THE SELF-IMPOSED RESTRICTION OF LINGUISTIC SCIENCE TO
THE STUDY OF LINGUISTIC COMPETENCE HAS PREVENTED LINGUISTS
FROM CONCERNING THEMSELVES WITH THE STUDY OF HOW LANGUAGE IS
USED IN THE DAILY LIVES OF PEOPLE AND, ASIDE FROM OCCASIONAL
SPECULATIONS, HOW IT IS INVOLVED IN THE MAJOR CONCERNS OF
SOCIAL SCIENCE--SOCIETY, CULTURE, AND PERSONALITY. STUDENTS
IN VARIOUS DISCIPLINES HAVE GRADUALLY COME TO REALIZE THAT
MUCH OF INTEREST IN HUMAN BEHAVIOR IS RELATED TO THE
KNOWLEDGE AND USE OF LANGUAGE. TO MEET THE GROWING NEED FOR
THE INTERFERTILIZATION OF LINGUISTICS AND BEHAVIORAL RESEARCH
SCIENCES, NEW CENTERS IN RESEARCH IN LANGUAGE BEHAVIOR HAVE
BEEN ORGANIZED. THE UNIVERSITY OF CALIFORNIA AT BERKELEY IS
CURRENTLY ONE OF THE LEADING CENTERS OF RESEARCH. THIS PAPER
DESCRIBES THE NATURE AND FUNCTIONING OF THE PROPOSED CENTER
FOR LANGUAGE BEHAVIOR RESEARCH AT THE UNIVERSITY OF
CALIFORNIA, BERKELEY. A PROPOSED BUDGET IS ALSO INCLUDED IN
THE OUTLINE. (AMM)

PROPOSAL FOR A CENTER FOR LANGUAGE BEHAVIOR RESEARCH

Submitted to the Institute for International Studies,

University of California, Berkeley

Principal Investigator: Paul Kay, Anthropology

Co-Principal Investigators:

    Brent Berlin, Anthropology

    Susan Ervin-Tripp, Speech

    William Geoghegan, IIS and Anthropology

    John Gumperz, Anthropology

    Terrence Kaufman, Linguistics

    Dan Slobin, Psychology

  Total amount requested: $297,065

April 1967

0. Outline of the proposal.

Section 1. deals with the need for and the goals of the proposed center and gives some historical background. Section 2 describes the structure and functioning of the Center. Section 3. contains the budget.

1. Until sometime in the mid 'fifties, studies of language and studies of human behavior occupied surprisingly separate intellectual traditions with little cross-fertility. Linguists concerned themselves with language as a self-contained code disdaining the study of speech behavior. Psychologists and other social scientists on the other hand pursued the study of verbal behavior with small cognizance of or interest in the sizeable amount of knowledge of the nature of language then available. Unquestionably, both groups suffered from this gratuitous parochialism, and almost as surely the behavioral scientists suffered the most. For example, large amounts of data have been gathered on word associations and until the knowledge of linguistics was applied to these data, little if any theoretical sense was made of them. Similarly, the intellectual abortion that machine translation has turned out to be testifies dramatically to the folly of attempting to deal with practical problems of language use without proper control of the relevant knowledge of language structure. On the linguistic side, the loss has been less

dramatic; the structure of the linguistic code has shown itself susceptible of valid theorization. The work of Chomsky and his associates and the general acceptance of this work by the scientific community attests to the empirical reality of the area of phenomena that linguists have chosen to consider as their special province. The notion of the linguistic code _sui generis_ is unquestionably one with an empirical referrent. Nevertheless, the study of linguistic competence, the tacit knowledge that underlies the use of the linguistic code by speakers of a language, by no means exhausts the study of all interesting phenomena relating to language. Above all, the self-imposed restriction of linguistic science to the study of linguistic competence has prevented linguists from concerning themselves with the study of how language is used in the daily lives of people and, aside from occasional speculations, how it is involved in the major concerns of social science: society, culture, and personality.

The situation described above is one that cried for remedy and the SSRC conference on psycholinguistics of 1953 can be taken, as well as any single event, as the date from which interfertilization of linguistics and the behavioral sciences began in earnest.[1] There has developed in the last decade and a half a truly interdisciplinary field based, not on an abstract belief in the magic of interdisciplinary research, but on the gradual realization by students in various disciplines that much of interest in human behavior is related to the knowledge and use of language. Various aspects of this nascent field, and

sometimes the field itself due to an excess of parochialism of one kind or another, have been called psycholinguistics, socio-linguistics, and anthropological linguistics or linguistic anthropology. A better name might be language behavior. Berkeley has been very much at the center of this development.[2]

Currently research on language behavior is one of the liveliest frontiers in social science. There is a need for consolidation of research in this area and for breaking down the remaining disciplinary barriers.

The study of human behavior involving and related to language is an increasing area of concern in social science, and a field that will be increasingly called on in the future by all pure and applied social sciences. A few exemplary areas are (1) translation, as regards overseas research of all types, (2) language socialization, of interest to all students of human development, whether primarily interested in the individual or in social aspects, (3) the nature of systems of knowledge and belief, a subject unapproachable without a thorough study of the language facts involved and of prime importance to any research, pure or applied, involving a culture foreign to the investigator, (4) the effects of differential language experience on ethnic and social minorities in plural societies, (5) the nature of man [sic]: language is by far the best understood exclusively human and pan-human phenomenon.

