of categorization at the lowest level of common usage. While the physical differences are present for all to observe for the purposes of linguistic codification certain distinctions are not paid attention

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to in Persian but are in English and vice versa. At this point this writer is not concerned whether the users of Persian may psychologically observe these distinctions but not code them or whether this is possible. An interesting point would be to investigate over a wide range of word-items the possibility of mental conception without single word linguistic coding.

The following comments on the numbered examples of divergent differences are made at all three levels, instantal, potential, and cultural.

<table>
<thead>
<tr>
<th>Persian</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>/xaːndan/</td>
<td>جوانن</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Coming together under the one Persian item جوانن we find the English read and sing. Perhaps the clearest statement to be made is that in English we lack a word to convey the general idea of oral expression from pre-arranged language, i.e. a song, book, speech, etc. Traditionally within the cultural setting for Persian the physical manifestations of what we call singing and reading are much the same. Starting from what is regarded by Moslems as the apex of all printed material, the Koran, the oral recitation of this is certainly neither reading nor singing but a blend of both، نون. In this case the lack of divergence in Persian between these two items has a cultural explanation with wide ramifications. Traditionally reading aloud has a long history. Even today when children are taught to read in school they do not read silently. Many a Western teacher of English has been most surprised and annoyed upon asking his class to read a passage silently to find that they all have ignored the injunction to silence and begin to outshout each other reading aloud. This is an
aspect of the potential meaning of خواندن which differs considerably from that of read in English. Other instances of difference in the direction of singing could be given. The teacher of English must be aware of the fact that خواندن in its meanings is potentially and culturally different from the particular instances where it may be considered to translate for read or sing in English. It should be observed that with the coming of more universal educational opportunities patterned on Western models the meaning/use of خواندن could be said to be changing and coming to acquire more of the potential and cultural meaning of its translation read.

<table>
<thead>
<tr>
<th>watch</th>
</tr>
</thead>
<tbody>
<tr>
<td>clock</td>
</tr>
<tr>
<td>hour</td>
</tr>
</tbody>
</table>

The glossing of watch, clock, and hour with the same Persian equivalent, خواندن, is another example of divergence but should not be confused with homonymy where one item covers several unrelated items, e.g. میلک - milk, and شیر - lion or in English bank - place for money and bank - edge of a river. The example under discussion should be classed as polysemy -- more than one gloss but with related meanings rather than totally unrelated meanings as in homonymy. These related items form a field or semantic domain, differentiated in English but not in Persian in the examples under discussion in this section. خواندن, while covering the three items in English, watch, clock, and hour, does not cover time but its Persian translation, خواندن, does cover hour in some instances. Since all instances (instantial meaning) must be accounted for in the potential meaning of an item we must allow for overlap or skewing between
the two semantic domains: \( \text{ساعت} \), \( \text{وقت} \); and \( \text{clock} \), \( \text{watch} \), \( \text{hour} \), \( \text{time} \).

<table>
<thead>
<tr>
<th>clock</th>
<th>watch</th>
<th>hour</th>
<th>time</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \text{ساعت} )</td>
<td>( \text{وقت} )</td>
<td>( \text{وقت} )</td>
<td>( \text{وقت} )</td>
</tr>
</tbody>
</table>

Possibilities of this nature will be dealt with more fully under 6.6.

3) \( \text{/ziːna/} \)

The coalescence of the two physical objects of \( \text{stairs} \) and \( \text{ladders} \) under one label needs little comment apart from the fact that in the Afghan culture \( \text{ديوان} \) may also apply to a notched log which we are at odds in English to know whether to call \( \text{ladder} \), \( \text{steps} \), or \( \text{stairs} \). Again we may say the Persian \( \text{پله} \) is the undifferentiated, unmarked item which relies on context for clarification whereas in English \( \text{ladder} \) and \( \text{stairs} \) are very marked and we find reluctance and hesitancy to use either for an object (such as a notched log) which we have not been in the habit of naming and which differs from both of the two items in English. 21

4) \( \text{/paːl/} \)

No differentiation is made between \( \text{leg} \) and \( \text{foot} \) in Persian but this does not mean that the Persian, \( \text{پاهای} \), is just an undifferentiated term. It has

21 See L. Bogdanov, 1930, "Stray notes on Kabuli Persian," Journal of the Asiatic Society of Bengal 26:123 where he points out that \( \text{پله} \) is the equivalent of Iranian Persian \( \text{پله} \).
its own vast range of uses and associations quite on a different plane from
the range of uses and associations for either of the English items. The
following examples are not exhaustive but suggest the range for لد in
Persian.

to be cheated


to happen


to get up


to be ruined


to kick away


to put on (the feet)


etc.

Thus the associations for the item لد in Persian present for the
Afghan student an entirely different range from English as well as a lack of
differentiation between the objects of the human anatomy which are designated
leg and foot in English.

5) /nawasa/


The fact that child and son come together in the Persian for grandson
and grandchild may bear some relation to the cultural meaning of the term
which is used to refer to child or son. The social significance
for the family to have a son is very high in that it is felt that not to have a
son is a misfortune not only for the father concerned but for the whole family
on the father's side. Thus when inquiring for the health of a man's family the polite reference is to his sons/children even though he may have only daughters. Thus in the term ی/وی we find this undifferentiation perpetuated, as a means of social etiquette and deference to the grandfather. The undifferentiated term ی/وی preserves the status of the father and grandfather by implicit reference to 'sons'.

6) /cavoid/

The lack of differentiation in Persian for objects used to sit on and with the defining characteristics such as legs and optional back support may reflect the lack until recent times of this object in the material culture of the speakers of Persian in Afghanistan. Seating is traditionally on the floor or ground (two more words covered by the same item in Persian) and although there are chairs in use today they are of comparative recent introduction (considering the total recorded history of Afghanistan) and cultural and linguistic lag would account for the lack of differentiation for the seating object named. Actually the term ی/وی comes from Hindi and is not in use in Iran at all... ی/وی being the term for chair in Iranian Persian.

7) /purist/

As with all divergent differences the Afghan student will be required to learn a greater number of distinctions than he has been in the habit of using for
the phenomena in question. not only covers skin, peel, and hull but also rind, shell, crust and bark as well as hide and parchment. On a comparative basis between English and Persian we can say that a semantic domain exists consisting of one item in Persian and of nine in English.

8) /me:z/  

The one item خیال serves in Persian for the two physical objects and are contextually disambiguated. The fact that English has this distinction will cause the Afghan student to want to learn one item in English and use it in all situations whether it is desk or table being referred to.

