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NOTE

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DESCRIPTION

FINAL REPORT COVERS THE FOLLOWING

ACTIVITIES OF THE CENTER FOR RESEARCH ON LANGUAGE AND

BEHAVIOR AT THE UNIVERSITY OF MICHIGAN. AFTER DURING THE FIRST

YEAR OF ITS OPERATION WHICH CLOSED ON JANUARY 31, 1971. A

PRELIMINARY SECTION LISTES COMPLETED PROJECTS AND THE AVAILABILITY

OF INDIVIDUAL REPORTS. INCLUDED IN THIS DOCUMENT ARE THE FOLLOWING

REPORTS: (1) "INSTRUCTIONAL MATERIAL FOR INTELLIGENT ROBOTIC

BEHAVIOR," BY E. A. CULLIN AND J. E. SCHRADE; (2) "THE ROLE OF PERSONALITY

VARIABLES IN SECOND LANGUAGE LEARNING," BY R. S. GUNDE; (3)

"COMPUTERIZED STUDY OF SYNTAX OF NON-NATIVE LANGUAGE," BY F.


BEHAVIOR: A SURVEY OF RESEARCH," BY L. GREEN. THE LAST REPORT IS

Followed by a listing of OTHER PROJECTS REPORTS, SELECTED STUDIES,

COMPLETED DOCTORAL DISSERTATIONS, AND PUBLICATIONS. See AI 002 793.

002 793 FOR RELATED DOCUMENTS. (APA)
FINAL REPORT

Contract No. OEC-0-9-097740-3743(014)

STUDIES IN LANGUAGE AND LANGUAGE BEHAVIOR, PHASE VI

Ronald Wardhaugh
Project Director

February 1, 1970 to January 31, 1971

Center for Research on Language and Language Behavior
The University of Michigan
220 E. Huron
Ann Arbor, Michigan 48108

Office of Education
Institute of International Studies
U.S. Department of Health, Education, and Welfare
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This report covers the various activities of The Center for Research on Language and Language Behavior during the final year of its operation before its closing on January 31, 1971. During that year a number of projects were brought to a successful conclusion and others were terminated at appropriate stages. The following listing indicates which projects were completed and where individual reports may be obtained:

I. Reports on completed activities available through the ERIC system:

A. July, 1970

Underachievement in College Foreign-Language Instruction
L. Feagans, E. Roeber, L. S. Barritt, and R. D. Tarte

Auditory vs. Articulatory Training in Exotic Sounds
J. C. Catford and David B. Pisoni

Psycholinguistic Evidence for a Hierarchy of Syllable Structure
Sanford A. Schane and David Pisoni

Experimental Design on the Psychological Reality of a Natural Rule in Phonology
Sanford A. Schane and Bernard H. Tranel

B. January, 1971

Development of Computer-Assisted Observational Systems for Teacher Training
Guy C. Capelle, Robert J. Jarvella, and Eleanor Revelle

The Development of a Cantonese Course for Students Acquainted with Mandarin
James E. Dew

Knowledge of Results and Other Possible Reinforcers in Self-Instructional Systems
George L. Geis and Reuben Chapman

Specifications for the Design of a Test of Knowledge of Foreign Cultural Patterns
Frank Kocn

Interaction between Prose Styles and Linguistic Developments in Arabic after World War II
Raji M. Ramuny

Psychological Studies in bilingual Performances and Cross-Linguistic Differences
Klaus F. Riegel

II. Report on a completed activity published in a journal:

The effect of delayed comparison in the language laboratory on phoneme discrimination and pronunciation accuracy

III. Reports of activities terminated at appropriate stages included in the following pages:

Instructional Material for Intermediate Modern Hebrew
Edna A. Coffin and Gene M. Schramm

The Role of Personality Variables in Second Language Learning
Alexander Z. Guiora

Computerized Study of Syntax of Modern Literary Arabic
Ernest McCarus and Raji Rammuny

IV. Report on activities of the Center for Research on Language and Language Behavior, 1965-1970, included in the following pages:

The Center for Research on Language and Language Behavior: A Survey of Research
Beth Greene
INSTRUCTIONAL MATERIAL FOR INTERMEDIATE MODERN HEBREW

Edna A. Coffin and Gene M. Schramm

Center for Research on Language and Language Behavior
The University of Michigan

Reading materials and preparatory exercises were assembled in an Intermediate Hebrew Reader. These materials were drawn from current Israeli non-fiction literature and were prepared for the students of Modern Hebrew. The reading materials were organized in 26 reading lessons. Each reading section included two preparatory exercises. Exercise A extracted the core of active vocabulary from the reading selection and presented it with various morphological notations and alternate morphological forms. For each active vocabulary item, a series of illustrative sentences were composed to show the nuances of words and in some cases the various meanings of a single item. Exercise B consisted of a set of sentences paraphrasing the reading selection itself and breaking down the difficult syntactic structures. The untampered reading selection was then included. The reading selection was followed by some content questions designed to, whenever possible, stimulate a directed discussion of subject and other related matters, in the classroom.

Introduction and Background

In the last few years Modern Hebrew has gained an increasingly important place among foreign languages being taught in American universities. There are no adequate materials for teaching Modern Hebrew at the university level. There is a crucial need for instructional materials at both the beginning and intermediate levels. This project has been concerned specifically with the preparation of materials to be used in Intermediate and Advanced Modern Hebrew courses. The purpose of the principal investigators was to prepare a reader that would answer the needs of the student who is past the beginner's stage. This student, who has already been introduced to the basic features of Modern Hebrew, still faces a great deal of difficulty in acquiring a substantial vocabulary and in mastering the more complex syntactic structures of the language.

The textbooks which have been or might be used for teaching Hebrew at the Intermediate Level vary widely in approach and methodology. At present some universities are using the textbook Hebrew: A Basic Course by Joseph A. Reif and Hanna Lewinson, Foreign Service Institute, 1965. The textbook is designed for the foreign service and covers the equivalent of first- and second-year Hebrew. It was specifically designed for the needs of the foreign service and not for use in academic institutions. It is, therefore, mostly concerned with conversational skills and a core of vocabulary that would enable the American in diplomatic service to get along in Israel. (Included are such subjects as visits to the
barber shop, beauty shop, shoe repair service, etc., subjects which have little relevance to academic studies). This book uses the "direct" or "oral" approach to language which is very useful in the early stages of language learning but certainly does not meet the needs of students past the first few weeks of studying the language. Reading and writing skills are neglected. When language is taught at the university level these skills are very important. There is no attempt to introduce vocabulary relevant to the interests of the students.

Other books such as Elef Millim by Aaron Rosen, Achinasaf Publishing House, Israel, and a Textbook of Israeli Hebrew by Halim B. Rosen, published at the University of Chicago, 1962, are not adequate and do not meet the demands stated above. The content of the readings in the above stated books ranges from trivial selections to those that are fairly acceptable. While some of these books contain an applicable core of vocabulary for the newcomer to Israel, they do not meet the requirements of the college student. The principal investigators decided, therefore, to undertake the task of gathering interesting reading materials in a reader alone with adequate exercises to prepare the student for these readings. The investigators assumed that the student using the materials would have completed the elementary phase of learning Modern Hebrew and would be familiar with the writing system, phonology, basic morphological and syntactic structures, as well as a minimum core of vocabulary. The specific objectives of the intermediate phase are: (a) to expand the active vocabulary of the student; (b) to deal with new structural items encountered in the readings; (c) to increase the student's proficiency in reading and composition; and (d) to increase his proficiency in speaking as well.

Procedure

May and June 1970 were spent collecting materials for the reading selections. These readings were selected from a large corpus of contemporary Israeli writings: books, journals, and newspapers. Many sources were used and finally 26 articles were selected for their interest in content and readability. By and large the articles deal with area studies: Near East geography, Jewish history, language and literature, religion, social studies, archaeology, etc. No attempt was made to control vocabulary. Reading selections were arranged loosely in order of difficulty.

During June and July these 26 reading selections were prepared for the preliminary copy of the reader. An experimental format was prepared for the presentation of these reading selections (see Appendix A). For each selection of reading the investigators decided on a core of active vocabulary. The basis for choosing this core of vocabulary was that of relevance and frequency of occurrence. (This selection was not done "scientifically", but rather on the basis of teaching experience and native-speakers' intuition). Two sets of exercises were prepared for each reading selection. These exercises were intended to present the new key vocabulary items. The vocabulary items which were selected...
were listed in the margin with morphological notations and with the principal morphological variations. Illustrative sentences were provided for each of the new vocabulary items. The sentences were constructed in order to indicate the principal nuances of each word.

The second exercise was prepared in order to facilitate the handling of complex syntactic structures within the selection. It serves as a more direct introduction to the article since it contains the actual content of the article in a simplified form. It is essentially a paraphrase of the original, breaking down complex syntactic structures.

Following these two sets of exercises, the reading selection itself is presented. The reading selection is not tampered with and the student is confronted with the same type of material to which an adult Israeli will be exposed. The lesson format contains content questions. These are designed to promote discussion in class and to further use the new vocabulary acquired in the lesson. These content questions can be used orally, or can form the basis for written exercises in class or outside. In August of 1970 tapes were prepared for the lessons included in the preliminary version of the Intermediate Reader. Since Modern Hebrew orthography does not indicate vowels, the problem of vocalization is indeed an enormous one for the student at either the second or third year of his study of Hebrew. The availability of tapes is essential not only for developing correct pronunciation and intonation, but also for correct readings of unvocalized texts. It is through the exposure to tapes of the written materials, as well as through rigorous exercises in grammar, that a student can hope to develop his reading skills and correct speaking ability.

The reading selections have not been selected for the final version of the reader. However, we expect to reduce the number of readings to 20 selections, and to keep approximately 80% of the materials chosen for the preliminary text, and substitute some of the less successful selections. The following selections are the ones contained in the preliminary version of the reader:2

1. Lesson 1: Israel in the Near East (geographical description)
2. Lesson 2: Flora and Fauna of Israel
3. Lesson 3: Climate
4. Lesson 4: Communal Settlements in Israel
5. Lesson 5: Old Jerusalem
6. Lesson 6: The Western Wall
7. Lesson 7: Jerusalem (a description of the mood of the city)
8. Lesson 8: Israel in the World - geopolitical description
9. Lesson 9: "We All Dreamt of Excavating It" - an interview with Prof. Mazur, the archaeologist in charge of the excavations of the southern wall.
11. Lessons 12 - 15: "Dialogue of Warriors" - interview with Israeli soldiers after the war also includes an article on a psychological study made on the basis of these interviews.
12. Lessons 16 - 17: History of the Jewish Communities in the United States (up to the 20th century)

13. Lesson 18: A Research on Yiddish Using a Computer

14. Lesson 19: The Dead Sea Scrolls
   a: Finding the scrolls
   b: Orthography and language of the scrolls

15. Lesson 20: Massada
   Yigael Yadin's first chapter of his famous description of the excavations in Massada, a historical introduction

16. Lessons 21 - 24: The Messianic Movement of Shabtai Zvi

17. Lessons 25 - 26: Kafka
   a: Kafka's works
   b: Biographical sketch

Testing the Preliminary Version of the Reader

From September through December 1970 some of the materials prepared during the summer of 1970 were tested in classes at the University of Michigan. Lessons 1 - 7 were used in the second year Hebrew class. Lessons 10 - 16 were used in the third year Advanced Hebrew class. An intermediate student also used some of the lessons for a self-study program with some amount of success.

The students in the second year class worked through both exercises with the aid of the tapes, and received extensive drill in class. After the completion of these introductory exercises their attention was turned to the original text. On the whole the second year students tended to think that the first exercise in each lesson (the introduction of new vocabulary with illustrative sentences) was too difficult and not terribly valuable to them. They complained that the sentences used to illustrate new vocabulary items themselves contained many unfamiliar words and were, therefore, difficult and did not serve the purpose for which they were intended. They felt that there was little return proportionate to their efforts. However, they did work under the handicap of not having an English translation for this exercise (such a translation was to be included in the final version). There was also a misconception that the sentences were to be mastered rather than gone 'once over lightly', in order to understand the various shades and nuances of the new items of vocabulary. In general, the second year students reacted favorably to the material included in the articles and found the subject matter interesting.

The third year students were exposed to the first exercise at home first and were given an English translation of all the illustrative
sentences. They also availed themselves of the tapes for the correct readings. These students found the exercises useful and stimulating, and commented that the sentences introduced them to a very valuable core of passive vocabulary as well. They did not like the attempt to introduce the lesson through Exercise B alone. The second exercise and the text were presented to them in the same manner as it was presented to the students in the second year. However, they did have additional follow up on vocabulary through various exercises--such as translation and composition based on the core vocabulary of each lesson. A lot of emphasis was put on the content questions, which served as a basis for excellent class discussions, both directly on the content of lessons and less directly on some directed conversations on matters related to the lesson presented. The students achieved an excellent command of new items of vocabulary. At the end of the semester the advanced students expressed a lot of satisfaction with their progress in the areas of reading, writing and vocabulary expansion.

Conclusions

The results of testing the materials gathered for the preliminary copy of the reader in classroom situations indicate that the general direction of the preparation of the reader is indeed the right one. The materials should have interesting content and should be relatively short, and the vocabulary should lend itself to other types of adult reading and conversation. The effectiveness of the format adopted for presenting these lessons varied greatly between the two levels of intermediate and advanced students. The usefulness of Exercise B is still a controversial issue, as it seems to serve the more advanced students better than the ones who had just finished one year of Hebrew. It is clear that it is necessary to meet the different demands of these two levels. Further experimentation in lesson formats is being planned for the coming year. It is possible that one set of preparatory sentences, which will include paraphrases as well as content related sentences, may prove to be actually a better solution than the two sets used in the preliminary text.