Probably the most general contribution of language behavior research to the broad field of social science is its

development of sophisticated methods of comparative analysis.
As will be shown in section 2., language behavior research in-
volves comparisons between dialects, languages, human and animal
communication, systems of social relationships, occupants of
social roles, etc. The list could be extended almost indefi-
nitely. To all these problems of comparison, language behavior
research brings the techniques of descriptive linguistics, psy-
chological experimentation, anthropological formal ("componen-
tial") analysis, and mathematics. It is perhaps not too much to
hope that some useful general principles for comparative analysis
in social science may emerge from this area. As argued below,
effects of this kind are already being felt in the fields of
anthropology and psychology.

In naming the proposed Center, the phrase "Language
Behavior Research," though lacking in euphony, was chosen with
some care. The point bearing emphasis is the marriage of em-
pirical social science method with a knowledge of abstract lin-
guistic structure. Investigation of the behavior of speakers of
a language without control of the structure of that language is
an intellectually arid and profitless undertaking. Similarly,
exclusive concentration on the structure of language as an
abstract object, although an intellectually rewarding pastime,
does not get on with the major business of the social sciences:
findoug out how people work. Language behavior is a growing
interdisciplinary field that bridges just this gap.

Evidence that this field is growing in numbers, and in

influence out of proportion to its numbers, can be seen in the
effects it has produced in the various traditional disciplines.
The first social science disciplines to be affected were naturally
psychology and anthropology. Not only does the burgeoning field
of prycholinguistics attest to this influence but the increasing
prominence of cognitive psychology and even social psychology
generally owe much of their impetus to work by linguistically
sophisticated psychologists such as Brown, Ervin-Tripp, Lenneberg,
Miller, and Slobin. Although traditionally American anthro-
pology has claimed linguistics as one of its subdivisions, the
highly touted intimacy of the relation of language to the rest of
culture has until recently (Sapir notwithstanding) often been
honored more by extravagant lip service than careful research.
The recent highly influential, and accordingly controversial,
trends in social-cultural anthropology named variously
"ethnoscience," "formal analysis," "ethnographic semantics,"
etc., show the influence of language behavior research in anthro-
pology. Sociology has been less affected than anthropology and
psychology, but not totally unaffected. The promising new field
of socio-linguistics has had to be invented largely by linguists
and anthropologists such as Labov, Hymes, Gumperz rather than
sociologists. There are exceptions however; for example Fishman,
Bernstein, and one can confidently expect that contributions of
sociologist to language behavior research will increase in the
future. Of the general social science fields (excluding eco-
nomics) political science has been the least influenced, at

least so far as can be judged by the published literature.
(Some of the work of Deutsch and Pool constitute partial exceptions.) Nevertheless, more than one political scientist has
expressed in private a real interest in developments in this
field, particularly political scientists engaged in comparative
international work who are not satisfied with current methods of
dealing with language problems in international sample survey
work. The attitude here seems to be one of hopeful waiting for
the language oriented social scientists to come up with some new
ideas in methodology. Linguistics itself is also showing interest in language behavior research. Among the many linguists
whose recent work shows this trend are Labov, Ferguson, Greenberg
and Weinreich.

The Berkeley campus is currently one of the leading
centers in research in language behavior. (For a discussion of
individual projects now in progress and in the planning stage
see section 2. of this proposal.) Other universities have recognized the need for such Centers; examples are the highly productive Center for Cognitive Studies at Harvard and the recently
created Center for Research on Language and Language Behavior at
Michigan. Given the relevant intellectual resources now present
on the Berkeley campus (for which see Section 2.) now would
appear to be the time for Berkeley to centralize, unify, and
actively promote its own research in this area.

The proposed Center for Language Behavior Research will
seek to implement this general goal in six major ways:

(1) by providing basic research overhead costs of the kind difficult to obtain under the usual sort of research grant, including especially research space, (2) by localizing in space a number of persons and projects on this campus that have everything to gain intellectually from a higher rate of interaction with the resulting mutual interfertilization, (3) by integrating a core of students into an ongoing, intellectually valid, interdisciplinary research culture, (4) by attracting to this campus outstanding contributors to this area of research as fellows of the Center, (5) by providing the sort of research culture that will attract the best graduate students interested in this kind of work to Berkeley, (6) by providing a small pool of highly flexible funds to stimulate pilot projects of high innovativeness and low certainty of payoff by Berkeley faculty and students. Each of these six points is discussed in greater detail in the following section.

2. The number of separate research projects currently in operation at Berkeley in the social science of language is quite large. Many of these involve collaboration of several faculty members and students. Most of this collaboration is of an interdisciplinary type.