9) /guftan/  

The different uses of say and tell in English are covered by خیال in Persian. The use of خیال on the other hand is tied to the limited use of indirect reported clauses as discussed in 5., making the distinction as found in English between say and tell seem unnecessary.

10) A word about grammatical differences of either a convergent or divergent nature should be made. Further comment under convergent differences will therefore not be made. The fact that the method of analysis as applied to the entire corpus turned up differences for both lexical and grammatical items must not be taken to mean that they are of the same order. The fact that they are items of a cline whose extreme ends are radically different should make this very clear. An explanation of a divergent grammatical difference must find its solution in structural relationships and the fact that two grammatical items
may in certain instances translate to the one item in English (or vice versa) says very little about categorization, at least categorization of the kind illustrated by an example such as $\cup \frac{1}{2}$ - foot, leg.

Thus the example which follows reveals a categorization but of a different order: "What time it is?" and "What did you say?" are translated by $\sim \frac{1}{2}$. "What town is this?" and "What book was it?" are translated by $\sim \frac{1}{2}$. If the object being asked for or asked about is named $\sim \frac{1}{2}$ is used leaving $\sim \frac{1}{2}$ for general unspecified reference. A deeper and more exhaustive study of grammatical items from the point of view of the semantic domain would be fruitful but the designation might more properly be amended to relational domain rather than semantic domain and subsumed under it.

\[
\begin{array}{c}
to \\
\text{at} \\
\text{by} \\
in \\
with
\end{array}
\]

For the above, apart from citing many score of examples for the use of $\sim$ (which I shall not do), one can only say that the wide range of possibilities for its translation into English make for a very intricate teaching problem for the Afghan student and should be dealt with at the level of structure although there is a conceptual stance to be acquired, a point of view, which in English differs considerably from the Persian. Thus it would seem for this case of grammatical item there is less of a categorization difference and more of a conceptual difference, unless one is to think of a new categorization of spacial
relationships. Note the following examples:

- "they beat him with a stick"
- "in my opinion"
- "I will sell this for one afghani"
- "he went to school"
- "he is at home"
- "they went by car."

Here, another example much in character with the preceding example where spacial relationships are involved. The example of the third, singular pronoun 9/ again leads the Afghan student into errors where gender should be distinguished in reference.

Lack of control in this area can produce significant errors, e.g. "Where is John? She was here a moment ago." (See 5.332 for grammatical reference.)
6.5 Convergent differences: one or more Persian items for one English (P l+ - E l).

The following examples will be discussed in the same manner as the divergent differences. It will be noted that they are opposite in effect, i.e. viewed from the standpoint of the native speaker of Persian, they can be considered as a convergent difference. These are also mentioned by Carroll.22

On first encounter it might seem that differences of a convergent nature will be easier for the Afghan student to master since it could be assumed that he will not need to pay attention to distinctions he has been in the habit of noticing. This might have some validity if the area or coverage dealt with were the same in both languages. While this is seldom true at the potential level of meaning it is certainly not true at the cultural. Convergent differences demand of the learner a discrimination in bearing that is crucial to his correct interpretation of the message in the second language for he may still be required (depending on his stage of learning) to filter from the L_1 potential meaning which he has the particular instantial meaning of the item in question. Or he may be attempting to make discriminations which are no longer required of him resulting in interference from the first language. In both divergent and convergent differences the cardinal aspect to be kept in mind for language learning is that the learner must acquire the point of view of the target language, to quote Carroll, he "must be taught to observe and codify experience as nearly as possible in the same way as native speakers of that language."23


23 Ibid., p. 17.
/uqumat kardan/  

اخامت كردن  

1) /tawaqif kardan/  

توقاتف كردن  

- to stay in the sense of living in a place, to reside.

/sada: kardan/  

صدرا كردن  

2) /naimidan/  

نايميدن  

call

The distinction made between صرا كردن and نايميدن is that between call after and to call by naming both covered by the one item in English, call.

/naisuk/  

نیسک  

3) /aibdair/  

ابداير  

thin

/laigar/  

لیگار  

The three Persian items cover the one item in English in the following manner: نیسک refers to the thinness of cloth, ابداير to the thinness of soup, paint, etc., and لیگار to the thinness of persons or animals. Examples would be as follows: "This cloth is thin." (نیسک). "My soup is thin." (ابداير). "You look very thin." (لیگار). Thus we might make a tentative categorization of fabric, liquids, and animate objects for the employment of the Persian items whereas in English this will not be required of the Persian speaker learning English.
divide the reference for street along a size dimension, the former being a proper street in a city between blocks big enough for two-way traffic of modern motor vehicles and the latter being reserved for smaller streets, very typical of Afghan cities as well as other ancient Eastern cities built before the advent of the car and truck. When one is trying to negotiate a street of an ancient quarter of the city of Kabul in a motor vehicle one would refer to it in English as a street (not alley) but in Persian as . Had alley been a part of the vocabulary it, on the other hand, would have been glossed as also linking this item as a divergent item with street and in the following manner.

We shall call this linking or mixture of divergent and convergent differences and will deal with them as a separate phenomenon below although if our corpus had been large enough linking (see 6.6) would have been found to be the largest category.

in the general sense is the opposite of good and is the opposite of sound (in repair, firm, etc.). may refer to a rotten apple, a ruined or wrecked house, a machine not in working order, etc. and shows the result of an agent on such object. refers to people and ideas of poor quality. Here again had the corpus been larger a linkage would have been possible with other items both in Persian and English.
The following examples of sentences from the text point up the differences covered in the Persian items and

"I keep all the things people give me." - to save or keep safe. "I keep my shoes in a box." - to put in a place for storage. "The fire kept on burning." - to continue to keep on.

The semantic domain for know is clear in Persian entailing four items (others might be added) from the corpus and These may be categorized in the following manner and by means of the following sentences. - to know a person, e.g. "I know John Smith." - to know a fact, e.g. "She knows that her father is dead." - to understand or know the situation, the relationship of facts in a solution, e.g. "Smith knows the answer to that one." - to know a skill, how to do something, e.g. "I don't know how to guide you to the top of the mountain."
Although not in the corpus one could also add — to have information of unquestioned origin, news, e.g. "I know he isn’t coming, John told me."

8) /duast daštən/  

The following sentences illustrate the semantic domain for like where the following distinctions are made in Persian.

- to like a person or thing, e.g. "Did you like the food?"
- to have interest or inclination for something, e.g. "I would like a dozen pencils."
- to like a person with the possibility of affection being denoted, e.g. "He likes his mother very much."
- to like in the sense of wishing or wanting, e.g. "What would you like?"