Some of the reading selections have proved redundant in vocabulary, and others have proved to be not as interesting as initially thought. However, with classroom experience the judgment of these materials is much sounder. A lot of work remains to be done in adapting the final 20 reading selections, which the investigators hope will be more varied than the ones assembled to date. Grammatical exercises, exercises in composition, and translation based on a core of active vocabulary should also be developed to further supplement the reading selections, and to further aid the student to control the new structures and vocabulary items. It is hoped that through a continuation of this project these goals will be realized.
Lesson 1.
Israel in the Near East

Exercise A

Active vocabulary

<table>
<thead>
<tr>
<th>marbit (f.)</th>
<th>The tourists spent most of their time in Jerusalem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>rou. (m.)</td>
<td>Most of the time the tourists were in Jerusalem.</td>
</tr>
<tr>
<td></td>
<td>The majority of the residents of Paris leave for their vacation in August.</td>
</tr>
<tr>
<td></td>
<td>Most of Paris' residents leave on vacation in August.</td>
</tr>
<tr>
<td>kat (f.)</td>
<td>The Essenes' sect was known for its communal life.</td>
</tr>
<tr>
<td>kitot (pl.)</td>
<td>There are many denominations in the Christian religion.</td>
</tr>
<tr>
<td></td>
<td>The Karaite sect believes only in the Torah's laws.</td>
</tr>
<tr>
<td></td>
<td>In India there are several castes.</td>
</tr>
<tr>
<td>zchut (f.)</td>
<td>Thanks to the grant, the investigator was able to finish his research.</td>
</tr>
<tr>
<td>bizchut li-zchut</td>
<td>One should mention to the credit of the lecturer that he knows his subject well.</td>
</tr>
<tr>
<td></td>
<td>(relevance)</td>
</tr>
<tr>
<td>chashivut (f.)</td>
<td>The importance of the theory was discovered only years later.</td>
</tr>
<tr>
<td>chashivuyot (pl.)</td>
<td>The mayor is a man of importance (a prominent man)</td>
</tr>
<tr>
<td>hariqha' (f.)</td>
<td>A teacher can have a great deal of influence on his students.</td>
</tr>
<tr>
<td>hariqhot (pl.)</td>
<td>The parents lost all influence over their son.</td>
</tr>
<tr>
<td></td>
<td>In the artist's paintings one can recognize the influence of Picasso.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition and Example</td>
</tr>
<tr>
<td>------------</td>
<td>----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>kalkala (f.)</td>
<td>The economic situation in an agricultural state depends on the yield of the harvest.</td>
</tr>
<tr>
<td>kalkalot (pl.)</td>
<td>The economy is based to a great extent on natural resources.</td>
</tr>
<tr>
<td>kalkali (adj.)</td>
<td></td>
</tr>
<tr>
<td>n-g-' +b..</td>
<td>Everybody was full and nobody touched the food.</td>
</tr>
<tr>
<td>(qal.)</td>
<td>It is forbidden to touch the electric wires. The crowded cars (bumper to bumper) almost touched each other.</td>
</tr>
<tr>
<td>gvuł (m.)</td>
<td>Each political state has boundaries.</td>
</tr>
<tr>
<td>gvułot (pl.)</td>
<td>Natural borders are rivers or mountains.</td>
</tr>
<tr>
<td>yachid (m.)</td>
<td>Einstein was a genius - unique in his generation.</td>
</tr>
<tr>
<td>yechida (f.)</td>
<td>The new book by Weisel is one of a kind (special)</td>
</tr>
<tr>
<td>An only child is often spoiled. Only few were given the opportunity to see the guest.</td>
<td></td>
</tr>
<tr>
<td>sh-y-k (hitpa'el)</td>
<td>The workers in the plant (belonged to the labor organization).</td>
</tr>
<tr>
<td>'emuna (f.) (emunat -)</td>
<td>The father believed in the special talent of his son.</td>
</tr>
<tr>
<td>'emunot (pl.)</td>
<td>&quot;A fool believes everything&quot;.</td>
</tr>
<tr>
<td>'emunot (pl.)</td>
<td>The Jewish faith is different in its principle from the Christian faith.</td>
</tr>
<tr>
<td>masoret (f.)</td>
<td>Many people believe in superstititions (superstitious beliefs)</td>
</tr>
<tr>
<td>Masorot (pl.)</td>
<td>The Orthodox (Jews) believe in the coming of the Messiah.</td>
</tr>
<tr>
<td>masoret (f.)</td>
<td>Each nation has a tradition of its own.</td>
</tr>
<tr>
<td>Masorot (pl.)</td>
<td>The Tse'ada ('Walk-a-thon') in Israel has become a tradition.</td>
</tr>
</tbody>
</table>
A traditionalist (tradition-keeper) lives by the religious rules.

It is a tradition to eat unleavened bread on Passover.

The concentration of the inhabitants in Israel is in the cities.

The separation of institutions (powers) in the state was meant to prevent a centralization of power.

The crowd gathered in the square for the event.

In early days men lived in caves.

The Ancient man lived by hunting.

Discrimination against minorities has its origin in prejudices ('early' 'pre' opinions)

Each student gets a discount of five percent in the new store.

The percentage of women in high offices is very low.

The salesman gets a commission from the value of the merchandise which he sells.

The percentage of the participants in the demonstration was nil.

The number of young people constitutes a sizable percentage in the population.

The representatives of various nations (constitute) make up the United Nations Organization.

The students' strikes constitute a serious problem.
Exercise 8

Israel is situated in the Middle East.
The Middle East is also known as the Near East.
Most of the countries in the Middle East are located in Asia.
Not all of the countries in the Middle East are in Asia.
Most of them are in Asia.

The majority of the inhabitants of the Middle East are Muslims.
Most of the inhabitants are Muslims.
The minority of the inhabitants are Christians.
The Christians belong to various denominations.

Israel is a bridge between the countries of the Mediterranean.
Israel has historical importance due to its geographical location.
Israel has a strategic importance in the present.
In the past Israel had a strategic importance also.
Like in the past also in the present Israel has historic and strategic importance.

Many Jewish communities existed in the countries of the Middle East.
The Jewish communities were large.
The communities were very influential
The Jewish communities had an influence on the economic life.
Most of the members of these communities immigrated to Israel.

With the establishment of the country many Jews immigrated to Israel.
Many of the members of these Jewish communities immigrated to Israel.
Israel has boundaries with four political states.
The neighboring states are: Lebanon, Syria, Jordan and Egypt.

Lebanon is located to the north of Israel.
In the northeast Israel touches Syria.
In the east the neighboring state of Jordan is located.
In the southwest is Egypt.
Egypt is the only state in the continent of Africa.
Egypt is the only one (of the Middle East countries) located in Africa.

Most of the inhabitants of the neighboring states are Muslims.
The language of the Muslims in the neighboring states is Arabic.
The Muslims mostly belong to the Sunni Tradition.
The Sunni sect is the largest one in the Islamic world.
The Muslims believe in the Quran.
They also believe in the Islamic Tradition.
The Islamic Tradition is called in Arabic: Al-Wadith.
Among the Muslims are also those who belong to the Shi'i Sect. There are small communities of Shi'is in Lebanon and Syria. The non-Sunni Muslims are in the majority Shi'is. The Sect of the Mutawallis is a Shi'i Sect.

There are large communities of Druzes. The birthplace of the Druze sect is Lebanon.

Christians also reside in the neighboring states. The Christians belong to various denominations. The Christian denominations in the Middle East are very ancient. In Lebanon there is a large percentage of Christians. Most of the Christians in Lebanon are Maronites. The Maronite Sect is very close to the Catholic one.

The large Christian denomination in Egypt is the Coptic Church. In Egypt there is a community of Christian Copts. The Copts are Egypt's earliest inhabitants. The Coptic Church is a unique one in the Christian's World.

Lesson 1.

Text

Israel is located in the Near East. Most of the Middle Eastern countries are in the continent of Asia with a majority of their residents being Muslims and a minority of the residents being Christians of various denominations. Due to its geographical location, Israel is a bridge between the countries of the Mediterranean, and in this lies its historical and strategic importance in the present as in the past.

In the countries of the Middle East there were large Jewish communities which were known for their influence, especially in the economic sphere. The members of these communities, for the most part, have immigrated to Israel with the establishment of the state.

Israel touches in its borders on four neighboring states. In the north—Lebanon, in the northeast—Syria, in the east—Jordan (in its official name: the Hashemite Kingdom of Jordan), and in the southwest—Egypt (in its official name: The United Arab Republic), which is the only state among these four in the continent of Africa.

The inhabitants of the neighboring states are for the most part Muslims and their language is Arabic. The majority of these Muslims belong to the Sunni Sect in the world of Islam, and they believe in the Quran and in all of the Muslim Tradition (al-hadith). In Syria and Lebanon there are small communities of non-Sunni Muslims like the
Mutawallis, and they are Shi'is. Among them (the non-Sunnis) are also large communities of Druzes in Lebanon—the birthplace of that sect—and in Syria, in Druze Mountain, which is the most important location of their concentration in the Middle East.

In the neighboring states are also Christians who are members of some of the earliest sects of Christianity. In Lebanon there is a large percentage of Christians who are mostly Maronites, who are closely related to the Catholics. In Egypt there is a very large community of Christian Copts and they are the earliest inhabitants of Egypt and they constitute a unique church in the Christian world.

Lesson 1.

Content Questions

1. What constitutes the importance of the State of Israel in the Middle East?

2. What are Israel's neighboring states?

3. Describe the various Muslim sects in the Near East.


Footnotes

1 The research reported herein was supported in part pursuant to Contract OEC-0-9-097740-3743(014) with the U.S. Department of Health, Education, and Welfare, Office of Education, under the provisions of P.L. 83-531, Cooperative Research, and the provisions of Title VI, P.L. 85-864, as amended.

2 Further information about the reader can be obtained from the authors, Department of Near Eastern Languages and Literatures, The University of Michigan.
THE ROLE OF PERSONALITY VARIABLES IN SECOND LANGUAGE LEARNING

Alexander Z. Guifora
Center for Research on Language and Language Behavior
The University of Michigan

This report pertains to the portion of the above project that was supported by the Office of Education through December 31, 1970. The research program continues with the support of the Department of Defense, and a final report on the completed project will be prepared by us and submitted to the Department of Defense sometime after July 1, 1971. Copies of that report will be made available to the Office of Education as well.

Pre-Contract Research

Guifora, Lane, and Bosworth (1967) examined the relationship between success in speaking a second language authentically (French) and a variety of personality dimensions. This study included the first use of the Micro-Momemtary Expressions (MME) procedure for the measurement of empathy. It was hypothesized that an ability to perceive minimal interpersonal cues, standardized in this case by use of selected film strips shown at different speeds, would be related to individual differences in empathic ability. A significant relation (rank order correlation of +.60) was found between this measure and language proficiency.

A second study (Taylor, Catford, Guifora & Lane, 1969) introduced refinements in the MME apparatus, an alternate projective measure of empathy, and four independent measures of the facility of subjects (English-speaking) in learning authentic Japanese. The results indicated that MME and projective empathy scores, together with an index of verbal intelligence, accounted for more than half of the variance in language performance, as indicated by a multiple correlation of +.72.

The promising results of these two laboratory experiments indicated the desirability of a larger-scale study of language learning under more realistic, and more demanding circumstances.

Methodology

Sample. The subject sample of our research project is being drawn from the United States Army Defense Language Institute, both East (DLIEC) and West Coast (DLIWC) branches. Students in this sample are studying one
of five different languages: Russian, Chinese-Mandarin, Spanish, Thai and Japanese.

**Design.** The data-gathering procedures consist of three phases.

Phase I involves the administration of two types of tests: paper and pencil measures which can be presented to a group of any size for which auditorium space is available, and the MME measure which is limited by the currently available apparatus to a sample size of N = 40 at any one time. These procedures are administered at the beginning of the language training program, usually no later than the first week of classes. The paper and pencil measures used in this phase include the following:

- Thematic Apperception Test (TAT)
- Photographic Perception Test (PPT)
- Test of Ego-Rigidity
- Literature Empathy Test
- Wesman Classification Inventory
- Prior Language Experience Form

The MME measure requires a 16mm audio motion picture projector and screen, a specially prepared test film, two Esterline Angus operation recorders, forty response switches and a forty cable system. The time required to administer all procedures in Phase I is 170 minutes, including instructions and collecting time.

Phase II consists of two procedures, the Linguistic Fluency Test (LFT) and the Predictive Empathy Test (PET). These two measures are administered in a language laboratory, in small groups consisting of class section, and can be accomplished in one 60-minute session per class.

The pre-recorded LFT is played simultaneously to each student in the section, through ear phones in each booth. Tape recorders in each booth record the stimulus sounds from the master tape, and the exact responses made by the student. These tapes will later be transcribed onto a single data storage tape. The PET requires only written responses.

Phase II procedures are administered approximately three months after classes have begun at DLI.

Phase III, the final aspect of data collection, consists of reports from DLI from student records of general mental ability test scores (AFQT) where available, and of final language proficiency evaluations for all students.

**Testing to date.** Phase I procedures were administered during the first week in July 1970 to a total of 153 DLI students. The second student input of DL1WC was similarly tested during the first week in
October 1970; while the input from DLIEC was tested during the first week in November 1970. Total input for the second cycle was N=169.

Phase II testing for students previously tested in Phase I was also accomplished during the first weeks in October and November 1970. Approximately 75% of the students previously tested were available.

The third cycle of testing at DLIWC is currently underway. Students who were administered the Phase I procedures in October 1970 are now being given the Phase II tests, and the new student inputs will be given the Phase I tests.

General Remarks

Two sources of attenuation of usable data samples have caused us some concern. One of these is general aptitude scores which have been available for only 59 or approximately 18% of students tested thus far. This problem is largely unavoidable it appears, although we hope for slightly larger returns on future inputs.

The other source of concern is that only 75 of DLI students tested in Phase I (July) reported for Phase II testing in October and November 1970. This appears to have been due partly to drop-out and reassignment rates, partly due to student factors (some students reported up to 30 minutes late for one-hour sessions), and partly due to conflicting assignments to other necessary duties. Again most of these missed cases are presumably unavoidable. In an effort to reduce their incidence somewhat, we have scheduled make-up testing sessions.

The final decision as to the number of student inputs to be tested will be made in the near future contingent upon the number of complete data cases obtained for each language in the next few testing sessions.
References


Footnote

1The research reported herein was supported in part pursuant to Contract OEC-0-9-097740-3743(014) with the U. S. Department of Health, Education, and Welfare, Office of Education, under the provisions of P. L. 83-531, Cooperative Research, and the provisions of Title VI, P. L. 85-864, as amended.
COMPUTERIZED STUDY OF SYNTAX OF MODERN LITERARY ARABIC

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This study is directed to the present outstanding need in the field of Arabic studies of a comprehensive description of the syntax of modern literary Arabic (MLA). The final product will be a book containing an analytic description of all the syntactic structures (clause-level and phrase-level) of post World War II Literary Arabic prose; the analysis will be based on a corpus of several hundred thousand words, to lend statistical validity to statements, chosen from the works of a large number of writers from the Arab world who are considered to be representative of good Arabic prose writing. By computer-storing an extensive corpus it becomes possible to retrieve all or any part of the occurrences of any particular feature under study, not only more speedily but also more accurately than otherwise. Further, the range of possible studies is extended. In their final form these data will serve as a research facility accessible to all researchers on Arabic in this country (or abroad) working on morphological, syntactic, lexical, or semantic studies, including those interested in contrastive English-Arabic studies and the preparation of teaching materials. Finally, the methodology may be of interest to linguists intending to pursue similar studies in other languages.

A. Goals

1. While there are many excellent works on the syntax of Classical Literary Arabic (i.e., Arabic written in the seventh to tenth centuries AD), there is no satisfactory work on the syntax of contemporary literary Arabic. A comprehensive treatment of MLA syntax, which is the outstanding need in the field of Arabic studies today, is the goal of this project. MLA is defined here as post-World War II narrative and expository prose written by those who are considered to be writers of most acceptable Arabic. Subsequent studies can compare narrative with journalistic styles, or prose with poetry, contemporary with classical, etc.

2. In order to achieve this goal, a total of one-half million words of text (i.e., the equivalent of approximately 20 books of 100 pages each) is to be examined. A corpus of this size should be fully representative of MLA prose, and will lend validity to statistical
In order to handle a corpus of this magnitude, these texts are stored on a computer, permitting immediate retrieval of occurrences of any structure under study. A special system of annotating and coding has been devised which will permit the retrieval of information for the following kinds of studies: syntactic (both clause-level and phrase-level), morphological, lexical and semantic, including any combination of studies (see Appendix I: Illustrative Annotation Sheet). It is interesting to note that the annotation system adopted is easily translated into terms of either a transformational approach, with its rewrite rules, or a tagmemic approach, with its slot-and-filler arrangement. At the same time, conventional grammatical terms are employed, including certain technical terms peculiar to Arabic grammar.

It is expected that the impact of this approach will be felt in two areas. It will provide opportunities for other Arabists over the country to pursue more effectively their own research on Arabic, the preparation of instructional materials, etc. It will also provide a model for scholars who wish to pursue similar studies on other languages.

On completion of the analysis and description of MLA syntax, it will be feasible to do a contrastive analysis of English and Arabic syntax, then to pinpoint those features of Arabic structure most difficult for English speakers to master, and to experiment on the most effective ways to teach them.

B. Personnel

The principal investigators are Professors Ernest N. McCarus and Raji M. Rammuny of the Department of Near Eastern Languages and Literatures of The University of Michigan, who have worked on the project on a year-round basis since March 1969. In the summers of 1969 and 1970 they were joined by Professor Petki Abboud of the University of Texas and Wallace Erwin of Georgetown University, also Arabist-linguists.

The following have assisted in the project: four annotator-encoders, who transcribe and translate the Arabic text and analyze and encode the syntactic structures and the morphological and lexical data; a key-punch operator; and a programmer.

C. Procedures and Principles

The following results have been achieved (not necessarily in chronological order):

1. Selection of Texts.

Principle: This study should represent well-written Arabic prose, to serve as a basis of comparison with Arabic of other genres, e.g., journalistic or poetry; or of the other periods, e.g., nineteenth century or eighteenth century; or of various styles, e.g., archaizing, vs.
Innovative. By choosing writers who are generally considered to be representative of the mainstream of development of Arabic literary traditions, we are assured of a linguistic norm. To assure a balanced selection, we not only consulted standard references on modern Arab writers but sent a questionnaire to some 70 specialists in Arabic literature, most of them Arabs in the Arab world. Their response was remarkably uniform, including names of writers of various persuasions, e.g., Taha Hussain, Muhammad Hussain Haykal, Ahmad Amin and Mikhail Nuayma, who are purists in their language; Nagib Mahfouz, Yousuf Al-Sibai, Halim Barakat and Ihsan Abdul-Quddous, who have made Arabic literature today more available to the public by using a simple straightforward style which can be easily understood by most people; and some, like Mahmoud Taymour, in his recent book of essays *Al-Shakhsiyat Al-Ishron, Twenty Personalities*, who, although they follow modern trends in MLA, still use a traditional, archaic style in terms of selection of vocabulary and structures.

In addition to the resources of the UM library and our own personal collections, we have purchased from Cairo and Beirut book dealers approximately 70 books for purposes of annotation.

Our selection of 38 authors from 13 Arab states includes representatives of seven literary genres and 16 different subjects, including literary criticism, short stories, novels, plays and essays and articles on history, religion, literature, etc.

2. Annotation of Texts.

Principle: Texts must be encoded to permit efficient retrieval of any of several kinds of information, by any of several investigators. Further, the encoding system must be so constructed as not to prejudice the ultimate analysis. The annotation system set up meets these requirements: it is one which encodes data in terms of their surface forms rather than their deep structure, and one which accommodates also traditional constructions such as *nal* (the circumstantial clause), *tamyiz* (the adverbial expression of respect), *al-maf'ul al-mutlaq* (the cognate accusative), etc. For every word the following information is given: its morphological form class (Col. 16—see Appendix I) and inflections, as well as certain semantic features (Col. 17); its syntactic role in the clause (Col. 1) or membership in a phrase in the clause (Cols. 2-15); its transcription, translation and additional lexical information (idiomatic phrases, words not found in the dictionary, emphasis, plural nouns that have no singular, aspects of verbs, etc. (Col. 18)). A special feature of our approach is the fact that every sentence in a selection is analyzed in this way, providing methodological rigor that is lacking in an introspective approach not based on a discrete corpus. That is, if the investigator uses himself as the source of data, he will overlook a vast array of unusual but normal constructions that occur in live language, written or spoken.
The annotation system has been perfected in such a way that additions, deletions or changes can be made at any point. Four annotators have been trained, and over 300 pages of text have been annotated. This annotation system was developed in consultation with a programmer, who also prepared the storage program as well as retrieval programs. The key-word operator has punched approximately 5,000 words. The programmer has programmed the material and has prepared the retrieval system.

3. Analysis of Selected Features.

of MLA. There are writers who resort to archaic constructions such as Mahmoud Taymour in his book of essays al-shakhsiyyat al-`ishrūn, *Twenty Personalities*, but this appears to be a relatively rare phenomenon. It is also worthy of note that if a given construction has several alternate forms in Classical Arabic, MLA tends to avoid those which are ambiguous or vague.

These studies have been invaluable in assuring that the annotation system we have devised does indeed provide the necessary flexibility, efficiency and thoroughness in the retrieval of data.

D. Summary of Progress

Selection and collection of data.
Development and testing of an annotation system.
Programming of the annotation system for computer storage.
Preparation of a retrieval program
Analysis and annotation of approximately 300 pages of text.
Key-punching of approximately 5000 words.
Studies of selected problems in MLA syntax, some of which have been submitted as articles in professional journals.

Footnote

1The research reported herein was supported in part pursuant to Contract OEC-0-9-097740-3743(014) with the U. S. Department of Health, Education, and Welfare, Office of Education, under the provisions of P. L. 83-531, Cooperative Research, and the provisions of Title VI, P. L. 85-864, as amended.
Illustrative Annotation Sheet: Explanation

NB: Lines are horizontal while columns and spaces are vertical. In keypunching, each line is punched on a separate card.


The Arabic sentence transcribed and translated (Col. 18) is wa tilka hiya l-lamaana l-kubraa lilatii tunaatu bihamalati l-masha'ili fii l-lumami l-nawaahidi... "And that is the greatest trust that is entrusted to carriers of torches among developed nations..." The sentence consists (Col. 1) of a clause connector W, a subject S, a pronoun of separation F, and a predicate P. The first three functions are performed by individual words which are identified in Col. 16: W = a coordinating conjunction CNC, S = a demonstrative pronoun that agrees with the fourth word in this sentence D04, and F = a pronoun that agrees with the fourth word in this sentence F04. The predicate consists of a noun phrase BN - EN (Col. 2) beginning on line 4 and ending on line 13. This noun phrase contains as its head a verbal noun VBN (Col. 16), a modifying elative adjective ELA (Col. 16) and a modifying relative clause beginning on line six BR (Col. 1) and ending on line 13. This relative clause itself is a clause analyzed in Col. 4 as consisting of a subordinator S (which is identified in Col. 16 as a relative pronoun agreeing with the fourth word in this sentence R04), a verbal element V (identified as a verb VO4 in Col. 16), and a prepositional phrase containing the object of the verb J; Col. 5 shows that J is a prepositional phrase BP - LP containing a preposition Ph' (which is identified in Col. 16 as a preposition Ph'94). Thus, Col. 1 lists the functions in the clause, while Col. 2 - 16 identify constituent phrases and embedded clauses. Col. 16 identifies the word class of each word in the sentence.

Col. 17 notes the inflections of words, e.g., NFS = nominative, feminine, singular (line 2); and certain semantic features, e.g., H (space 34) = human referent. PIF3 (line 7) = passive voice P, indicative mood I, feminine F, singular S, third person J (verb), and GS 30 (line 19) means genitive, masculine, plural (broken plural pattern number 30). Other semantic features noted in space 34 are negative word, place name, personal name, divine referent, abiteness and ordinal numeral.

In Col. 18 of this illustration the following kinds of data are included:
Transcription of Arabic word, e.g., WA.

Translation of Arabic word (following quotes), e.g., WA "AND.

Dictionary (citation) form of the word (following the symbol &), e.g., TILKA & 6AALIK (that is, the word TILKA would be found in the dictionary under 6AALIK). This will permit word frequency counts, etc.

Translation aids:

(1) While each word is translated as a single word as far as is possible for that context, words in parenthesis are added if they help make possible a smoother English translation of the sentence as a whole, e.g., CARRIERS (OF). These are generally a function of the syntactic structure.

(2) The symbol @ indicates that a word (usually following) should be inserted here, e.g., THE @ TRUST (line 4) plus GREATEST (line 5) gives "the greatest trust".

Aspect of verb, e.g., = H (line 7) indicates that this verb is being used with habitual meaning; such data will facilitate the study of tense and aspect in verbs and participles.

Lexical units—the colon: signifies that this word together with the word whose number follows the colon constitute a lexical unit (an "idiom") and together give the meaning indicated on this line.

Punctuation—The actual punctuation of the text is reproduced here, usually with the word it follows: thus, this sentence ends with ,... (line 13). This will permit studies on the relationship of punctuation marks to syntactic structures.

Other data included are: usages not found in Han Wehr's Dictionary of Modern Written Arabic; any syntactic device used to connote emphasis.
Appendix II

الترابط بين الأساليب الشريذ والنقوش المhooks في المعرفة

بعد الحرب العالمية الثانية

راجي الرموزي

جامعة شيكاغو

لهذا المقال قاينان: الأولي منهما استعراض الأساليب النثرية المستخدمة في المعرفة الفصيح في فترة ما بعد الحرب العالمية الثانية وتانيهما محاولة تفسير ما تلاحظه من ارتباط بين هذه الأساليب النثرية والتطورات التي احتسبت النشر العربي من ناحية الشكل والمضمون في هذه الفترة.

وقبل البدء في الموضوع، أود أن اذكر بأن هذا المقال مبني على دراسة لغوية يقوم بها معهد البحوث في اللغة والسلوك اللغوي التابع لجامعة Center for Research on Language and Language Behavior في الولايات المتحدة الأمريكية. وتشمل هذه الدراسة إلى معرفة التطورات النثرية التي طرأت على النشر العربي في الثلاثين سنة الأخيرة، ويشترك فيها الأساتذة التالية أسماؤهم: الدكتور أرنست ماكيرسون من جامعة "مينيغان" والدكتور والاس آباجون من جامعة "جورجتاون" والدكتور بيتر عمود من جامعة "كنتاكي"، بالإضافة إلى كاتب هذا المقال، ومن الجدير بالذكر أنهما تضافان لهذه الدراسة فلوق الأساليب العلمي، فقد بعثنا نستثمر بعض الأساليب والمصطلحات في اللغة العربية وأدبيتها في الولايات المتحدة والعالم العربي، كلاهما منهم تزويدها بإسماها 20 كتابًا مميزًا من كتب النشر الذين يتناولون فترة ما بعد الحرب العالمية.

*Article submitted for publication in a Lebanese literary journal; translation follows.
الثانية، مع ذكر أهم موظفات كل كاتب يذكور اسمه. وقد ضمت القوائم التي تسلّمها اسماء كتاب ناشرين من معظم أنحاء العالم العربي، كما اشتملت على معلومات تتعلق بشئ انواع النشر العربي الحديث: كالقصة والرسومية والرواية التلميذية والنداء كالخطابة والصحافة والترجم والكتابة باللغات العربية والادبية والاجتماعية والسياسية، إلى غير ذلك من الموضوعات الفلسفية والديموغرافية والهندية الفنية والدينية التي نتمق في هذه الفترة.

والاستناد على هذه القوائم، وتم اختيارنا على 31 كتاباً يمثلون 42 بطرازاً عربياً، كما اختارنا ما بين كتابات ثلاثة كتاب لكل موطئ، معترفين في ذلك اهتمام الكاتب بشهره والموضوعات الأدبية التي يعتبره بها. وكذلك تعرض لدينا عدد من الكتب والكتب بعمل الفناء التي نود بثها كما يلي ونها.

ونشجعنا في البحث هو تحليل ما لا يقل عن 4500 صفحة من النشر وتوفيرها، تصفيفها، تعريفها وحذفها، وتم اختيارها على وجه شامل لكل جملة مع مرتبطة المحترفة بعضها مع بعض وردانات مفرداتها، وتميز دراستها هذه باستعمال الطرق والاجهزة العلمية الحديثة في تحليل وجمع المعلومات السراد دراستها. إذ بعد القيام بعملية التحليل اللغوي الدقيق، تخزن المواد المجلعة في الآلة الحاسبة (computer) تقوم ببعدها بأعطائها ما نريد دراسته من تراكيب نحوية وغيرها، بعد تصنيفها ونفخها لنا بالطريقة التي يتناولنا.

وقد كشفنا لنا بعض الكتابات الشهيرة التي تم تحليلها حتى الآن من استعمال ثلاثة انواع من الأساليب في النشر العربي الحديث. ولا يسع لي قليل المثبنة هذه الأساليب أن يوضح بان
القسم يبينهما مقصود منه التعميم والشمل لا غير؛ حيث أنه من الصعب في
هذه القائمة تصنيف الأساليب أو الكتابة تلقائيا أو وضع حد عام
بين كل أساليب وآخر، بسبب كثرة تداخل هذه الأساليب بعضها في
بعض واستعمال الكتاب في كثير من الأحيان أكثر من أساليب معينة،
لذا سنرى فيما بعد، وهذه الأساليب هي:

١٠ الأساليب السهل الحديث الذي تخلب طبيعة البساطة وحرية التعبير.

ويستخدم هذا الأسلوب الجمل والتركيب السهلة التي تشتمل على
لفة مبسطة وفريدة من مظاهر العを作って، وهذه الرئيسية من
ذلك وصف الحياة الواقعية على طبيعتها والتعبير عنها بحرية
واطعقة، كما أنه يستعمل أحيانا الانتفاخ والعبارات الحامية
والاجتباس الطالفة، قادما من وراء ذلك تتمييز الجماهير الشعبية
وخدمة مصلحة، وقد أضحى هذا الأسلوب شائع اليوم خاصة بين
طبقة الكتاب التاشكيين، وفي العوامل التي ظهرت أخيرا لبعض
الكتاب الذين ظهروا قبل الحرب العالمية الثانية ولا يزالون يكتبون
حتى اليوم، أمثال يوسف السباعي، إحسان مدادنود، خيلوق
الحكم.

وعسر مشاكل لذا النجع من الأساليب القطرانة الغالبة.

القطاع الأولي مختارة من كتاب "نحن لا نزعم الكرم" للايديب:
بواسطة السباعي (الجزء الأول، من ٢٨٤، ١٩٢٨).

رقم تحليل جملة سيدة بجوار السيدة ٥٠. ونبدأ تدبيها:

١. كر خيرك يا خالتي ام مطولة.

٢. وبدت ام مطولة يدها بقطعة من الخسرو، وهي تجبر تأثيرة:

٣. الله يحميك يا بنتي ٨٠، خذي هذه طي ما قسم.

٤. كر خيرك يا خالتي ام مطولة.

٥. واحسست سيدة انتها تود أن تفعل ام مطولة كبيرة ولكنها
كرهت أن تجرب شعرها بإعطائها شن الخلوى. فقت يدها إلى الفعل نائمة:

- عائزة جزءين في جل يا خالة
- خذي ما تريدين يا بنتي
وأخذت سيدة حزمن الفعل ووضعت يدها في جيبها وخرجت
فرشها من الأيدي التي ضعها أياها أهل البيت
وتساءلت أم عطوة في استنكار:
- ما الذي تعلينه يا سيدة؟
- جمل الفعل يا خالتي أم عطوة
- عيب يا سيدة 00 عيب يا بنتي

- لسم يا خالة؟ 00 لقد احذت ثمنه من الذي أعمل

فهمنهم وجب عليك أن تأخذ بيه:
- والتي ما يستبوا 00 دول حزمن فجل
- خذي يا خالتي أم عطوة 00 ده عريض
والقطع المختارة من كتاب "آنا حرة" للكاتب
أساس عبد القادر (الطبعات الثلاثة 00 م 1956-1958)

وجاء أحد الطالبات - طلبه الجامعة - وجنس بجانبها في
منفرد الحديث وقال كانه صديق قديم:

- حضرتك في أي كلمة؟
ونظرت إليه ولي بانته العالية وطريقة الطويل وقالت

- أنا مش في كتيبة 00 أنا مش في الجامعة خالص
وقال وهو يحاول أن يبدء خفيف الدم
- أنا كان قلت مش مكن واحدة بالجمال ده تدخل الجامعة
وأنا مش كتيب محدن هناك تحارب 00 اللي ما تنفعش للجواز
يدخلوها الجامعة!
لاستعمال العربية أو العبارات الأجنبية كالأسلوب السهل،

لم ترد، وأدرت رأسها عليه لن تخفي أمرها. لقد
كانت تعتقد أن طبقة الجامعة أرقي في عقلهم من أن يغفوا
بكل هذا الغزل الرخيص، وكانت تعتقد أن بنات الجامعة أكثر
احتراماً بين زملائهم من أن يقال هن في هذا القول.