9) /buzu:kər/  

- big in the sense of huge or enormous and - big in the sense of being adult or grown up; the first referring mainly to size and the second to age.

10) /xəshxə kərdən/  

In English the item ask suggests the following semantic domain: ask for, want; request; inquire, ask for information; ask, to question. These items do
not appear in the text but indicate the range of the item ask. The Persian items glossed likewise do not form a complete semantic domain but could be added to with such items as دوام کردن, and دوام کردن. Although the domains of either English or Persian are not complete from the material turned up in the corpus they do give an indication of the categorization in Persian. دوام کردن - indicates asking in the sense of wanting. There is the association of politeness and decorum also, e.g. "He asked his father for 1000 afghans." پرس کردن - to ask for information, e.g. "The traveller asked the way to Kandahar."

6.6 Linking: a comparison of semantic domains in Persian and English (Pr⁺ - El⁺).

The following material from the corpus indicates that with further research on a larger segment of language related semantic domains in English and Persian would be found to exist, the one being identified by the other in each language. As was pointed out above convergent and divergent are in themselves only half of the total comparison of semantic domain to be made between English and Persian. The following example will illustrate the fact that a particular item in English can be a member of a semantic domain and that its translation equivalent can also be a member of a semantic domain in Persian but that these domains have only the one instance in common.
While both languages have semantic domains for the items in question in the above example they are not analogous nor are they linking like the examples we will be considering in this section. For a fuller treatment of the above example see the appendix.

What is more interesting as well as intricate are the examples which follow where there is linking of entire semantic domains between Persian and English.

<table>
<thead>
<tr>
<th>Persian</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>گل</td>
<td>beautiful</td>
</tr>
<tr>
<td>زیبا</td>
<td>pretty</td>
</tr>
<tr>
<td>خوش</td>
<td>nice</td>
</tr>
<tr>
<td>گو</td>
<td>good</td>
</tr>
</tbody>
</table>

The above example of linking between semantic domains presents differences at both the instantial and potential levels of meaning. The Afghan student will find the middle ground in English between beautiful and good over-differentiated and to that extent in terms of his own use of گل، زیبا، and گو superfluous since there is one term extra (apart from the fact that the English terms, except for pretty, have alternative reference in Persian). Both nice and pretty become special problems for teaching meaning. Here research is needed in English to define their grammatical and lexical usage.
The above conflated scales of hot and cold can be conceived for illustrative purposes as one semantic domain in either language. The dotted lines overlapping in meaning and usage but are not synonyms in that they may be employed to make a discrimination more specific than the more general item which they overlap and which overlaps with it, e.g. *اَنتِين* overlaps with *دَخَلَ* and vice versa; *شَكَر* overlaps with *کَرَد* and vice versa. The central item seems to overlap on both sides in both languages. Items in parenthesis were added for the sake of completeness and were not found in the corpus.

Although the above example of semantic domain deals with a specified scale of temperature I feel it is nonetheless representative of cross-language disparity or non-congruence for many areas of experience and at the same time shows the intra-language adequacy for communication of its own categorizations and discriminations. Therefore, in similar cases of
skewing between semantic domains it would seem that the only adequate orientation to meaning and use of the semantic domain of a target language is to be found within the target language. Again we are confronted with the need to teach the student more than structures and words but relationships of new discriminations and categorisations of experience.

3) 

<table>
<thead>
<tr>
<th>lexicon</th>
<th>sad</th>
<th>angry</th>
</tr>
</thead>
<tbody>
<tr>
<td>عازف</td>
<td>خرم</td>
<td>فار</td>
</tr>
</tbody>
</table>

In the above example the central item is not adequately represented in English. Had the corpus been larger other items would have had to be dealt with such as , another discrimination within this domain in Persian. A difference of this nature will cause the Afghan student to misinterpret sad and angry as they are used by native speakers until he has come to relate them to the proper situations and experiences in English or conversely to categorize his experience in this area in terms of the instantial, potential, and cultural meanings of sad and angry.

4) 

<table>
<thead>
<tr>
<th>lexicon</th>
<th>floor</th>
<th>ground</th>
<th>earth</th>
</tr>
</thead>
<tbody>
<tr>
<td>فرش</td>
<td>پرده</td>
<td>خاک</td>
<td>ـ</td>
</tr>
</tbody>
</table>

From top to bottom in Persian in the above example the following explanations are given to show the relationship within the semantic domain. - the floor as well as the covering of the floor, a carpet; - the uncovered or uncarpeted floor of any kind. Since in many
homes this is synonymous with ground there is a cultural explanation for the two senses of the term. But this is ground in the sense of being hard packed. In cases where it is loose  is used, meaning earth but also dust again since much of the earth when it is dry is dust.

5) 

<table>
<thead>
<tr>
<th>طیف</th>
<th>child</th>
</tr>
</thead>
<tbody>
<tr>
<td>گیز</td>
<td>boy</td>
</tr>
<tr>
<td>نفر</td>
<td>son</td>
</tr>
</tbody>
</table>

It would seem that the full potential meaning of these items in Persian must account for the socio-cultural fact that sons are preferred and highly honored in contrast to daughters in the Afghani culture. With this fact in mind it seems culturally fortuitous that the term  can denote boy as well as child. Hence in the rather delicate situation concerning reference to sex of a man's children,  can be employed correctly and in good taste for all situations even where girls are involved and in the case where the sex of the children involved is not known the reference is taken as a complement -- a reference to boys, thus ameliorating what could be an embarrassing situation.

6) 

<table>
<thead>
<tr>
<th>تختن / تختن</th>
<th>throw</th>
</tr>
</thead>
<tbody>
<tr>
<td>پایان / پایان</td>
<td>drop</td>
</tr>
<tr>
<td>اضدادن</td>
<td>fall</td>
</tr>
</tbody>
</table>

The following sentences reveal that in English the Persian speaker will be required to make an active/passive differentiation for drop which in Persian is handled by selecting  for active and  for passive.
Note the following examples:

Active

"He threw the ball."

"He dropped the ball."

Passive

"The ball dropped from his hand."

"The ball fell from the table."

Converting the above uses of throw, drop, and fall to the symbols 'a', 'b', and 'c'; active and passive to 'A' and 'P'; and to 'x' and 'y' respectively we have the following diagrammatic representation.

The significance for teaching revealed by the diagram is that 'a' and 'b' above the broken line are non-substitutable (-s) whereas 'b' and 'c' are substitutable (s) demanding that the learner discriminate consistently for 'a', 'b' usage but less so for 'b', 'c' usage while not discriminating at all for the item 'b' which in Persian is clearly separate. Thus the issue involves grammar as well.
Note the following uses of 

- long mountain: پلار
- tall tree: درخت بلندر
- long rope: صرائی بلندر
- loud noise: بلندر

The use of بلندر for rope indicates a difference at this point from English where rope is thought of as being long. But not covered by بلندر in Persian. Another case of difference in categorization to be taught the learner.

While these items are easy enough to teach if one uses realia there is a field in Persian represented by the two terms پلر and صنرودن which is interesting from the point of view of English in that briefcase comes together with box and chest.

6.7 Examples and comment on differences at the cultural level of meaning, (P l - E l).

The above designation (P l - E l) indicates that items in this category are translation equivalents in all instances but are culturally differentiated. In other words the potential meaning according to the diagram below of these
Items cannot be considered identical between English and Persian since potential meaning has cultural meaning as its other component.

In the case of 1-1 translation equivalents the assumption is made that instantial usage has nothing to offer in variation for the potential and that the 1-1 relationship is identical with the potential meaning except as it is influenced by cultural meaning. In the examples that follow this influence will be seen as making a clearcut differentiation between the Persian and English items. Potential meaning is an open ended concept hence the broken line. Instantial meaning as indicated earlier refers to specific instances of the use of an item and is also open ended. Here the relationship is reciprocal; instantial feeding potential and potential adding to new and different uses of instantial. Cultural meaning is likewise reciprocal with potential and is drawn from the interlocking networks of social institutions hence the interlocking boxes.

Comments made on the cultural meaning of items will be confined to relevant features and participants. This is in line with earlier thought on this subject by Firth and Ellis mentioned above. Of necessity the following

25Ellis, 1964, pp. 4-5.
statements are made at the potential level of meaning having been built up over eight years observation of instanital situational features and participants for these items within the Afghan culture.

1. - airport. On the surface these items may not suggest any differences whatsoever. As to participants in an airport situation the following could be named: passengers (arriving and departing), their relatives and friends, airport officials, pilots, stewards and stewardesses, mechanics, ground and air control personnel, stevedores, etc. Although cultural differences to a greater or less degree could be found in all of these we will only speak briefly of the passengers. As mentioned one can only speak in particular of what seems common to the largest number in general. Dress: men in loose white pantaloons with long over-shirts, a western suit coat and a karakul hat or turban; women in long dark blue pleated veil with no portion of her anatomy or clothing showing; children in similar clothing if a boy and often with mascaraed eyes, if a girl in colored pantaloons with over-dress. Luggage: a prayer rug folded in on the contents and bound with a rope, or a bundle tied in a many purposed cloth (ضیرالحجاب), or unpainted wooden box or tin box (صنوع) brightly painted with flowers and scenes bearing western or eastern design padlocks. Greeting and leave-taking: men embracing ritualistically, women standing silently or sitting to one side.

Although much more could be said about the airport situation and participants in it all relevant to the cultural meaning of بانر in Persian, enough has been said to indicate the nature of the differences. Indeed a full scale

26 In all fairness to the progress being made in the emancipation of Afghan women it should be said that an airport would probably have an equal number without the veil and in western dress, here again with its cultural differences as to what type of clothing is worn when and where.
sociocultural description of this segment of Afghan life would be most revealing on several counts, e.g. social structure of family, role of men, women, and children, language patterns, etc.

2) — bicycle. For this example and several subsequent only a résumé of differences will be given. All imported from India, Japan, or Western Europe. Ridden by men and boys of all ages. Often decorated with fresh seasonal flowers. Kept in one’s office or left under guard in the corridor of a public building, at home kept in the hall or other sheltered place. Regarded as a valued possession and used for transportation for work and pleasure.

3) — night. A particular day begins at sunset and ends the following sunset; therefore, the evening (or part of the night between sunset and midnight) is considered a part of the following day from the Western point of view. For example, Thursday evening is called and not . This difference may cause the Afghan to arrive 24 hours early to an evening appointment.

4) — baker, — bread. A man (not a woman) in the neighborhood (bakery and shop) wearing brown native clothing with a black leather apron sitting on top of his oven which is counter high. His work includes (unless he has a helper, young boy) mixing the whole wheat flour, weighing the dough into a standard weight for each (loaf, piece of bread quarter of an inch thick 10 inches wide and 18 inches long), beating the oven with charcoal, pulling the dough into long thin patties, slapping these against the mud walls of the oven pit, retrieving the when it is done by means of a long iron fork and placing it on a cloth- covered counter. The last act is to sprinkle a little water on the crust of the bread.
5) َبathroom. The features of a bathroom situation would include a copper cylindrical tank on a small cylindrical stove. The tank has a tap near the bottom from which to draw the water when it is warm. The tank may or may not be part of a water system in the house and there may or may not be part of a water system in the house and their may or may not be a wash basin with connecting pipes. The basic equipment is the stove and tank for hot water and a drain in the floor. The method of bathing is quite different from the use of a tub which is not felt sanitary reflecting an attitude toward hygiene which has had embarrassing situations for Afghans who have insisted on bathing in their usual manner in a western bathroom without a drain in the floor. Toilets are usually not a part of the َبathroom but are outside in an alley and referred to as َبathroom.

6) َب - bed, ُبَرو (rope) bed. The first is the average bed of thin tick and blankets on the floor which is rolled up during the day to save space in the same room where daily tasks are carried on, e.g. eating, entertaining, etc. The second is a proper bed as its name signifies (four feet) and is strung with banana-leaf rope. It is on this that the َب is put and usually rolled up when not in use. Thus the cultural meaning of bedroom as well as bed are different in Persian. This obviously brings up the whole use made of َب - house in the Afghan cultural context. As an illustration of this one house may have several َب in it while still being called َب. Each َب in the house may be occupied by a separate but related family, e.g. the parents with their married sons. Another striking difference is shown by the next item which stretches the concept 'house' to include other buildings.
7) - kitchen. This room for the preparation of food has no chairs, no tables, and possibly no windows, is an outbuilding and contains only a mud and mudbrick stove (can we use the word?) on the floor of about 10 inches in height with several fireboxes. (pots) of circular shape with rounded bottoms and smaller mouths made of copper, stone, or clay are used. There is usually no piped water and usually no drainage. Food is prepared and brought on trays to the house where the family in its all purpose eat sitting around the food on the carpet. Connected with the whole concept of house and its uses is the question of washing before meals. is not used for this. The family sits ready for the meal while a ewer and basin with soap and towel are brought around to each person then the meal is served. The meal is closed with the Bismilah, a short prayer with uplifted face and hands and a downward stroke of the beard at the end.