وعاد بسالباً:

alam حضرتك، برجي مدرسة أيه؟

لم ترد أيضاً، فقال:

ما دام شايلة شنطة تنبئ لأزم برجي مدرسة

والتى متهكمة:

يا سلام على العبادة!

ولسه تماماً حتشوفين من ناهتي، بين تفويضي المدرسة
تبقى فيها أنت اترك على طول اسمها أيه

ويجب ان يتعامل الدح كله 100 اسمها مدرسة

وتظل لنا هاتان القطعان الخطوات اللؤسية التي خطاها

الأسلوب السهل للوصول إلى فاهمهم الجماهير الشعبية عن
طرق استعمال لغة بسيطة وواحة كل الوضوح. ومن اللاحظ هنا
ان هذا النوع من الأسلوب يستعمل الطرادات والتعابير العاطفية
والاجنبية على حد سواء لأظهر الشخصيات والحوار على
طبيعتها، وهذا ما زاد في سلامته وسهولة فهمه.

الأسلوب الوسيط الذي يلتزم حديد الاعتدال من ناحية
اختيار الطرادات وصياغة العبارات والجمل، ولهذا الأسلوب
بشكل عام إلى تحقيق النثر العربي الحديث من
الاعتدال على العقائد والمواطف، وما تجربة هذا من
الأمر من استخدام أسلوب السجع والزخرف التقليدي. إذ أنه
بدلاً من ذلك يستعمل لغة عربية سليمة صافية لا يSHOTها كثيراً.
ولما كان أصحاب هذا الأسلوب يحاولون دائمًا إيجاد نوع من التزون بين الكاف ومضمون، فقد جاء أسلوبهم خليلاً من التراكيب اللغوية المتقدمة التي تعتمد على المحسنات البديعية. وكذلك التراكيب العربية المشححة أو الإجстраخة التراكب. وأخبار هذا الأسلوب هم مزيج من الكتاب الذين ظهروا وضمنوا قبل الحرب العالمية الثانية وظروا ألكثيرون بعدها، وبعض الكتاب الذين ظهروا بعد الحرب، ومنهم: طه حسين، نهج الفهم، نجيب محفوظ، محده الزيادات، مصطفى البغدادي، مازن بيدون، اسماء كمال، محمد حسين بركات، سهيل اديم، نازك الملاك، ساطع الحصري، وبعض كتباء تجيب محفوظ، محمد جعفر من انشه الأدب الذي يميز بوجهته لنفسه، والحسن تعزيزه ومساعدة بالشكل والضمون معاً التنويذان التاليان: "عن
كتاب "المدام" للدكتور طه حسين (من 1937، 1941) ما يلي:
"لا أكتب لكي أن باريس بعد أن أتت فيها أثاث السكن المستقل لا أقامت الزائر العلم. فقد زارت باريس في الصيف، لاكتفي لم اسمه فيها إلا يومين اثنين لقي فيها روابط البعض وفرعته أنفسها، وثلث له ومستحث شبه، ثم استاذته في أن أتزع باريس حتى يغطي الصيف، ولم ير في ذلك بأسبا.
ولعل رأى فيه خيراً إن كان يجب أن نعوض الساحل البحر يعني الموطن، فلم يكتر وفقي من جوع مصر، ولم يكر ذلك ولم يفر بأساً، ولكنه نباني عين مارسيليا وزين في مدينة قريبة منها على ساحل البحر أيضاً في مدينة.
كانَ كأظهرت الطاعة له والقبول لرأيه، والخطاب أن نحن نجح السفر على حساب الجامعة للذهاب والابن،
وتركت وتركت باريس، ولكنني لم اذهب الى "كان" ولم انزل في الفندق الذي سلم لي من فنادقها الا بعد ان مرت ببرسيليا 200 واقع في فندق جنين اياما، واستوتمت من اني لن يكون وحيدا في "كان".

ولم لا؟ ان فرنتد او كان خادما الحق في ان تنصريح وتعاطى كم يستريح السادة وصطفافون وما يمنعها ان تستريح وتيعاطا لساعاتين حيث استريح انا واعطافنا.[*]

ومن كتاب بيت سيء السمعة لنجيب محفوظ (ص 248 - 250) القطعة التالية:

"دخل حسين من احد الابواب نخبطا طولا من حجرة الى مصر ومن مصر الى سردار ومن سردار الى نفق، وتيار الحائرين يعافيهما في شقي الاتجاهات، ولم يقتصر اهتمامه في وضع واحدة للشكك أو الخلف او التعلقات، وتجهت سعاد وهي تقتصر في رجاء:

- دعراج

فهد قال:

- ماما يعني الرجوع او ماذا يعني القفدم؟

ينسبي فحسب إلـ

- لا تذكر من اين اتيت؟

- لا

- لا لا لا تذكر اين تذهب؟

- هذا واضح.

- هذا واضح.

- هذا واضح.

- ماذا ما اى مالية.

لا تسمع اصوات النخيل.
- وصوات الضحك؟
- مستنبط حتى موقف الإغلاق.
- سر اللعبة لا يمكن أن يعبر في أول جولة فليس،
"امامنا الألا أن نجرح حظنا".

من أبرز ما نلاحظه في هذين المقدمين، إشادة

استعمال لفظ عربية صارمة مثلى على التعبير عن افتكار

وشاعرة بدون تكلفة زائد في اللغة أو المعنى، وبدون أن تتسل

الى مستوى اللغة الجامية أو ما يعاد إليه. فكان أصحاب

هذا الإسلوب يريدون رفع مستوى القراء إلى اللغة الوسطى

التي يستعملونها، وما يطرد ذكرها هنا لأنه بالرغم من

أن معظم كتب هذه الفترة التي نحن معددها يحاولون نوعا

ما تسليح لحنهم وجعلها في مناول الجميع إلا أننا لا

نزال نجد هذا الإسلوب الوسط شائعًا أكثر أصحابه لا

يزالون في الحقيقة، فقد تصرفت القوائم التي تسلتناها

اسمه بعض الكتاب الذين يكثرون من استعمال هذا الإسلوب

دون غيره، مثل: طه حسين، ميخائيل نجيب، محمود

عبير، أحمد امين: سهل، إدريس، وغيرهم.

الإسلوب الفؤ ة الذي تسليط عليه الزخارف اللغوية

والدعسات البديعة. وكثر في هذا الإسلوب المجمل

والترابط الذي تتشكل على النضج والعوارض التي غيرو ذلك

من الأمور التي يستعملها الكاتب لغرض بلاغه وبيانيه، مع

أن هذا الإسلوب لا يزال يسير على نموذج أساليب السجع

والأدبي التقليدي، باستعماله المهمة المشروعة بالانطلاق العذزارة

والدلائل المبهمة والعبارات الرمثاء. ألا أنهم لم يدن بتجربة

الكتابة الحديثة، خاصة فيما يتعلق بالتحليل النفسي والاجتماعي

والوصف الدقيق واستعمال التنقيط حسب المعنى دون التقيد بالقواعد.
التقليدية المرسومة، ومن مميزات هذا الأسلوب استعمال التركيب
اللغوي البليغة، ومحاولة إحياء بعض النصوص العربية القديمة،
وتوسيع باب الابتكار في اللغة. وقد أصبو هذا النوع قليل
الاستعمال لدرجة محدودة في هذه الأيام، إذا لم أشعر
حتى الآن إلا على كتاب واحد يمثل هذا النوع من الأسلوب،
وهو كتاب "الشخصيات العشرين" لعمرو تيمور (1971). ومن
الكتب المذكور القطائعان التاليان: 
يفت محمد تيمور في
القطعه الأولى (من 1 - 10) لطفي السيد يقوله:
"إنه فكرة أكثر منه جسد، وعقل أكثر منه مادة؛
وقت حتى أكثر منه خلقًا ليس..."
ائي ادنى إليها الاتجاه المستقيم الذي هو أقرب بعد
بين نقطتين. ولكنه ليس بالاتجاه المستقيم، يجري به المداد
على المرتفعات... هو خط متشلخ يصل إلى أعماق الأغوار من الفكر الإنساني
الإنساني.
خط مستقيم لا غريب
خط سريع الحركة، يدفع من نقطة البدء إلى نقطة
الانتهاء، حتّى أنتج، شديد التأقل، يبلغ الهدف كالذئبة
الصائدة.
إذا لمحت هذا الخط يبرز في ساحة الفكر، اقتنع عن
خطوات كثيرة أحر، تعبد حينا وتبتعد حينا، وتبعد هنالك،
وهي، حسب النافذان في امتدادها والتزامها وتعاونها
سهر علمنا، ولكنه في الحق لا يصعب منها غير اختراق
الجذري، وصعوبة الوعد، نسيب الصبر.
إنه كلمة واحدة.
لفضل الله، بذكر بكبار المعاني، فيه فرحة من مثال ومقال
وفي القطة الثانية (من 11-22)، يصف لنا الكاتب والألمعية: "النزعة الفضائية في شخصية أحمد أمين:
إن التحصينات مختلفة الجوانب من شخصية "أحمد أمين" لطالت عينه صورة قاضية تتنوع نمط: نزعة القضاة بأوقات ما فيها من خلال الدقة والوزن والانظام، وأكرم ما فيها من خصال النزاهة والعدلية ووضوعة الضمير.

إنه قاض في خاصة شانه مع نفسه، قاض في حديث مجلسه، قاض في الجامعه استذازا، وعلى مكتبه رئيس عل قاض في معاملاته مع الناس بين تريث وبيع، قاض فيما يجري به قلمه من مباحث ودراسات وبحوث.

وقد عرفت القدر نزعته الفضائية في بواكيرها، حين شاب شابه، فارادت له أن يكون أحد قضاة الشرع، وصل فيما هناك من خصومة ونزاع 300، ولكنه لم ينك في منصب انتقاء طيلة، فترك ذلك الميدان المحدود، ليكون قاضيا، طلما لا تقبل به ثروة المبحة عند غاية، ولبى في دينه، على اختلاف مباح، وتنوع مجالات نشاطه، تعلمه نزعة القضاء، وتهيمن على فكره ما وسعها أن تبهين.

وهذه النزعة الفضائية قد وسمت حياة الرجل في مناحمته العقلية والاجتماعية بنجوم الاعتدال 300، فهو معبد أبدا في علاقاته و kotاه، لا يجمع في النسبة، ولا يتراخت في اللين، يحب حين يحب هونا ما، ويغض إذا ابغي هونا ما، نبأ ما يكون من الزيتك والتهذيب، أنف ما يكون للسرخ والتطرف، ابقل ما يكون الى المواد، والحسن إل العجب الحاجب في شخصية "أحمد أمين"، إن نشأته قد اكتسب كل دواعي التحفظ، من معتقدات راسخة.
وتخليد صارمة، وتعاليم جامدة 600 ولكن فكره تطهير والتخلص ذلك كله، كما يتكلم الجوهير النقي، ويجي بنغذل الطلاقة.
في الأفق البعيد 600 فإذا النمسا الآن حرية الفكر بين القادة الأعلام، الفناء من النور الطريق.

وقبل الانتقال إلى القسم الثاني من هذا المقال، اود ان أكون مرة أخرى بأن الفصل بين هذه الأساليب واضحًا بشكل دقِّي غير متيسر، خاصة عندما نجد ان بعض الكُتُب الناقد في ايمانا هنالك يستعملون مزيجا من الأساليب او أكثر في محاولتهم.

ويستعمل الاسلوب المكلف احيانا، والاسلوب الوسيط احيانا أخرى.

ويجب ملاحظة توقف الحكِّم وحيلهم بركات يستعملون الاسلوب الوسيط، احيانا. وتعمل الكتابة في انتخاب السهل الحديث، واستخدام الكُتُب.

للمزيد من الأساليب الثلاثة بالاختلاف الادبياء انفسهم، و poop: تطويرات الاحوال ونموذج الموضوعات التي يطردونها في كتاباتهم.

والان، بعدها الاستعراض الشامل للاساليب الادبية الثرية المعاصرة، انتقل الى الحديث عن مدى تأثير هذه الأساليب على الشعر العربي المعاصر من ناحية الشكل والضمون، وسأبدأ بالتطورات الشكلية، وهذه التطورات على أنواع:

1- التطورات المتعلقة بالتفصيلات المستعملة، وتشمل هذه التطورات ما يلي:

أ- التفاصيل العربية المفردة م الايزة، كالفرائد التي يستعملها محمود تيمور في كتابه "الشخصيات العشرون"، وهي مفردات عربية صحيحة تضم بعض الاسماء والصفات والافعال النادرة الاستعمال، مع ابنا موجودة في طياتا العامية: مثل: اسانيد،
الكويك، يحيا، طرق، أفكاره، حوائط، راحب، نقار، نشطة، ملحة، مشخض، حال، حاجم، نظمان، عاجب، ذكر، تعاصي، عص، يمح، وغيرها،
ب- الطرادات العربية العامية التي يغلب وجودها في
الكتابات النثرية التي تستخدم الأسلوب البسيط،
خاصة في مواقف الحوار ومناظرة بين شخصيات
القصة أو الرواية المختللة. وقد أصبح استعمال
العامة الآن أمرًا طبيعيًا عند بعض الادباء
الناشرين المعاصرين، أمثال: احسان عبدالقدوس،
توفيق الحكيم، يوسف السباعي، وغيرهم، إذ
توجد هناك أنواعًا كبيرة من الطرادات والتعابير
العامة في كتاباتهم الدعامة أو السردية،
كالعامة التي وردت في القصص أغلب المختارين ليوسف
السباعي وأحسان عبدالقدوس. أثناء الكلام عن الأسلوب
السهل الحديث.(1)
ج- الطرادات الأجنبية التي ازدادت بعد تعرفها
واستعمالها أكثر شهرة، وشيوعًا من نظرها بالعربية، وضم هذه الطرادات أسماء الالات
والأجهزة الحديثة المظهر، وكذلك بعض الطرادات
والاصطلاحات العلمية. وتوقف استعمال هذه
الطرادات على نوع الأسلوب ونقار الاديب، فاصحاب
الأسلوب السهل مثلا، يستعملونها بكثرة حتى ولو
كانت تناظرها في العربية شائعة، كما يستعمل
اصحاب الأسلوب الوسط منها ما كانت نظائره.

(1) انظر من 3-5 من هذا المقال
في العربية لا تعطي المعنى الدقيق. أما الأسلوب المكلف في استخدامه لذا تأدر، والخطة التالية من كتاب "العالم" للدبيب خليل تتي الدين (ص 82)، تعطينا فكرة واضحة عن استخدام العفرات الإنجليزية بعد تعرفها في اللغة العربية الحديثة.