8) - blackboard. Several boards fastened together and painted black usually nailed to the wall in the front of the classroom. One to a room and approximately 3 x 4 feet in size greatly limiting their use for school-room activity.

9) - class, - classroom. - a group of students of one sex from 30 to 50 in number, of at least two language backgrounds (Persian and Pashtu) and usually more, of a wide range of home (socio-economic) backgrounds (the entire range since there are no special schools for the affluent or leadership class), of considerable variation in appearance due to racial background and economic status (clothing tends to be western, suitcoat, trousers, and shirt without tie), and with the usual intelligence and interest of school children anywhere. They are often given the caption
(full of enthusiastic interest and impertinent trickery).

- A room in a school building for teaching, whitewashed walls, floors varying from earth to brick to cement tiles, windows with or without glass, desks for two with a bench in three or four rows, a chair and desk on a raised platform for the teacher.

10) **كتاب** - book. Apart from the fact that the print is in Arabic script a major difference lies in the fact that the direction of writing is from right to left and the cover opens from the left to the right with the binding on the right as one faces the front of the closed book. Books are highly thought of, often seen wrapped in a ** tela** (cloth), especially the Koran which is usually placed on a high shelf in the home. **ورقة** - paper. Paper being the material on which books are printed, especially the book of books, the Koran, is not to be used for unseemly purposes, e.g. paper handkerchiefs, napkins, etc. One may be reproved for using a kleenex to blow one's nose. 27

Although the corpus contained many more interesting examples of difference in cultural meaning the above examples have clearly indicated the extent to which a consideration of these differences involves one in the content of culture, how much cultural material (values, institutions, etc.) is carried by any language. Looking back over our examples it should be pointed out that **مطار** - Airport while having a 1-1 relationship in translation and yet different cultural meaning can also be differentiated at the lexical level via a study of its collocates, e.g. airport/prayer rug, pantaloons, turban, etc.

This same difference at the lexical level could be shown for all examples above.

27 The above remarks pertaining to home and school are based on observation from many parts of Afghanistan, the Kabul area, the Kandahar area, Herat, Mazar-i-Sharif, Kunduz, Charicoar, etc. rural as well as urban.
It seems valid to conclude that at the cultural level of meaning items of the most everyday sort carry with them cultural meaning which can cause considerable interference in reception and production of the $L_2$. This fact alone would seem to be reason enough to teach $L_2$ in terms of $L_2$ culture if we are to adequately teach for comprehension and production with native speakers of $L_2$ and in its cultural setting. This author takes the view that as language is part of culture (one of its institutions) so culture is part of language. Culture is carried by language in such a manner that the linguistic symbols become forces in themselves. They rise above being just a neutral code.

Thus the teaching of English in an Afghan cultural setting with an Afghan cultural reference is not teaching English but teaching an alternate set of symbols for the $L_1$, in which case we might say that English has been given a new cultural meaning.

6.8 Comment on linguistic-cultural interference and second language teaching.

The emphasis in second language teaching in line with and as a result of linguistic theory and analysis has been squarely centered on structure at the phonological and grammatical levels. Much less has been done to balance out the picture by extending the theory and analysis of language to a structural presentation of meaning. Obviously in the language teaching situation one of the paramount goals is the use of the language in meaningful communication with other users of the language. This, of course, means that one has to acquire the phonology and grammar but it also means acquiring meaning, instancial, potential, and cultural, a fact often taken for granted.

One of the most notorious examples of this fact being ignored is the
substitution drill, a pattern practice where grammar and phonology are focussed on to the exclusion of meaning as it is conveyed via actual situations appropriate for the linguistic items and structures involved. If meaning is tied to situation via context, then relevant features and participants must be taken account of and provided or simulated. Otherwise there will be either no meaning to the sentences in the drill or we will be requiring the student to take mental note of varied and diffuse situational features from sentence to sentence in the drill frame, providing the student's mind is nimble enough to perform this feat.

The argument here is not that we should replace pattern practice of phonology and grammar but that we should add another ingredient without which a very abnormal state of affairs as mentioned above occurs, and that is the ingredient of situation with its concomitant aspect of instantial meaning and in turn its relation to potential and cultural meaning. Random use of situation cannot be seen as of great value but a consistent integration of systematic presentation of lexical items in a culturally relevant situation designed to build potential and cultural meaning via instantial has great promise. It is true that these aspects of learning of a language have been seen but attempts to implement them have been based more on intuition than on empirical observation of semantic domains, related or unrelatedness, etc. as indicated by the analysis in 6.

It seems reasonable that second language teaching materials should take cognisance of the fact that unwittingly much of present teaching materials foster the notion in students which they are only too often already in possession of

28 This point of view should apply to all presentation of language material if possible.
that an item translates for another in one instance and therefore will for all others, i.e. it has the same potential meaning, or in other words that potential and cultural meaning are implied in instantial meaning equivalence. Another distortion by implication is the teaching of the second language in terms of the culture of the first language. As has been pointed out this gives the erroneous idea that one has learned the second language as it is used by native speakers in their own culture. The only merit in this approach, if there is any, is in that it forms a bridgehead, albeit, full of potential interference, for those learners who will go on to swim in the cultural stream of the second language. Obviously the question of how much alien culture and ideology and linguistico-cultural stance or point of view are to be allowed to pass via the second language to the student cannot be answered here. Unfortunately they are left to be answered by those whose political position may overshadow their social and cultural inclinations.

To make specific reference to the teaching of English in Afghanistan one must mention the fact that the materials in use were written from the $L_2$ - Culture$_1$ combination which I have seriously questioned in this thesis. At some point in the teaching of any second language with as widely separated cultures as that of Afghanistan and America there comes the time when the question must be raised and answered as to when English will be taught in its own linguistico-cultural medium. If a second language is to be considered a Trojan horse full of potentially disruptive ideologies to the student (which has not proven to be the case at the level of everyday lexical items within the interest range of beginning students at least) then there is political and social justification for treating it as a code which can take on the meaning of any social milieu necessary.
This point of view cannot be seriously considered in light of the cultural load that most lexical items carry and the linguistically differentiated relationships and points of view carried by items closer to the grammatical end of the oline.

Whenever the plunge into the second language culture is made, either from the first day or at the end of the third or sixth year or whenever, then must be faced these questions: What are the defining characteristics of the culture and where are they to be found in print? It is obvious that a native of any linguistico-cultural background can serve as informant for either the language or the culture but he may never have externalized any of the defining features of this culture or language and only prove able to elucidate minor and colorful points. Sociologists and social anthropologists have made many technical studies of the American culture but these are technical and can at best only serve as background material. Short of living in a culture where the L₂ is spoken one can participate vicariously via what that culture puts into print in the L₂ about themselves in literature. Here literature is taken to include newspaper editorials, short stories, current novels, etc. In light of the research of social anthropologists, social historians, sociologists, and sociolinguists dealing with such facets of culture as national character, personality structure, patterns of culture, cultural ethos, etc. a series of check lists should be devised for the particular second language culture designed to turn up the above mentioned aspects of culture as found in literature. Thus we would be able to use these to compile reading material which would, for example, yield information on parent child relationships, or socio-economic aspects of the adolescent, etc. A suggestion for such a cultural check-list is included in the appendix although under close inspection it will be seen to attempt too much in one listing and as suggested needs to be broken down into smaller units. See Appendix C.
Obviously the above suggestion is aimed for the student who has come to the point of reading in the L₂ with ease. What is to be done for the student before he reaches this stage of learning? It would seem entirely feasible to use the cultural checklists in reverse as a guide to writing original material or adapting material which fulfils the cultural goals one has in mind.

As a concluding thought for this work and a guide to future research in this general area the following remarks by J. R. Firth are put forward:

"The disciplines and techniques of linguistics are directed to assist us in making statements of meaning. Indeed, the main concern of descriptive linguistics is to make statements of meaning.

"Every scientific worker must mark out his field in accordance with the resources of his disciplines and techniques and develop them in the handling of his chosen material. The linguist studies the speaking person in the social process."

"We must apprehend language events in their contexts as shaped by the creative acts of speaking persons."²⁹

APPENDIX A

Note on interference at the level of visual material, i.e. writing and other symbolisations such as pictures.

1. Writing.

The following is a brief description of the conventions of writing Arabic script employed for the writing of Persian or Pashtu as well as the other written languages in Afghanistan.

Writing is done from right to left and from top to bottom of the page. This means for all printed matter such as books, etc. when facing the cover of the book, the spine will be on the right and the pages will turn from the left to the right hand side. For the purposes of writing most children are taught what is called the /Hikasta/ script. Only three vowel phonemes are indicated in writing while all of the consonants are represented. This does not mean that there is a one to one correspondence between phoneme and alphabet. In some cases there is a letter not always sounded, e.g. ج, ژ, and others (due to Arabic loan words retaining Arabic spellings) have several graphic representations, e.g. ت/ /æ/ ت. Thus while Persian spelling is not phonemic in the sense of a one to one correspondence it is still not parallel to English in this respect and will be a possible area of interference.

Most of the letters are connected to preceding and following letters in the word although there are some letters which do not connect with a following letter, e.g. ی/ . There are no capital letters and each letter of the alphabet is considered to have four shapes, independent, initial, medial, and final. Some letters have identical shapes or basic forms and are distinguished by the arrangement of one, two or three dots above, below or inside the basic form. Thus the manner of writing is cursive due to the connecting forms but with conventions of linkage either between two word-items or on occasion part of a word
may connect with a following word. Thus such common words as 'this' ین , 'that' یک , 'one' یک , can be linked to the following word (although they would not join words beginning with a letter of the group ... ۰۰۰ , etc.).

Punctuation in writing may or may not exist. If it is used it follows generally the lines of usage known in English for the following: [.] period; [?] question mark (which may be replaced by a period if the question begins with a question word such as چهل); [!] exclamation point; [:] colon; [:] semi-colon; [;] comma.

It will be noted that these have been adapted for the right to left sequence in writing and changed in cases where there might be confusion with certain forms of existing letters.¹

While writing is taught in relation to the concept of line this is not an overriding consideration as it is in English. In /Nikasta/ یک the student is taught to begin the writing of each word higher than where it will end, to slope down, thus یک. The tendency, therefore, in writing Persian is to continue this general slope for the entire line. In writing a good hand in Arabic script the student is taught to see the whole page as an artistic or well balanced presentation. He is therefore entitled to fill gaps by writing a word or part of a word above another especially at the end of the line and to have a number of well spaced long strokes to give a pleasing effect. These esthetic aspects of writing are culturally conditioned and will not be further commented upon apart from noting that the writer of Persian is given a great deal of freedom to exercise his artistic talents in writing a word, a line, or a page.

These characteristics of Persian writing can be contrasted with the writing conventions of English and differences ascertained although there has been no research in this area to determine which factors are to be seen as having more interference potential than others. Those who have had experience in

teaching English cursive to Afghan students have noticed the tendency to slant their writing from left to right (the converse of that in writing Persian) in other words downwards in the direction of writing, to fail to develop a fully cursive hand (this may be due to the fact that Persian is not written, strictly speaking, in a fully cursive hand due to the letters which are non-connectors), to disregard line, i.e. either write too far above it or through it, and to fail to comprehend the rules of capitalization and punctuation even for the simplest occurrences such as the capitalization of the first word in a sentence and the use of a period at the end.

It would seem manifest to this writer that the reason for this is mainly due to the material and method in use in the teaching of English in that it has not adequately recognized writing as a teaching problem of high-strength interference. The assumption has been too often made that the Afghan student sees and recognizes all the meaningful conventions of English writing whereas he neither sees nor understands them and is left to do his best under the negative transference of Persian writing habits. S. Pit Corder in his forthcoming _The Visual Element in Language Teaching_ makes this comment about visual material in general: "In short, we must be quite sure in language teaching that our pupils understand what they see of the visual element of the situational context; that is, they must not only see what the teacher intends them to see, but also recognize it for what it is and understand its relationship with the other features. They must do this so quickly and so completely that the language they are being taught is immediately filled with meaning." Actual examples are given below

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2 S. Pit Corder, 1965, _The Visual Element in Language Teaching_ (To be published by Longmans in 1966), typescript, p. 36.
of the writing of well-educated individuals (all university graduates and some doing advanced graduate study). It could be said that most of these hands would not pass as 'educated' hands and thus an unfair judgment of these persons may be made by native speakers of English who would classify these hands as something less than university graduates. Therefore for social reasons, if no other, one of the goals of teaching English writing should be an 'educated' hand and this could be culturally defined for either American or British education.

It would seem (although this too bears further study) that in reading English the Afghan student enters a set of conventions with fewer defining characteristics. But here again without careful analysis of the conventions of English reading and writing one may assume too much. Studies in which the various parts of words in English were unintelligible but with the word still meaningful to a native speaker might reveal what the cues are that tip the balance between unintelligible and intelligible graphic substance, e.g. unintelligible, unintelligible, unintelligible, unintelligible, etc. Probably all but the last would convey to a reader of English the word 'unintelligible' and the last one can only be confused with 'unintelligence' since 'unintelligent' could be considered to be one letter too short. In hand writing again we look for those defining characteristics which tip the balance.