كانت عينا سلمان غلبان الحديدي التهاماً، وتنظران إلى زاد العمال وقد لم تنها الزيت نظارات حب وحنان. نظلت شوكة صاحب الكاروا نفاذة ما شأته. وقال إنه أطله علاء.

· وهل لديك خبرة بالسيارات؟
· كلاً. نكتني ميكانيكي.
· أي يعلم الميكانيكي؟

قال سلمان وقد رأت عيناً رفيقاً سريعاً مهلاً:

· في بحثين. كان عندى مطحنة وموتر 1000

ولم تفوت فترة وجيزة على وجود سلمان من الكاروا حتى تفوق على جميع رفاقه، وتعلم سوق السيارات بسرعة مدهشة. ووقت رئيسي بهكان يختب دون سوال بالعناية بسيارات الذوات، وأبناء الذوات.

التطورات المتعلقة بالعفارات والجمل العربية المناصرة باللغات الإنجليزية من ناحية إشتقاق واستعمال بعض مفرداتها ودلالاتها اللغوية. وميل إلى استخدام مثل هذه العفارات والجمل بعض الكتب الذين تلقلاً أو عاشوا في الغرب، من أمثال: حليم بركات، جبر ابراهيم شجاع، ليني بيليني، ومن اهتمام هذا النوع ما يلي:

أحد الطائرات 'He took the plane'
التعليم المبرمج 'Programmed learning'
The scientific field
The starry night
A starry sky
to mould man
delectable trances

The evolution of the relationship between the two concepts of scientific knowledge, especially

It appears that, under the conditions of language that make the use of adjectives and participles possible, the relationship between the adjective and the participle forms a new relationship between them, which is not the case under ordinary conditions.

The relationship between linguistic and morphological concepts has been established in the two concepts of scientific knowledge, especially

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The relationship between linguistic and morphological concepts has been established in the two concepts of scientific knowledge, especially
على الاستياع الاتنمار مع وجود نفاذ اللفظ في الجملة اصيح قليل جداً، فقد وجدت خمسة أعلا أطل من هذا النوع في الكتب التي تقرأها.

أما فيما يخص بпрос نفاث ة تنفيذ "إلا"، فقد اصيح الاستياعا غير طبيعي أو محدودا في الوقت الحاضر، ما اصباب باب اللفظ من تطور اصاب النبوي الآخر من النحو، فقد لاحظت ان التراكب التكونية التي تصدرها الحال مثل "مسيرة الطائرة" "مسيرة" أو "تلك التي تعيد الحلال فيها" التسهيل افادة تجسعيد "لمجد النظ اسدا"، التي غير ذلك من التراكب التي يكون معنى الحال فيها موجهة ضمن الجملة التي تبليها "خليل ابن رحبا". فقد اصبحت جميعها دادرة الوجود.

اذ انتي لم أذكر على مثال لها بعد. كما ان التراكب اللغوية التي يكون الحال فيها أصدر للعديد المعنى والدلالة عليه بطريقة غير مباشرة تلت لتدرة كبيرة، حتى انها أصبحت محصلة اليوم على الأسول المتلاخ الفادح والمذلال التالبان من كتاب "الأشخاص والمشرعون" لمعين تيمور (ص 10) خير تفسير لذلك.

"لمحته على مكان جلسة توضع فيها الوعادة واللباقة؛ مناصري الإصلاح تعلي على الخلق شغله الفيل".

وكذلك قولنا في وصف احمد ابين (ص 11) :

"أنه قال في خمسة شأنه مع نفسه، قال في حديث مجلسه:
تأتي في الجامعة ماذاذا، وعلى كتابه رئيس عمل 0020
ليس العقود مما أشار إليه من تطورات هذا التحديم، وإنما
ايضاح حقيقة واتجاه تتعلق بالتطورات التي يمر فيها تأويل اللغة.

(2) الأمثلة الواردة هنا مأخوذة من كتاب "النحو الوقاني" لعباس حسن
(الجزء الثاني، الطبعة الثالثة، ص 328 - 380) (1968)0

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العربية المعاصرة، وسنستمر بالتحقيق جميع النظريات اللغوية التي اصابت ابواب النحو المتعددة في متالات خاصة بعد حصولنا على المعلومات المكيفة، وتحليلاً فنياً عملياً ودياً مختلداً على املنححة مستددة من النظم الأدبية الموجودة بين ايدينا الآن، ان النظريات المتعلقة بمجال الجمل العربية وتركيب كلماتها واستعمال النظريات على نموذج النظريات الحديثة في الكتابة، تكتب ما نجد الجمل بعض القصص والروايات التحليلية العربية التي لا يراها اصحابها عند كتابتها اصول النشط القديمة في النظريات أو طول الجمل وتركيب أجزائها.

إن مجرد نظرية لكتابات انسان عبد القادر، ليلي بحلفاكي، حليم بركات، عبدالله القويري، محمود تيمور، بعض روائيات توفيق الحكيم الحديثة، لتضمنا فكرة واضحة عن استعمال هولاء الكتاب، وإملاءهم تجاً توازي في طولها بين كلمة واحدة إلى سطر واحد أو أكثر، وما يستخرج النتائج هنا رعاية هولاء الكتاب، أصول النشط القديمة الحديثة، من وضع للغة ككل والسهم والت ngữات التحجب والاستخدم إلى غير ذلك من الامور الذاتية التي تسير بها الاساليب الكتابية الحديثة، وولادة على ذلك فانا نلاحظ ان بعض الكتب الحديثين لا يقيدون بعض المبادئ، الموضوعة التي تنص على اعطاء حق العامية للفعل، ما لم يكن هناك تركيز جامع على الفاعل في الجمل، فالفاعل والفاعل عند حليم بركات سواء في التقدم والتأخير، والقطعة الثالثة من كتابة "عودة الطائر إلى البحر" (ق د 1919).

توجه لنا ما سبق ذكره من نظريات:

* على كُمان كان لا يزال في دار البلدية يحاول تنظيم المقاومة الشعبية، يلوذ في قضاها من المتطوعين للدفاع عن القدس. يحمل بالتفوق طالباً السلاح. لا ينكم من احتمال واحد. موظفو الثغور تركوا هرباً بكره شمعه.
يحاول أن يخل يأخذه عمام في القدس، مستقبلًا، يخل بAILSIEH لا جواب، ينكر في أنهم تركوا المنزل والجوا إلى الحقيقي لا بأس، لا يخف ضجرهم، زوجته تعرف كيف تبدر الأموار، يقظ بابته عدلا. يخطر ببائه ابنه دروش. أنه الوحيد بين ابنتين، يخف عليه، يتشاق، تقبل سلط قرب دار البلدية، الزجاج يجبر وجهه.

يشوع خالد عبد الحليم بذقيته في سبسطية. يريد أن يلتقي بالمعاقبة الشادية، تعترف به الحاجة سليمة. لا يجيبها. ينكر السحايا نفسه عندما تذكره أنه الوحيد الذي يذكر الاعتداء عليه في العائلة. يجريه من طريقته دون أن يقل شيئا. تتمسك به، تصرع، لسن ترك زوجته ونذك ولد خريدة وابنها وولد اخته؟

أن الدارس لمثل هذه التطورات التي حدثت في الأساليب الادبية النصرية وما سببها من تطورات لغية في الشكل والضمون، ليجد أنها جميعها طبيعية في مسلكها، دعت إليها نهجنا المحبة، ومتطلبات حياتنا المعبرة، قالجحيض الذي تعني فيه بما فيه من موهورات اجتماعية وثقافية وسياسية، هو الذي يعلي طينة ما نكتبه، ونتيجة لذلك فأنه مما يكيم اليوم من اختلاف في الأساليب المستعملة، فإنها جميعها تلامس مع حياتنا وليتنا واقعنا. وفي الحقيقة، أن جميع هذه الاختلافات في الأساليب والتطورات اللغوية التي حدثت نتيجة لبنا لدلل دلالة واضحة على مرور اللغة العربية المعبرة، وطبيعتها بشكل يجعلنا قادرًا على التعبير عن كثير من الأفكار والمعاني بدقة وفعظ، وبدون عسر أو مشقة.

ان النشوة في الأساليب الادبية النصرية المعبرة كما شاهدنا، قائم على أساس استعمال اللغة للتعبير عن مختلف المستويات الاجتماعية والثقافية، وما دامنا نحاول نمارس نهجًا الاس
الادبية الحديثة في معاناه مواقفهم، وتصوير الحياة الاجتماعية والادبية كما يرونها بعينهم، ويعتبر فيهما إما لخدمة الجمهور التي يخافونها أو لخدمة الثقافة العربية وذلك يعلمهن، فليس من الأورجك اذن أن يكون جميعاً بأسلوب واحد ومن أجل هدف واحد اذ لو فعلنا ذلك لننعدادنا بالضعف وضيق المجال، بل من القوة والأسلحة.

هذا فيما يختص بالأساليب الأدبية الشرعية، أما فيما يتعلق بالمؤثرات التي ادخلتها التيارات الأدبية الحديثة على النشر العربي من معاناه جديدة للمواقف، واستعمال النطاق وصياغة الجمل، التي غير ذلك من استخدام العفردات والمصطلحات الأجنبية بعد ترجمتها او استمتع كلمة إبرية جديدة على شاكلة اعتقادات في اللغات الأجنبية، فهذا ما لا يعبد لنشا العريبة المعاصرة او كتابية الناشرين، فالإهمان بالتجديد والتحزن، والعلاوة بين كتاباتنا وحياتها المعاصرة وما يؤثر فيها من تيارات جديدة في الكتابة والتعليم، كلها أشياء ضرورية اليمين. فهي فائدة لنا، وتثور لاهياءنا، وفاء لادينا، وثوبة للملفون.

إن البجع العلمي الفاهي يحاول جاهداً الآن إيجاد نظام عربة للعفردات والمصطلحات الأجنبية، فهذا جاء بهذه الظواهر العريقة في وقت مبكر استحسناها الكتاب واستملوها، ورياضة الحال يستدعي الفراء، وبخوثها، أما إذا كان منهجها في وقت مبكر، او أنها لا تعني المعنى الدقيق الذي تعطيه العفردات الأجنبية، خاصة فيما يتعلق بأياء الآلات والآجيز العلمي، والكانتنات العلمية، فاستعمال العفردات الأجنبية نفسه بعد ترجمتها يصبح طولًا أكثر، لما فيه من دلالات ودنيا واضحة للكلف المستمعة.
كذلك فإن استعمال اللغة العامية في بعض القصص والمعرجات الحديثة لتصوير الحوادث والأشخاص يثير الكثير أكثر من خيالنا، يكسب طبيعي جديد يجعل ادبياً يخلق الحياة الحقيقية، وسواء كانت هذه الظاهرة مستقاة من الأداب الأجنبية أو نتيجة لتحرك التطور الطبيعي الذي يمر فيه الأدب العربي والأدب العالمية جميعاً، فإنها ولا شك ظاهرة سليمة، فضلة في عملها وخدمة، وند لا ينجوم منها خطر ما دام استعمالها ينحصر على مؤلف الكتاب أو الحوار لاغراض أدبية محددة.

أن الخوف الذي وقع فيه بعض الكتاب والنقاد في الآونة الأخيرة مع ان استعمال الأساليب السهلة التي تستخدم العامية، وبعض اللغات الأجنبية، هو فساد للغة العربية، وهم لتواعدها النحوية، لخوف مبني على الهم لا الواقع، فاهتمام أصحاب الأساليب السهل بالطفل ومراجعتهم للطبقات الشعبية التي يكون لها، ليس فيه شيء على اللهجة العربية وتواعدها، وإنما تبسيطها وجعلها مناسبة للآخرين، واللغوي الرياضي لهذه الفقرات، إذا كان كل ما يحدث في هذه الحالة هو عدم استعمال التراكيب اللغوية التي لا تجبرنا من كبارنا تعبيراً واضحنا وطبيعية مباشرة، وما شاهدناه من تطور في استعمال بعض تراكيب النفي والدان في الكتبة الثقافية المعاصفة لخير برهان على ذلك، نعدي مثل الكتاب الذين يستعملون الأسلوب السهل إلى استعمال أداة النفي التي تدل على النفي بطريقة غير مباشرة، كدليل النفي المستقل من النغمة عند استعمال "هل" أو الإحاطة بمعنى الجمل الكلي مع اعتبار ما قبلها وما بعدها عند استعمال "لأ" أو "لأو" أو "لأو"، أو "لأو" أم داء الفعل "لأ" محل "لما" للدالة على نفي الحدث في الزمن الماضي، المقص بالذين الحاضر لى ما في ذلك من وضوح زيادة بيان كذك ذلك لم ولن يظر باللغة العربية أو يخل بالموضوعة النحوية. ونذكرون، يقال من تجنب أصحاب
الأسلوبين السهل والوسط من استعمال الحال في صدر الجملة أو استعمالها مشابهة بالمادة، إلى غير ذلك من العوائق البلاغية التي يخص اهتمام الكتاب فيها على الشكل والزخرف بدلاً من نقل المعنى بصورة واضحة وسهلة.

مجل القول إن النشر الحربي بعد الحرب العالمية الثانية يمر في دور الاستقرار التام، فعلى ما نلاحظه في الشواهد الواردة في القسم الأول من هذا المقال تطور الأساليب والموضوعات النثرية تطوراً يسير روح العصر الحديث، ومع أن هذه التطورات قد بدأت بالظهور ابان الحرب العالمية الأولى وقبل الحرب العالمية الثانية، إلا أنها تضمنت واستمرت في السنوات التي تلت الحرب الأخيرة، فبعد أن كنا نجد التشبيه والغش والمعارضة تسود بين مجموعات الكتاب فيما قبل الحرب العالمية الثانية، نرى أن نجد بعض الكتاب فيما مضى متسكن بالتقليد والمحافظة وغيرهم من التحذيرات والابتكارات، نرى معظم الكتاب اليوم يستندون إلى مبادئ، الكتابة المصرية، حتى أولئك الذين لا يزالون يحتمل أن استعمال الأساليب التقليدية القديمة، وذلك تسنى للنشر الحربي اليوم الاعتماد المباشر بحياة الناس وما يوفر فيما من عوامل نفسه واجتماعية وسياسية. فقد ظهرت فيه روح البحث والتحليل واتجه أكثر فأكثر إلى المناقحة بالضمن والشكل معاً. وقد اصبح التقارب واضح اليوم بين طبقات الكتاب حتى انا نجد البعض منهم يستعمل أساليب متفرقة، تراوحت إحداها إحداها حسب ما تتعلقه الظروف وظروف الفن، ونتوجه إلى ذلك جميع من الرجال، كما اسلفت، التعليم بين طبقة وأخرى، الا أن طريق الشعر فقله.

وقد رأينا كيف أن هذا التنوع في الأساليب الكتابية المصرية ضرورى لابدنا العربي وجمعاً العربي، لأنهم يفتحون لجميع الاطراف
الشعبة على اختلاف أنواعها وتغاوت طبقاتها ومظاهرها كي تتبناها كا
تشابه، إذ أنه ليس من العدل في عمر مثل عمرنا هذا أن تقرر
مبدان الكتابة الشعرية على أسلوب دون آخر، أو على فريق من
الكتب دون الفريق الآخر، خاصة وأن منطق الحياة المعاصرة وطبيعة
الناس فيها يخطبيان النوانا متنوعة من الأدب لا لونا واحدا.

وما المواقف التي أعطيتها اثناء الحديث عن النفي والحال الا
امتهنة تجلاء من التطورات الواقعية التي اصابت نشرنا العربي المعاصر في
متدحرنجها وتواجده، وتوعد لنا هذه التطورات وامثالها ونعلمها
المعاصرين إلى ضرورة وجود نوع من المطلقة بين الأسلوب واللغة التي
يستخدمها الكاتب من جهة، وبين الكاتب وأسلوبه وعناصره من
جهة أخرى، ووجود هذه المطلقة في الأساليب اللدائرية العصرية
له أهميته الكبيرة، إذ أنه يفسر لنا بعض الأوجه التي تحدث;
كاستعمال أو عدم استعمال بعض الأدوات والتزويجية اللغوية حسب ما تتطلب
الأساليب والعناصر معا.

وتشير كلمة أخيرة وقادتم بها هذا العقلاء، وهي أنه إذا
كان هدنا ابتلاء نشرنا العربي الحديث حياة امكانيًا لحياة العصرية،
ومنجاوة مع فريق الكتاب والقراء معا، فما عليها إلا أن ننظر بارتحال
التطورات الحديثة التي اصابت نشرنا المعاصر وأخذت عليها حرفة في التعبير
والتصدير، وسهولة في الوصول بالفهم، إذ أن القوة اللغوية على الـ،
والتصدير، ودقتها على الحرف والبيان، أثرت على معناها، ومادة
ونتوثج عناصرها، والمطلقة الأسلوب المستعمل لفضيحة الحال، وعدم
خريجها عن الأصول العامة المشتركة في كتابة النثر العربي. وفي
الوقت الذي تجد فيه أي علمادي ترى ضعف الاختلاف والتركيب، حيث لا
يوجد ارتباط كبير بين أجزاء ناعمهم، فما علينا إلا أن ننهذه ونحاربه
سواء اكنا أسلوب بسيطة أم بلغاً.
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THE CENTER FOR RESEARCH ON LANGUAGE AND LANGUAGE BEHAVIOR:  
A SURVEY OF RESEARCH\(^1\)  
1965 - 1970

Beth Greene

The Center for Research on Language and Language Behavior (CRLLB) was founded on February 1, 1965 and has continued in operation for six years. As its initial objectives, CRLLB proposed:

1. Basic research on language learning with people of all ages and levels of language functioning;
2. Activities leading to the preparation of techniques and materials to improve language learning;
3. Applied research involving the iterative modification and field testing of instructional techniques, materials and devices; and
4. Dissemination of information leading to the enhancement of research, development, and instruction in language learning.

Study of both formal and thematic repertoires in language functioning were to be conducted. Within the formal area of research such topics as discrimination of auditory and visual stimuli, differentiation of vocal and manual responses, and the integration of these repertoires were to be examined. Thematic explorations were to include analysis and specification of the verbal and non-verbal cues which serve to identify categories of utterances, the production of semantically and grammatically appropriate utterances, and the synthesis of these repertoires into the structure of normal language. Preparation of diagnostic and evaluative instruments, the development of standardized techniques and programmes audio-visual materials to aid in learning language skills were to be developed for the analysis and conduct of language learning.

To accomplish these selected research topics as well as other areas of concern, investigations focused on speech perception and production, language functioning in normal and atypical populations, cross-linguistic variables in language usage, the development of mechanical devices to augment foreign and English as a second language learning, and the development of instructional materials and the field testing and dissemination of those materials.
Research and development activities have been directed fundamentally toward answering four kinds of questions about language: how does it operate (language processes); how does it come about (language acquisition); how can it be altered (language modification); what are its formal properties (language structure)?

**Language Research Library**

As an aid to CRLB personnel a Language Research Library was established. Planned as a reference library for linguistics and the psychology of language, it contains a good selection of basic reference and research materials. Approximately 1000 hard and soft bound books are available, the majority acquired between January 1966 and December 1967. Among this number are some important foreign and domestic research reports. An extensive collection of scholarly journals, numbering some 500, are currently received, many consecutively since 1966. These journals are utilized by both members of the Center and Language and Language Behavior Abstracts which shares the facilities. Included in the library are tape (350), microfilm (315), and microfiche (500 DDC documents), as well as copies of all CRLB publications. Library resources are available to people who are not connected with CRLB; that is, University of Michigan faculty and students and visiting scholars at CRILB and the University.

**Dissemination Activities**

Dissemination activities have been a continuing major concern. Periodic reports have included interim and final reports of ongoing research activity spanning dozens of research projects. During the past six years over 1500 requests for CRLB publications were received and processed and reports supplied to domestic and foreign individuals and institutions. Most CRLB publications will continue to be available through University Microfilms, ERIC, and the University's Research Editorial Office.

A significant conference on Language and Language Behavior held in October 1966 included participation by Center members and invited scholars from other institutions. Attended by some 750 persons, the conference provided a forum for the interchange of ideas in all areas of language behavior (Zade, 1968).

**Language and Language Behavior Abstracts**

Since 1967 CRLB has published Language and Language Behavior Abstracts (CRLBA) as a quarterly journal to be published by the University of Michigan. It contains summaries of articles on the nature and use of language which were originally published in 25 different languages. More than 2000 scientific journals, research reports, occasional papers, and periodic reports from over 40 countries are regularly screened for relevant articles. Although much of this literature is relatively well known and of excellent repute in its country of origin, a large portion
Greene is not widely disseminated and thus is not easily identified as a resource by potential users.

The function of LLBA is the identification and acquisition of this literature, the selecting and abstracting of articles dealing with language and language behavior, and the dissemination of these summaries to interested scholars and researchers throughout the world's scientific community. As a comprehensive journal, LLBA deals with articles from about 30 disciplines including its broad scope psycholinguistics, sociolinguistics and applied linguistics including second language learning, speech and hearing pathology and physiology, anthropology, educational and medical specialties.

LLBA has concentrated on overcoming rigid discipline orientation and limits of language and geography by the use of an interdisciplinary and international approach. By providing a central source of all research related to language and language behavior, methods and findings of one discipline are made available to researchers in other areas concerned with related problems. LLBA's international approach is an attempt to overcome communication barriers arising from geographical distribution and language diversity by centralizing the literature.

Programmed Instruction as a Method of Teaching Languages

One of the goals of programmed instruction is to allow the student to work at his own pace and in so doing permit him to master a particular skill before advancing to other skills (Geis, 1966; Smith, 1966). Members of CRLLB investigated the role of the printed answer in programmed instruction (Geis, Jacobs, & Spenser, 1965). It is generally accepted that the immediate feedback available in programmed instruction reinforces the learner.

This series of studies revealed that there is a trimodal distribution of answer observing in programmed materials. A few students look at every answer, a few look at no answers, and most students look at some of the answers. Furthermore, the probability of a student observing an answer after having made an error was higher than after having made a correct response. Thus, observing answers when the student knows or suspects that he has made an error complicates the role of the answer as a reinforcer. He may be reinforcing his incorrect responding behavior (Geis & Nielsen, 1967).

A more positive view suggests that when subjects are uncertain as to the correctness of their answer, exposing the answer makes possible a correction on their part and increases the likelihood that they will emit a correct answer on the next occasion that such an answer is called for. This view is consistent with the guiding principles of programmed instruction. The high degree of redundancy in programmed instruction permits the student to correct himself and consequently learn the correct response.
It should be noted that no correlation was found between confirming behavior and performance. This finding suggests that students have unique personal response styles. In addition the particular mode of presentation of the correct answer (tab-pull, flip card, or successive frame) produced different amounts of answer observing but no differences in performance on post-test measures of content.

To encourage and facilitate the use of programmed instruction and self-instructional techniques, a bibliography was prepared at the earliest possible date (Knapp, 1966). In addition, articles containing background information on programmed instruction and specific suggestions for applying the principles of programmed instruction to language courses were included (Brethower, 1966; Smith, 1966).

Second Language Learning

Arabic

Second language learning has been a major concern of CLILB. One language area that was examined extensively was Arabic. When these investigations were begun, no satisfactory contrastive studies had been done on the phonology and prosody of American English and Arabic dialects, especially from a pedagogical viewpoint. Therefore, this area of study was of interest to both language teachers and linguists. Undertaken in 1966 by Rammery, a contrastive analysis of the prosodies of General American English (GAE) and Colloquial Jordanian Arabic (CJA) identified areas of difficulty that native Arabic speakers had when learning English. Rammery, J. L., (1967). Problems of stress, rhythm, and intonation complicated the learning of English. To overcome this, a contrastive analysis of native Arabic speech was able to approximate the correct English prosodic patterns (stress, rhythm, intonation) which are quite different from those of Arabic.

A distinctive part of this research was the use of the Speech-Auto-Instructional Device (SAID) developed at the Behavior Analysis Laboratory of The University of Michigan (Mellen & Lane, 1964). The SAID system, a computer-controlled analyzer, provided immediate feedback to the student as he attempted to reproduce the phonetic patterns. Although SAID was time-consuming, extensive, and very demanding for the student, this technique enabled students to acquire more natural sounding GAE patterns.

A programmed course in Modern Literary Arabic (MLA) phonology and syntax has been developed at CLILB by McCune and Rammery. In 1967 research involving a word count of MLA textbooks used in the United States was started (McCune & Rammery, 1967). The main objective of this research was to provide a practical vocabulary base for a fully-programs course in Arabic phonology and syntax (McCune & Rammery, 1967). This was followed by a study involving a contrastive analysis...
of American English (AE) and Modern Literary Arabic (MLA) and an analysis of the MLA writing system (McCarus & Rammuny, 1967). From this study, and the computerized word count of 11 MLA textbooks, three sets of instructional materials dealing with pronunciation, reading, and writing were drafted in 1967. These semi-programmed materials, entitled "Phonology and Script of Modern Literary Arabic" intended to teach Arabic phonology and script combined to native speakers of English (McCarus & Rammuny, 1966). The materials contain exercises especially constructed to train the student to make subtle discriminations in Arabic pronunciation and to interpret equally subtle written variations in Arabic script. Field tested at The University of Michigan, as well as at several other major educational institutions, the materials were reworked, retested, and in order to make it as widely usable as possible, the materials appeared in a fully programmed course entitled "A Programmed Course in Modern Literary Arabic Phonology and Script" in 1969 (McCarus & Rammuny, 1969).

Subsequently revised in 1970, these materials became the first of their type to teach Arabic phonology and script combined together in a programmed course. Such a course was badly needed in view of the increased use of modern audio-lingual techniques in the teaching of Arabic in this country. Included with the texts are coordinated tapes to provide an integrated approach to learning Arabic.

**Interference Variables in Language Learning**

In learning a second language there are many interfering variables as well as variables that facilitate learning. Most research is concerned with the facilitating factors. However, at CRLLB several variables which led to interference in second language learning were examined.

In one such experiment, subjects were chosen who varied in their experience with French (no experience in any Romance language, second semester college French, native French speakers) to explore the relationship between foreign language experience and color word interference (Sisson, 1968). The task required subjects to state aloud the color of the ink used to print a series of color words on a white card. Interference occurred because the color of the ink and the color name were always incongruent. Previous research consistently revealed that performance time was fastest when subjects read a series of color words printed in black ink (W), somewhat slower when subjects named patches of color (C), and appreciably slower when they had to name the color of the ink used to print the color name (CW). This last case requires that the color of the ink and the color name must both vary and always be incongruent.

In this study the W condition consisted of four English color words printed in random series in black ink, the C condition presented an equal number of circles of the four colors, and the CW (interference) condition presented the four color words in French printed in incongruent ink colors which the subject had to name by English color name.
results indicated that when the color names were in French and the subject was required to name the ink colors in English, greater familiarity French was associated with greater interference in color naming.

Another study explored the intervening steps of bilingual speakers in a word association task which questioned facilitation and interference in bilingual performance—the degree of thinking in the foreign language (Riegel, 1970).

Ritchie (1968) considered interference as a basic problem of second language learning. He demonstrated the qualitative differences involved when speakers of different native languages learn English. The suggestion was made that training procedures in teaching phonology might be varied with respect to the native language of the learner to capitalize on phonological similarities. Systematic categorization of interfering behavior might reduce the influence of deeply entrenched native language phonology in second language learning.

Recent Research in Second Language Learning

Recent Center research has focused primarily on the acquisition of second language skills, the development of instructional materials for teaching these skills, and ways to improve classroom instruction in a second language.

Hebrew

The development of instructional materials for the teaching of Modern Hebrew has resulted in a set of 15 units (Coffin, Schloss, Paper, 1970). These units are noteworthy in that they deal with topics that are of popular interest in archeology, geography, and history of Israel, and history of Jewish communities in the United States. All the units are based on non-fiction sources and as such reflect an increased concern with cultural affiliation toward the group which speaks the language one is learning. The completed set of units is subject to revision following field testing in the Modern Hebrew program at the University of Michigan.

Cantonese

A beginning Cantonese Chinese course for students acquainted with Mandarin Chinese is being produced (De, 1970). Initially the vocabulary introduced in this course will be correlated with the vocabulary introduced in beginning Mandarin courses. The vocabularies have been sifted for "cognate correspondence"; that is, a categorization has been made between 1) items that, when given the appropriate Cantonese reading, retain the same meaning they had in Mandarin, and 2) those items which cannot be directly transferred. Thus the course attempts to use the pre-existing knowledge of the student to facilitate acquisition of...
appropriate pronunciation, a set of Cantonese-Mandarin phonological correspondences has been compiled. The comparative description of Cantonese and Mandarin phonological systems will provide an extensive body of data on which pronunciation drills and annotations of items presented in the texts may be based.

**Arabic**

The Arabic group has as its current goal a comprehensive treatment of Modern Literary Arabic (MLA) syntax (McCarus, Rammuny, Abboud & Erwin, 1970). A corpus of one million words from a large number of texts will be stored on a computer to permit immediate retrieval of occurrences of any structure under study. On completion of the analysis and description of MLA syntax, it will be feasible to do a contrastive analysis of English and Arabic syntax, then to pinpoint those features of Arabic structure most difficult for English speakers to master, and then experiment on the most effective ways to teach them.

**Phonological Rule Learning**

Experimental studies have provided hard data on two aspects of second language learning in the areas of phonological rule learning and spoken language. Schane and Tranel (1970) have demonstrated the necessity of providing students with rules of phonology to aid them in mastering certain second language phonological variables. Experimental evidence on discovery learning by students of the natural rule in French phonology (for example, elision and liaison) demonstrated that when the natural rule was included in the learning of a nonsense language "Newspeak", students showed more rapid mastery of "rules" than when the natural rule was non-existent. Thus, in teaching phonology the presentation of the rule per se should facilitate pupil mastery of the specific constructions.

**Training in Production and Discrimination**

An investigation into the method of training of production and discrimination of exotic sounds compared two conventional teaching methods: auditory vs. articulatory (Catford & Pisoni, 1970). The results somewhat negate the use of programmed instruction in the pedagogy of foreign languages. Emphasis is placed on the need for a human instructor to describe articulatory postures required to produce specific sounds rather than an auditory model specifying listen-imitate-repeat as in a programmed technique.

**Authentic Pronunciation in Second Language Learning**

For the speaker of a second language to approximate the native speaker, his pronunciation seems to be more crucial than his knowledge of either semantics or syntax. In other words an authentic sounding
"accent" is more relevant than vocabulary or grammatical correctness. Much of the teaching of second languages has stressed vocabulary and grammar. Recent pedagogy has emphasized the conversational approach which includes increased attention to pronunciation.