A word should be said about the professional letter writer (0 0 0 ') in Afghan culture employed by the illiterate or ill-educated who uses a stated form of greetings and salutations before coming to the business of the letter and ends with other appropriate forms to the culture. This attitude toward writing, in a stylised and stereotyped form, shows up very readily in the student's attempt to write in English. He would seem culturally bound to a pattern from which he as a person cannot escape. For the student in writing
compositions in Persian is taught to adhere to a style and choice of subject well defined by traditional literature. The use of feminine names, especially of one's own family, is very much proscribed both in speech and writing of a public nature. This to some extent limits the patterns of the L2 unless they are set in the culture of the L2.

While the written word is greatly respected and revered in Afghan culture due to the large number of population who do not function as literates (lack of reading material, lack of adequate schooling, etc.) the cultural patterns of communication are still largely verbal, e.g. social, educative, entertainment (via radio), with the exception of government, a highly bureaucratic system where everything is in writing.

All of these factors and others must be considered in studying the interference to be seen in written English by Afghan students.

2. Pictures.

The use of pictures in the classroom has unquestioned advantage in teaching but the reading of pictures is dependent on several factors, i.e. maturity, experience, and socio-cultural background. All but the last are recognized in western educational practices. The assumption is rightly made for the last, socio-cultural background, that there is a very high common denominator or common cultural experience for western culture on which to rely in getting what the picture says. This is not true when there is a cultural gap of the proportions as between general western culture and provincial eastern culture such as the majority of Afghan students possess. Corder makes this point well when he says, "The ability to pick out the relevant features of the situation [in a picture] and discern the relationships between them is dependent upon several factors. It depends upon the maturity and experience of the learner."
He cannot be expected to spot features which are unknown to him, or which lie outside the range of his experience. He may be too young to understand, or he may be too unsophisticated. On the other hand, his failure to spot the relevance of the feature may be due to his social or cultural background. This would apply equally well to stylized drawing, certain conventions used in pictures such as **?!?!** for questioning or non-comprehension; !!!! for surprise; facial expressions, hand and body movements, etc.

Persian art has a traditional manifestation in its two dimensional aspect of height and width but not depth. In other words the third dimension is carried by objects being placed above others rather than beside them but drawn smaller. This is seen in paintings, book illustrations, rug designs, etc. It may have little lasting effect on the student or none but dimension does play a part in reading of pictures by provincial students. One may wish to call it lack of sophistication. This also bears investigation from the cultural and psychological point of view.

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3 Pit Corder, 1965, p. 38.
The above example tendency to slope downward from the point of origin and to break words or even use separate letters within a word.

In the above there is a mixture of lower and upper case forms with apparent lack of control for smooth execution of the word as a unit.

The above could also be said to lack smoothness of execution or control of shape and size.

To the left another example of slanting in a somewhat broken cursive. The Persian script is by the same hand.
APPENDIX B - Example for the possible potential for the item play.
APPENDIX C

This checklist is included as a suggestion of what might be done on a larger scale, i.e. taking themes or structural units of American culture and devising a checklist for each of greater detail thus making the coverage more comprehensive and of greater use. The following checklist borders on being superficial in scope and detail. The value of a well constructed checklist would be to allow one’s reading material to give a balanced presentation of the socio-cultural aspects of the language being learned.

The checklist is employed to check material being presented to students for cultural content. This information can then be used with other material for teaching in order that one might complement the first or reinforce some aspects previously presented. This can be done for any type of material but is probably best suited to literature in the strictest sense of the word. In a wider sense this sort of information could be very useful in a contrastive sense provided a similar checklist for the $L_1$ culture were made for, it would allow enlightened presentation of new cultural patterns carried in the $L_2$.

A CHECKLIST FOR AMERICAN CULTURE

I. General patterns in American culture

A. Developing maximum potentialities of the individual

1. Acquiring pecuniary power
2. Climbing the ladder of success
3. Seeking adventure
4. Taking the initiative
5. Competing with others
6. Protecting individual rights through government

B. Equalizing opportunities for all

1. Conforming with the group
2. Seeking social equality
3. Forcing economic equality
4. Using political equality
5. Practising philanthropy
6. Cooperating with the group
II. Man and nature

A. Food

1. Farming
2. Processing
3. Marketing
4. Eating
   a. How many meals
   b. At what times
   c. What is eaten
   d. What is drunk
   e. Seating at meals
   f. Practices with servants
   g. Practices without servants
   h. Spoken formulas at meals
   i. Use of eating utensils

B. Shelter

1. Dwellings
   a. Uses of various parts
   b. Furnishings for each
   c. Plumbing and heating
   d. Conventions of cleanliness
2. Non-residential buildings

C. Clothing

1. Men's clothing
2. Women's clothing
3. Urban and rural clothing
4. Formal and informal clothing

D. Transportation

1. Vehicles for transportation
   a. Cars and taxis
   b. Subways, streetcars, buses
   c. Railroads
   d. Airplanes
   e. Ships
2. Volume of traffic
3. Frequency of travel

E. Technology

1. Use of mechanical inventions
2. Use of scientific processes

F. Man and animals

1. Useful animals
2. Pets
3. Treatment of animals
II. G. Climate

1. Avoiding extremes
2. Preserving food

III. Man and man

A. Social structure

1. Family groups
   a. Family organization
      i. Size and relationships
      ii. Marriage, divorce, remarriage
      iii. Line of descent
   b. Parents
      i. Husband-wife relations
      ii. Extra-marital relations
      iii. Parent-child relations
   c. Children
      i. Relations to adult world
      ii. Formulas of address
      iii. Relation to other children
      iv. Forms and spirit of play
      v. Attention given to physical skills
      vi. School experiences
      vii. Stories for children
      viii. Songs for children
   d. Adolescents
      i. Time of stress and revolt
   e. Sex differences and relations
      i. Differences in childhood training
      ii. Adolescent social relations
      iii. Conventions of modesty
      iv. Areas of supervision and freedom
      v. Courtship and marriage
      vi. Areas of dominance of each sex
   f. The aged
      i. Care for the aged in families
      ii. The aged in institutions
      iii. The aged who live alone

2. Social groups
   a. Class levels
      i. Owners
      ii. Managers
      iii. Laborers
      iv. Professional groups
      v. Groups outside the social structure
      vi. Consciousness of class levels
      vii. Language of various class levels
   b. Race and nationality groups
      i. Social position of cultural groups
      ii. Intercultural relations
III. A. 2. c. Religion
   i. Protestants, Catholics, Jews
   ii. Church attendance
   iii. Baptism, marriage, burial
   iv. Holidays and festivals
   v. Intergroup relations
   vi. Superstition

d. Societies and associations
   i. Business men's clubs
   ii. Fraternal orders
   iii. Veterans' groups
   iv. Women's clubs
   v. Informal associations

3. Community units
   a. Scattered farm communities
   b. Small towns
   c. Suburban towns
   d. Cities
   e. Metropolitan centers

4. Leisure time activities
   a. Motor activities
      i. Enjoying the out-of-doors
      ii. Participating in sports
      iii. Practicing handicrafts and skills
      iv. Dancing and playing social games
   b. Sensory activities
      i. Watching sports events
      ii. Attending plays and movies
      iii. Attending opera and concerts
      iv. Listening to the radio
   c. Intellectual activities
      i. Reading
      ii. Doing club work
      iii. Playing cards

5. Language formulas and gestures
   a. Clerks in stores and customers
   b. Family and servants
   c. Casual meeting
   d. Informal parties
   e. Formal receptions
   f. Greetings and leave takings
   g. Shaking hands
      i. How frequently
      ii. Who extends hand first
   h. Introductions
   i. Differences of ceremoniousness in different social groups
III. B. Economic structure

1. Schemes of ownership
   a. Means of acquisition
   b. Personal, not family, holdings

2. Economic exchange
   a. Position of trade
   b. Position of business leaders

3. Employment
   a. Types of work
      i. Work for adolescents
   b. Preparation for work
   c. Areas of choice and compulsion
   d. Amount of pay and security
      i. Workers' attitude toward pay
      ii. Their attitude toward advancement

4. Labor organizations
   a. Attitudes of others toward labor

5. Social service work

C. Political structure

1. Democracy
   a. Responsibility for government
      i. Elections
   b. Freedom and personal security
   c. Police

2. Political parties
   a. Position of liberals and radicals
   b. Political morals

3. International affairs
   a. Relations with world groups
   b. War

D. Educational system

1. Primary schools
   a. Teachers (sex, age, training)
   b. Boys and girls study together
   c. Subjects studied

2. Secondary schools
   a. Teachers
   b. Coeducation
   c. Subjects studied
   d. Social life at school

3. Higher education
   a. College studies
   b. Campus life

4. Newspapers and magazines

5. Radio

6. Adult education
IV. Values in the culture

A. Social values
   1. Sanctity of the individual
   2. Leveling and cooperation

B. Emotional tone
   1. Attitude toward showing emotion
   2. Times of showing emotion

C. Religious tone
   1. Importance in daily life

D. Ethical values
   1. Ideas of right and wrong
   2. Attitude toward obeying laws
   3. Attitude toward war, homicide, suicide

E. Areas of taboo
   1. Areas of silence
   2. Attitude toward profanity

F. Esthetic values
   1. Public taste in art
   2. Attitude toward artists

APPENDIX D

In accordance with Regulation 15 of "Regulations for the degree of Doctor of Philosophy (Ph.D.)" Programme of Special Study and Research, p. 708, the following facts of publication resulting from research on the thesis are given: "An Ethnolinguistic Bibliography with Supporting Material in Linguistics and Anthropology," Anthropological Linguistics 6:2.10-32.

Since the bibliography deals with the general scope of the thesis and is the first to be published in the field of sociolinguistics (in the last year socio-has superseded ethnolinguistics as a general term), it is being included as part of the thesis although in an expanded form including over 300 additional items. The original introductory statement, however, is being included in zeroxed form.

A version of the bibliography arranged according to subject matter is being considered for publication by Mouton and Co.
AN ETHNOLINGUISTIC BIBLIOGRAPHY
WITH SUPPORTING MATERIAL IN LINGUISTICS AND ANTHROPOLOGY

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In this bibliography the general assumption is made that a study focusing on ethnolinguistics will find linguistic and anthropological works meaningful and helpful. A word here needs to be said about the term ethnolinguistics, what it means and why it was chosen. The term ethnolinguistics signifies the marriage between the two disciplines of anthropology or its subdivision ethnology, and linguistics. As stated by Olmsted (1950) ethnolinguistics has been seen from several points of view: (1) the use made in linguistics of ethnological findings, (2) the use in ethnology of linguistic findings, (3) the exchange of methodologies between the two disciplines, (4) studies where data from both disciplines are clearly seen as contributing to a common goal, and (5) an integrated approach to the problems of social science made possible by combining the forces of ethnology and linguistics. Of these five, the most significant for the future of either discipline is the last, which gives promise of producing a new approach. The term ethnolinguistics covers all five aspects and seems to have had no serious competition until recently when at The Ninth Congress of Linguists several papers were given in this general area of study using the term 'sociolinguistics'. In the Hymes (1963) article, Notes toward a history of linguistic anthropology, a somewhat longer history for the term 'sociolinguistics' is given. Although this new term has obvious improvements over the present one used (socio is broader in scope than ethno which is restricted quite closely to the specialization of ethnology within anthropology), it was felt that ethnolinguistics should serve for this bibliography since the great preponderance of articles use it.

Three main categorizations were made due to the sheer size of the bibliography. The author felt that an attempt to present only ethnolinguistic studies would not make a very significant contribution to the field for two reasons, (1) it is hard in some cases to know just where to draw the line as to what is ethnolinguistic and what is not and (2) in the study of two disciplines one does not learn much that is new unless those other tangential areas of the two are allowed to exert their influence, also. In line with this many items of the bibliography in general linguistics and general anthropology were allowed because of their contribution on the theoretical level. It is, therefore, felt that a bibliography of this nature can make a significant contribution to the end that two disciplines and their carefully chosen associated fields when skillfully blended yield new and fresh ideas for the solution of linguistic and non-
linguistic problems of long standing.

The following is a subject-matter outline of the bibliography indicating its scope.


Anthropology: Cultural and social anthropology: general, kinship, values, community, method, area concept. Ethnology: patterns (Boas, Benedict, Mead, Sapir), universals (Murdock), cross-cultural comparisons, useful theory from anthropology (area concept, assemblage, trait, configuration, Gestaltian theory, diffusion, patterning, universals, flow-flux-change, cross-cultural comparisons), national character and personality.


In order to make the bibliography of easy reference one alphabetical listing has been made including the three above mentioned categories; therefore, items pertaining to Linguistics will be marked (L), items pertaining to Anthropology will be marked (A), and items pertaining to Ethnolinguistics will be left unmarked.

The style of reference and abbreviations used are generally those used in AL, with the addition of Roman numerals only for Series numbers (e.g., II.12.44-9 Series II, Volume 12, pp. 44-49 inclusive).


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