A large body of research at CRLB has been concerned with the acquisition of authentic pronunciation. Several studies reflect basic research on the nature of the sounds of the second language (both English as a second language and foreign languages including Arabic, Chinese, and French), pedagogical techniques, and mechanical aids for teaching the sound system.

Native-like fluency in a second language is predicated on a mastery of its patterns of intonation, stress, and rhythm—in short, a mastery of its prosody. To train learners in these areas of foreign languages, an electromechanical device was built. At CRLB that device, the Speech Auto-Instructional Device (SAID) has been modified and employed in several research experiments.

**Speech Auto-Instructional Device**

SAID presents to the student tape-recorded pattern sentences that are considered to be standards in prosodic performance. These sentences are programmed in the best known sequence for teaching prosody in the target language to a speaker of a given native language. The student is instructed to imitate the pattern sentence after he hears it. Second, SAID processes the student's imitation, and instantaneously evaluates its acceptability on the basis of its three distinct prosodic features: pitch, loudness, and tempo. Third, SAID immediately displays to the student the degree to which his imitation is unacceptable, and demonstrates how he must modify his next imitation, in the prosodic feature under consideration in order to make the imitation more acceptable. This process of presentation-evaluation-display repeats itself until the prosody of the student's imitation is acceptable (Buiten & Lane, 1965).

It is to the second step of this above procedure that continued research has been directed. An examination of the sources of parameter variability of vowels was conducted to ascertain the possibility of mechanical recognition (Hemdal, 1967). By limiting the computer analysis to formants one and two (F1 and F2), it was found that the vowels could be correctly classified. Formant location of 176 productions of eight vowels for nine different speakers were presented. It was shown that suitable accuracy of classification is obtained by a boundary of constant F1 and a boundary of constant F2. Although this study dealt only with vowel production, it was suggested that it may be of significance in vowel perception.

**Air flow Patterns of Speech Sounds**

A quite different approach to mechanical recognition of speech was taken in a series of studies dealing with airflow out of the mouth in the
production of speech (Catford, Lane, Oster & Ross, 1966; Lane, Catford, Oster, O'Donnell & Rand, 1967; Catford, Josephson & Rand, 1968). Kymographic recording of total air flow out of the mouth has been used to diagnose the varying durations and degrees of constrictions of the vocal tract during speech. This project attempted to introduce a second dimension to recordings of air flow—cross-sectional area of flow—on the hypothesis that this would reflect changes in the location and cross-sectional shape of constrictions of the vocal tract. The findings were anticipated to be of value in perfecting automatic speech recognition devices and allied objectives.

The system developed for obtaining air flow patterns consisted of a matrix of 16 hot-wire anemometer flow sensors, a PDP-4 Digital computer, an X-Y oscilloscope, a circuit generating circles on the oscilloscope screen in spatial locations corresponding to the locations of the sensors and of sizes corresponding to the flow velocity at each location, and a control box enabling the operator to change the state of the computer.

Upon completion of computer storage of air flow patterns for specific speech sounds, learners would attempt to match their productions of target language (English or foreign languages) patterns to representative patterns in computer storage.

**Personality Variables in Second Language Learning—Empathy**

The effects of personality variables upon second-language acquisition and performance are often cited by language teachers as critical. In a series of studies Guiora, et al. (Guiora, Lane & Bosworth, 1967; Guiora, 1967; Guiora, Taylor & Brandwin, 1968; Taylor, Catford, Guiora & Lane, 1969) have examined the role of empathy on ease of second language acquisition and accuracy in second language pronunciation. The major hypothesis investigated was that people who can be described as high empathizers may achieve a greater degree of pronunciation authenticity than those who are low empathizers.

In an exploratory study an extensive battery of tests was administered to a group of high school French teachers, including measures of personality, interest patterns, general aptitude and intelligence, and perceptual functioning. Subjects' spoken French was rated by a panel of native French speakers (Guiora, Lane & Bosworth, 1967). An instrument was constructed for the purpose of measuring empathic capacity. Briefly, that instrument consisted of strips of film of a person's face shown at reduced speeds (24 frames per sec. to 4 frames per sec.). At these speeds subjects can perceive changes in facial expression undiscernible at regular speeds. These transitory facial expressions were called micro-momentary expressions (MME's).

Results indicated that most of the psychological tests did not correlate significantly with scores on the measures of authenticity.
However, a significant rank order correlation (\(\rho = .60\)) was found between the measures of empathic capacity and those of pronunciation authenticity.

Further studies replicated the significant finding noted above (Guiora, Taylor & Brandwin, 1968; Taylor, Catford, Guiora & Lane, 1969). Undergraduate students received instruction in the pronunciation of Japanese. Ten utterances were tape recorded for each subject; five were immediate imitations of the instructor and five were responses during dialogue. These utterances were rated for accuracy in pronunciation by two native Japanese linguists. Subjects were also given the MME test of empathy to provide a measure of empathic capacity. In addition they wrote responses to several cards of the Thematic Apperception Test (TAT) which were scored for empathy (sensitivity to feelings for characters in the stories).

The overall results of these studies tend to support the theory on which the investigation was based. Individuals who were more aware of feelings were more sensitive to the details and specific aspects of the second language and reflected this in speaking. To account for some negative findings, it was suggested that anxiety might affect MME responding and act as a distractor in second language pronunciation accuracy.

This possibility was explored in another study (Garwood, Guiora & Kalter, 1970). Several measures of anxiety were administered to subjects as well as the MME task. The results did not corroborate the suggested relationship between anxiety and MME responses. Currently a large scale replication of the original Michigan study is underway with the assistance and facilities of the Defense Language Institute.

**Instructional Devices--Pluralingua**

Language laboratories have become a significant aid in teaching second languages. The development at CRLLB of the Pluralingua (Companys, 1968) added a dimension to language laboratory procedures. Basically a self-contained language laboratory, the Pluralingua is a standard 4-track tape recorder modified by the addition of extra amplifiers, filters, voice-operated relays, and other relays to permit the responses of up to six students to be recorded during a single laboratory session on one spool of specially prepared magnetic tape. Different tracks of the tape are utilized to allow simultaneous involvement by all students while permitting a single instructor to monitor specific channels which contain only student responses.

The Pluralingua permits active student participation. Through the use of more than two channels, the model stimulus may be responded to more than one time without the time delay needed to rewind the tape which is the case in most tape recorded lessons. A study by Sisson (1970) indicated that students who were actively involved, as opposed to those who had to delay their comparisons to the model stimulus,
achieved superior results on tests designed to measure their progress in pronunciation and discrimination.

Classroom Dynamics--Verbal Interaction

Foreign Language Classes

Several studies were undertaken examining verbal interaction in foreign language classes for the purpose of improving teacher training. The earlier studies made video tape recordings and analyzed the temporal distribution of instructor's speaking time (Dugas, Knapp & Sisson, 1966; Knapp, Dugas & Geis, 1966). In spite of the differences in the constitution and conduct of various classes, several properties of their temporal distribution are relatively constant.

The amount of total speaking time was almost uniformly divided into 45% student speaking time and 55% teacher speaking time. Further, teachers' speaking time was relatively consistently divided into model time (20%), prompting, correcting and confirming time (10%), and other time (25%). A major discriminating feature was the amount of silent time, especially the wide variation in length of pauses in the students' responses before prompting and the length of time after a model has been presented but before a student was selected to respond (Dugas, Knapp & Sisson, 1966).

The same video tapes were analyzed to determine specific teaching problems related to teacher student interactions. The analysis led to recommendations for more effective and efficient classroom teaching concerning specification of student terminal behavior, diagnostic testing, strategies of teaching, contingency management, and language skills. Teachers, in this study University teaching fellows in French, viewed edited versions of these tapes as part of an in-service training program. Awareness of the behavior that occurred in the class, rather than consciousness of methods of instruction, was emphasized in this study (Knapp, Dugas & Geis, 1966). The teachers were able to talk objectively about classroom behaviors. In the absence of follow-up data on these teachers, the authors suggest that the teaching fellows were at least aware of the importance of specifying a set of terminal behaviors which would then act as a guide in their teaching.

A recent study sought to develop, test, and refine instruments directed specifically at describing verbal behavior in the language classroom (Capelle, Jarvella & Revelle, 1970). An observational system following the model developed by Flanders (1964) consisted of 10 macrocategories (7 to indicate teacher behavior, 2 for student behavior, and 1 for silence or confusion). However, Capelle refined this model by subdividing seven of the macrocategories to more adequately reflect foreign language teaching interaction and techniques. (For example, Category 8--Student responses--is broken into three parts: 8₁ indicating individual repetition, 8₂ choral repetition or answers, 8₃ individual
answers.) A second observation system was designed to reflect the teacher's command of the foreign language. It consisted of five major categories with appropriate linguistic subcategories to describe specific weaknesses or errors in spoken French.

**Special Education Classes**

Teacher-pupil interaction in classes for normals, educable mentally retarded (EMR) and trainable mentally retarded (TMR) were analyzed to determine the differences in patterns of interaction (Semmel, Herzog, Kreider & Charves, 1967). In the earlier study of normals and EMR's, differences in both the amount and nature of teacher and pupil talk in the two types of classrooms were found (Semmel, Herzog & Jorgenson, 1965). When the data for TMR classes is included, several trends may be noted. EMR teachers made greatest use of lectures and TMR the least, with teachers of normal children falling in between. Student response may be a function of intelligence in that normals respond the most, TMR the least. More student statements were initiated in EMR classrooms than either TMR or normal classes. TMR classes appear to have much more silence and/or confusion than regular or EMR classes.

**Computer-Assisted Teacher Training System**

The development of a Computer-Assisted Teacher Training System (CATTS) at CRLLB was motivated by earlier work on the analysis of teacher-pupil interaction in the classroom (Semmel, et al., 1963). An extensive demonstration-research project was designed to determine the effects of feedback on teacher trainees who were systematically observed and evaluated during 15 half-hour practicum teaching lessons. By utilizing a computer (PDP-4) and elaborate hard- and software components, a button press coding system was developed to replace the time-consuming coding, tallying, summarizing and analysis of in-person observation. Furthermore, the incorporation of real-time computer assistance provided the in-situ teacher with immediate visual feedback on his teaching behaviors. A cathode ray tube was placed near the teacher in the classroom and the scope displays indicated cumulative percentage curves for several interaction variables. The teacher was able to monitor his performance through CATTS and regulate his behavior to conform to specific behavioral objectives.

It was determined in a pilot project that a teacher could use continuous feedback within a classroom setting with minimal interference to his verbal teaching behavior (Semmel, et al., 1968). With very little introduction to CATTS, the teacher could decode the information presented on the scope display and decode the types of behavior represented by this form of abstraction.

Using CRLLB facilities, three dissertations employed CATTS with teachers of mentally retarded children (Kreider, 1969; Schmitt, 1969; Weaver, 1969). These studies were concerned with modifying teachers'
questioning behavior, increasing teacher use of pupil ideas, and teacher expectancies regarding teacher-pupil interactions. Results of these explorations indicate that CATTS could aid teachers in directing their own behavior toward specific goals. Immediate feedback enabled teachers to regulate themselves during an on-going teaching situation. However, analysis of overall teaching behavior cannot so effectively be incorporated into the system at this time.

Native Language Acquisition and Development

To understand language behavior in normal speakers and listeners, it is necessary to look at the language abilities of such atypical groups as the mentally retarded. Examination of this population of speakers provides some important insights to language behavior. In the mentally retarded language development proceeds at a slower pace than in normals. This lag permits investigators to determine possible language acquisition stages.

Language Development--Mentally Retarded

Mentally retarded children have been found to have deficient learning sets (Semmel & Williams, 1966). They require extra motivation and attention for adequate learning due to this deficit. While normals acquire a great deal of what they know through incidental learning, educable mentally retarded children do not learn this way to any great degree. Instruction must be provided to compensate for the retardates' ineffective incidental learning.

Several studies by Semmel and his associates were concerned with a grammatical analysis of word associations in mentally retarded children (both institutionalized and in public school classes) and normals (Semmel, Barritt, Bennett & Perfetti, 1965, 1966; Semmel & Bennett, 1966). Previous research indicated that children tend to move from sequential responses (syntagmatic responses) to associations falling within the same grammatical class (paradigmatic). This progression from syntagmatic to paradigmatic word associations was suggested as evidence for an increasing grammatical competence in language functioning.

In a word association task a grammatical analysis was undertaken (Semmel, et al., 1965, 1966). Retarded subjects were randomly chosen from institutionalized retarded (I-R) and from public school classes (PS-R). Normals consisted of subgroups selected from a mental age range (MA-N) and a chronological age range (CA-N) both comparable to the two retarded subgroups. Results indicated that the CA-N subgroup gave significantly more associates of the same form class (paradigmatic) than the other three subgroups. The PS-R and MA-N were rather similar in their performance; the I-R group gave fewest paradigmatic responses.

Thus, these results partially confirm the previously reported findings that as children grow older there is a shift from primarily
sequential associations to responses of the same grammatical form class. In addition, these results directly implicate intellectual level as a significant variable in the shift to associations of the same grammatical form class. The difference between PS-R and CA-N and the lack of difference between PS-R and MA-N leads to the conclusion that mental age as well as chronological age appears to play a significant role in the shift from syntagmatic to paradigmatic associations.

In a subsequent study the relationship of paradigmatic free word associations (W-A) to paired associate (P-A) learning was investigated (Semmel, Sitko & Semmel, 1968). Educable mentally retarded boys were grouped as high and low paradigmatic responders on the basis of their responses in a free W-A task. Paired associates were employed which varied in degree of association strength and in the grammatical form-class of their items. The results suggested that EMR boys who are predominantly high-paradigmatic W-A responders are able to utilize both grammatical and associative cues in paired-associate learning, while low paradigmatic EMR boys lack strong habits to avail themselves of their more limited competence in recoding linguistic units into grammatical form classes.

Semmel, et al., in their ongoing studies of the retarded, tabulated oral word association responses of EMR boys to facilitate future research endeavors (Semmel, Sitko, Semmel, 1969). Since the stimulus words were based on an established list of words most commonly used by retarded children (Mein & O'Conno: 1960), these norms provide valuable information for this subject population.

Language Development-Processing Connected Discourse

Rosenberg in a series of studies ranging over a period of about three years and numbering some 20 provided detailed and specific data on various aspects of recall and facilitation in the learning of sentences and sentences in connected discourse. Attempting to control as many extraneous variables in his experiments as possible, he has developed three sets of sentence norms. The first two sets were developed prior to his association with CRLB. Previously compiled "Associative Sentence Norms" (1965) and "Associative Sentence Norms: Simple Declarative Sentences" (1966) provided the bases for his extensive research at CRLB. "Norms of Sequential Associative Dependencies in Active Declarative Sentences" (1967), the third set of norms, provided normative data on object nouns most frequently associated with specific verbs. In this set of norms the stimulus sentence frames were of the form: The dog _____ the _____.

Using associatively related words to examine the facilitation of recall of connected discourse, it was found that associatively related words 1) facilitate recall of the associates, and 2) facilitate recall of the passage in general (Rosenberg, 1967a).
Essentially a replication of the above study, a control passage containing high strength R-words (response words) but replacing S-words (stimulus words) with associatively unrelated items yielded an extreme difference between High association (HA) and Control (C) passages (Rosenberg, 1967b). However, there were no significant differences between HA and Low Association (LA) passages or between LA and C passages. The lack of significant difference between LA and C in the recall of pairs indicates that it was not some characteristic of the HA-R words that was responsible for the superiority of Group HA in the recall of pairs. The C group difficulty in recall of S and R words may have been a result of some characteristic or characteristics of the words themselves.

The next step was to determine the source of facilitation in the recall of associates embedded in connected discourse (Rosenberg, 1967c). The HA group was superior in recall for words in pairs in a recognition memory task as they were in recall of connected discourse studies. This finding suggests that to a certain extent HA word pairs embedded in connected discourse may be stored as pairs.

The recall of sentences constructed from pairs of HA and LA associations were prepared using controlled association norms. An intra-list interference task was constructed by pairing the NP of one sentence with VP of another sentence in the same list. The interference condition impeded recall of the sentences for both HA and LA associations.

Grammatical and associative factors in sentence recall were then examined (Rosenberg, 1967d, e). Three independent variables were included: Active vs. Passive sentence type, HA vs. LA, and Animte vs. Inanimate object-noun. For associatively well-integrated sentences neither grammatical function (subject vs. object nouns) nor sentence type (active vs. passive) made any difference in recall. This was not true for LA sentences. The results for sentence recall are interesting in that they demonstrate the importance of a particular variable—word class subcategory—one which has not been studied extensively.

Groups of four associatively related or four associatively unrelated nouns were embedded in connected discourse using identical contexts. Using two methods of retrieval, a written recall test and a paced successive binary recognition-memory test, the facilitating effect of association was demonstrated. In other words, associatively related nouns are stored more efficiently than associatively unrelated nouns and were thus subject to superior recall or recognition.

Turning attention to the production of connected discourse, Ss were provided with lists of associatively related or unrelated nouns and told to write a story that contained the nouns from the experimental lists (Rosenberg, 1967f, g, h). Main findings included: 1) The clusters of key items that appeared in the sentences of the high association (HA) productions were larger than the clusters that appeared in the sentences of the low association (LA) productions, 2) A knowledge of associative
relationships makes it possible to predict which nouns will occur together in the same sentence, and 3) The HA productions tended to be shorter than the LA productions.

Using the same experimental task to extend this area of investigation to syntactic relations, it was found that HA nouns tended to occur as identical constituents of the same underlying sentence, while LA nouns tended to occur in different underlying sentences (Rosenberg, 1967i).

Sentences of controlled association strength (HA vs. LA) were presented in either grammatically correct syntactic structure or randomly (ungrammatical syntactic structure) (Rosenberg, 1968b). Instructions for the recall task required either ordered learning of the string or free-learning. (That is, Learn the string in order or learn the words in any order.) Results indicated that it appears that subjects may recall associatively related words better than associatively unrelated words but have difficulty arranging them in proper order when the words appear in long ungrammatical strings; that the effectiveness of grammatical structure is reduced if subjects are not required to learn and recall items in order; and that instructions appear to be an important variable in serial recall regardless of level of association and grammatical structure. It is clear from the results for total word recall that the effect of learning and recall instructions is upon the serial organization of items in recall and not upon the probability of recall of items. These last results are not consistent with the common observation that free recall is superior to ordered recall in the case of word lists.

Rosenberg's investigations sought to characterize the nature of semantic structure at the level of the sentence and to evaluate the effect of parameters of semantic structures on the storage and retrieval of sentences in verbal learning (Rosenberg, 1968b, c, d, e). Evidence supporting the functional importance of semantic markers and their associated structural relationships could hopefully provide a fresh approach to the problem of evolving a psychologically based "grammar" which critically involves the interface between syntactic and semantic systems.

Language Acquisition

Acquisition of one's native language has been studied at CRLLB. Analysis of the prosody of infant's vocalizing was undertaken by Lane and Sheppard (Sheppard & Lane, 1966a, b; Sheppard, 1967). A later stage of development is examined by McNeill. He is concerned with the form nature of language acquisition by children. Concerned with explaining the rapidity and extent of language acquisition, he provides a theoretical explanation of language acquisition in terms of generative grammar and describes the nature of linguistic universals which influence and direct the acquisition process in children.
Infant Proagdy

Infant vocalizing was recorded continuously and completely during the first five months of life. Electro-acoustic analysis of samples from this body of infant vocalizations was conducted to provide composite statistics describing three prosodic features of the vocalizing: fundamental frequency, relative amplitude and duration. Developmental changes in the fundamental frequencies of utterances over the first 141 days showed that the average fundamental frequencies of utterances [M(MF)] at birth was approximately 438 cps; then it decreased to 411 cps by sample 18 (about 21 days), and remained there until sample 36 (about 45 days); then it rose and stabilized at about 450 cps for the duration of the study. The infant's utterances did not become more variable in pitch as he grew older; approximately two-thirds of the utterances in a typical sample had fundamental frequencies within about ten percent of the mean value. They concluded that the infant's pitch did not fluctuate during an utterance either more or less as he grew older. Variability in amplitude within utterances was greater than the variability in fundamental frequency within utterances.

The arithmetic mean of utterances was approximately 613 msec at birth decreased to 466 msec at 21 days and then rose to about 600 msec at 45 days at which level it remained for the rest of the study. A developmental trend is noteworthy in that there was covariation of average fundamental frequency and average duration. The parameters show a decrease from their initial values, then an increase to a value which exceeded the initial level, and, finally, stability for the duration of the study.

Three possible explanations of these trends are offered: due to chance fluctuations (unlikely since the trend is across measures), physiological development (combination of increase in length, thickness and area of vocal cords and increase in age in the subglottal pressure), and difference in crying vs. non-crying responses (that is, unconditioned reflex crying-responses vs. operant crying-responses controlled by environmental stimuli) and the gradual disappearance of reflexive crying and appearance of motivated crying.

A Theory of Language Acquisition

McNeill's investigations consider the acquisition of language as a question of specifying how children's capacity for language interacts with their linguistic experience—the interaction taking the form of relating the universal aspects of deep structure to the idiosyncratic aspects of the surface structure of language (McNeill, 1966a, b, c, d; 1967a, b, c). He credits children with an inborn capacity for language acquisition, a capacity that consists of expectations as to the general form taken by natural language.

An abstract "Language Acquisition Device" (LAD) is postulated by McNeill. LAD receives a large corpus of speech containing both
grammatical and non-grammatical utterances. Upon receipt of the corpus, LAD creates a grammatical system, which may be regarded as LAD's theory about the regularities that appear in the corpus of speech. With this internalized grammatical system, LAD will allow predictions of which utterances will be grammatical. LAD is then some sort of cognitive mechanism which enables a child to acquire his native language.

To acquire a particular language a child must formulate hypotheses that enable him to produce utterances that are understandable and grammatical. A child's grammar has a set of simple rules and whose output would not be considered grammatical if generated by an adult speaker. Children's utterances are quite short, one to four words, expressing complex ideas. These utterances have been labelled with the generic term telegraphic in that they look very much like reduced adult sentences as one would use in telegrams to save space. For the child the "reduced" form may indeed save space in memory because, although the child can understand longer more complex sentences when spoken by an adult, he produces only short utterances. Even when imitating an adult sentence, the child reduces it to a size he can handle.

Elementary children's grammars have been written by several investigators. McNeill compares the grammatical rules that would generate the speech recorded in these studies. These rules appear to develop hierarchically, increasing in complexity as the child matures.

In an attempt to validate hypotheses about language acquisition, McNeill studied the spontaneous speech in Japanese children, a language quite different from English. The child's speech had few rules not unlike the rules of the American children studied. Furthermore, the child's earliest speech contained an abstract feature as it must if a linguistic universal reflects an aspect of the fundamental capacity for language.

Transformations must be acquired by the child in order to handle more complex utterances. Data on American, Japanese, and Russian children is provided to indicate that they formulate hypotheses about the regularities observed in parental speech. Needless to say the particular transformations of each language are peculiar to that language. In each language children evaluate their hypotheses against further evidence to enhance their ability to handle specific transformations in their language.

McNeill attacks the application of simple and mediated stimulus-response principles to an explanation of language acquisition. These theories restrict learning to the acquisition of overt responses, at least initially, whereas languages with transformational rules require the acquisition of underlying forms that are never presented overtly in speech. He proposes a biologically based capacity for language; an inborn set of predispositions to develop a grammar of immense complexity and richness on the basis of very small amounts of evidence.
Complex Language Episodes

Studies of analytic and productive skills in complex language episodes were primarily concerned with tagmemic analysis, rhetoric, and paragraph structure (Becker & Young, 1965, 1966; Young, 1968). Several of these studies are part of a continuing effort to develop both a theory of rhetoric based on tagmemic principles and effective pedagogical tools based on the theory. Studies on the nature and application of tagmemic discovery procedure would provide a bridge between investigation of covert, internal operations and studies of overt verbal production, since tagmemic discovery procedure shows certain features of each. The internal component consists of directed research along well-defined lines of inquiry calculated to isolate and analyze problems, to retrieve a maximum amount of relevant information available to the inquirer, and to stimulate the discovery of original ordering principles. In short, the procedure enables one to probe his own fund of knowledge in a systematic and productive manner. This procedure may offer a method for achieving control over what rhetoricians have come to call the "pre-writing stage" of the writing process.

Young (1969) has discussed the absence of motivation for engaging in pre-writing activities. He suggests that an extension of pre-writing activities to include the perception and formulation of problems may enable the teacher to create classroom situations which deal with real problems (relevance), to teach the later stages of the writing process more effectively, and to increase student involvement.

Becker (1967), in his thesis "A Generative Description of English Subject Tagmemes", done in part under the auspices of CHILB, described the considerable generative capacity of a tagmemic grammar.

Psychological Studies of the Paragraph

Several studies sought to establish the psychological reality of the paragraph (Koen, 1967; Koen, Becker & Young, 1967). An outgrowth of tagmemic principles, these studies examined the paragraph by presenting passages of expository prose to students. Nonsense words were substituted for all content words in each passage, grammatical endings on words retained, and paragraph indentions removed. Unaltered passages were also presented. Results showed that subjects were able to place indentations in unindented stretches in both English and nonsense versions of prose with a significantly high degree of agreement ($r = .82$) and that semantic cues were not essential to such discriminations in some cases.

To ascertain developmental changes in paragraphing ability, a similar task was presented to elementary, junior and senior high school students (Koen, Becker & Young, 1968). Product-moment correlations increased regularly from the youngest to the oldest age group for both English and nonsense passages. These data are compatible with the idea
that the development of the syntactic system precedes that of the semantic—at least up to a certain point (around 12 years of age). Thus, it may be said that the progress in the processing of formal cues is fairly regular and apparently consists of increasingly finer discriminations of the cues used by adults.

Young, Becker, and Pike (1970) have recently published a book on rhetoric. Concerned in part with work done at CRLLB, a modern theory of rhetoric based on tagmemic principles is presented.

Language Disability

The language behavior of several language disability groups was examined. Many individuals investigated the language functioning in such areas as: aphasia, socio-cultural and socio-economic class differences, schizophrenia, dysarthric speech, mental retardation, dialect differences, and non-standard English.

Specific studies were concerned with such investigations as: comparisons of advantaged and disadvantaged children on productive and receptive language skills (Barritt, Semmel & Weener, 1966; 1967); language training programs for preschool age children of migrant workers (Hagen & Hallahan, 1969); culturally disadvantaged children and speakers of non-standard dialects (Weener, 1965; 1967; Lane, Caroline & Curran, 1967); modification of overt language output of near-mute schizophrenics (Shorkey, 1968; Sundel, 1968; Butterfield, 1973); comprehensibility of dysarthric speech (R. Tikofsky, 1969); and explorations of linguistic competence of aphasics (R. S. Tikofsky & Reiff, 1967; R. S. Tikofsky, Reiff, R. Tikofsky, Oakes, Glazer, & McInish, 1967).

Summary

From its conception, the goal of the Center for Research on Language and Language Behavior has been to contribute to the more effective learning, teaching, and use of language by persons of all ages and abilities. The Center carried out basic and applied research of an interdisciplinary nature as well as programs designed to disseminate information. Over 200 interim and final reports of research appeared in periodic progress reports. In addition, Center personnel independently published articles in scholarly journals and presented papers at conferences, symposia, and workshops. Second language pedagogy was advanced by the development of instructional devices and materials which are currently used extensively. Thus research findings were widely disseminated throughout the scientific community. Its international journal of abstracts in the language sciences, Language and Language Behavior Abstracts, coordinates research related to language and language behavior in a central source. The Center for Research on Language and Language Behavior, through hundreds of varied activities and programs, has achieved many of its initially stated goals.
I. CRLLB Progress Reports


II. Selected Studies


Becker, A. & Young, R. The role of lexical and grammatical cues in paragraph recognition. In Progress Report II.

Brethower, D. M. Thoughts on designing language courses. In Progress Report II.


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McNeill, D. Developmental psycholinguistics. (a) In Progress Report II.

McNeill, D. Some universals of language acquisition. (b) In Progress Report II.

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McNeill, D. On theories of language acquisition. (d) In Progress Report III.


McNeill, D. Cognition and the problem of language acquisition. (c) In Progress Report V, pp. 301-316.


Rammuny, R. Contrastive analysis of the prosody of spoken American English and colloquial Jordanian Arabic. (a) In Progress Report II.

Rammuny, R. An analysis of the differences in the prosodies of general American English and colloquial Jordanian Arabic and their effect on second-language acquisition. (b) In Progress Report III.


Rosenberg, S. The source of facilitation in the recall of associates embedded in connected discourse. (c) In Progress Report IV, pp. 272-276.

Rosenberg, S. Associative facilitation and interference in the recall of sentences. (d) In Progress Report IV, pp. 278-291.


Rosenberg, S. Language habits and the recall of connected discourse. (f) In Progress Report V, pp. 90-100.

Rosenberg, S. Associative facilitation in the recall and recognition of nouns embedded in connected discourse. (g) In Progress Report V, pp. 111-123.


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Semmel, M. I., Herzog, Beverly, & Jorgenson, F. A pilot study of the verbal interaction of regular elementary classes and special classes for the educable mentally retarded. In Progress Report I.


Semmel, M. I., & Williams, J. Intentional and incidental learning in normal, borderline, and retarded children. In Progress Report III.


Sheppard, W. C., & Lane, H. L. Development of the prosodic features of infants' vocalizing. (a) In Progress Report II.

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Smith, D. E. P. Programming as a research strategy. In Progress Report II.


Weener, P. Some differences in the verbal behavior of preschool children from contrasting social environments. In Progress Report I.


Appendix A

Partial Listing of Completed Doctoral Dissertations


Dale, P. S. Children's color categories and the problem of language and cognition, 1968.


Kopp, J. L. I see 'em as I call 'em: Hue discrimination and hue naming across cultures, 1967.

Kreider, J. The effect of computer assisted teacher training system feedback on increasing teacher use of pupil ideas with educable mentally retarded children, 1969.


Sheppard, W. C., Jr. The analysis and control of infant vocal and motor behavior, 1967.


Sundel, M. Modification of two operants (verbal and non-verbal) in near-mute schizophrenics using reinforcement and modeling procedures, 1968.

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Weaver, P. A. Effects of a computer assisted teacher training system and teacher expectancies on teacher-pupil verbal interaction with educable mentally retarded children, 1969.


Footnote

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The patterns of airflow during pronunciation: A feasibility study for automatic recognition and evaluation of speech
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An application of digital inverse filtering to the systematic variation of vowel parameters
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The purpose of this quarterly which started in January 1967 is to provide access—comprehensive, rapid, selective—to the literature in language and language behavior, whatever the disciplinary focus, whatever the country of origin, whatever the language.

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