Research in this area always includes language as one of its central foci and always also at least one, but usually more than one, of the social science disciplines. Also, human biology and psychophysiology often play an important part. Character-

istically, the research involves not only variables from linguistics and one social science but consideration of results and methods from other social and biological sciences as well. For example, psycholinguistic studies usually involve social and cultural, and frequently biological, considerations. This fact, which will be established by the following discussion of research presently in progress, argues strongly for a Center at which social scientists from all the interested disciplines and linguists act in effect as intimate (and free) day to day consultants for each other.

The following list of research projects is given as exemplary, but by no means exhaustive, of the currently operating and immanently planned research activity in language behavior at Berkeley. Each project discussed is provided with documentation in the like numbered appendix, except as otherwise noted.

(1) Animal Communication as Part of the General Study of Human Communicative Ability. A. Richard Diebold (proposed Fellow of the Center for the first year,[3] currently of Stanford University). This research seeks to place animal communicative systems in a framework that includes all human communicative systems, including those of gesture, posture, spacial positioning, etc. It aims at a deeper understanding of (1) the nature of all forms of human communication, (2) the particular place of language in this total framework, and (3) the continuities between animal and human communicative abilities.

(2) Biological Bases of Speech Perception. Peter MacNeilage (Visiting Associate Professor of Speech, whose research will form part of the activities of the Project on Phonological Research, directed by William Wang, Linguistics). Speech perception is studied in terms of the muscular and neurological bases of speech production.

(3) Cognitive and Linguistic Development (Dan Slobin, Psychology). Linguistic development in the sense of the acquisition of linguistic competence and cognitive development in the sense of the Geneva school are assessed independently. Relationships, causal or otherwise, between these two phenomena are sought and an attempt is made to assess the roles of maturational and environmental factors.

(4) Color Terminologies: their evolution. (Brent Berlin and Paul Kay, Anthropology). Preliminary research has shown clear substantive universals across languages regarding the foci of color categories encoded in lexicon. An evolutionary sequence in the development of color terminologies is strongly suggested by a pilot analysis of twenty-five languages representing many unrelated language families. A world survey is planned.

(5) Editing of Speech Signals into Linguistic Symbols. (Paul Kay, Anthropology. [There is no Appendix dealing with this project, which is not yet underway. A separate proposal for a pilot project in this area is being submitted to the IIS]). Actual speech, which is commonly quite ungrammatical, is generally

held to be understood by virtue of its relation to (hypothetical)
perfectly grammatical utterances. The nature of this theoreti-
cally important relationship has not previously been studied
empirically.

(6) Ethnobotany of Tzeltal (Brent Berlin, Anthropology). A
comprehensive study including plant inventories, nomenclature,
identification, classification, use, and cultural significance
of all kinds.

(7) European Loan Words in Arabic and Hindi and their Cultural
Significance. (Terrence Kaufman, Linguistics). A comprehensive
inventory of words borrowed from European languages into Arabic
and Hindi will be compiled. Which elements of their meaning as
well as the global meanings of the words themselves are studied
in terms of the light they shed on the receiving cultures and
societies and on the culture contact situations.

(8) Language Socialization Studied Cross-Culturally
(Susan Ervin-Tripp, Speech; John Gumperz, Anthropology; Dan
Slobin, Psychology). Psychological, cultural, social, and matura-
tional factors in the acquisition of linguistic competence in
children in a variety of societies and languages.

(9) Linguistic Atlas of West Coast Indian Languages. (David
Reed, Linguistics. [No documentation is currently available
for Appendix. The unpublished Ph.D. thesis: A Word Geography
of California and Nevada by Elizabeth Bright, Berkeley Department

of Linguistics, may be consulted.]) A linguistic Atlas of the Indian languages of the West Coast of the United States is being compiled with particular reference to dialect variation correlated with such social variables as age, sex, income, social class, etc.

(10.) Mathematical Models of Semantic and Cognitive Structures. William Geoghegan, IIS Visiting Scholar and Department of Anthropology). A general mathematical theory is being developed for the description of semantic and cognitive structures. Emphasis is on the processing of information relating to the identification, evaluation, and prescribing of action in culturally standardized situations. Data is taken chiefly from Phillipine and American systems.

(11.) Numeral Classifiers as Linguistic, Semantic, and Cognitive Systems. (Brent Berlin, Anthropology) A world survey is in progress. Tzeltal systems are treated in fine detail. Numeral classifiers occur in many languages in almost all major language families and furnish well defined semantic domains of great scope that can be studied from cultural, structural, and developmental points of view.

(12.) Psychological Aspects of Transformational Generative Grammar. (Dan Slobin, Psychology) Chief foci are the role of syntax and semantics in the comprehension and memory of sentences.

(13.)   Social Rules as Part of Linguistic Competence.

(Susan Ervin-Tripp, Speech) The notion of Linguistic Competence as comprising only the tacit knowledge of syntax, phonology, and semantics must be expanded to include the tacit knowledge of social context as determiner of appropriate speech style and content.   Chief sources of data are observations of natural conversations and interview situations in which the experimentor controls the social context and observes differential effects on the verbal performances of subjects.

(14.)   Sociological Variables and Linguistic Code Selection.

(John Gumperz, Anthropology) When a community of speakers has more than one linguistic code at its command, a fine-grained analysis of the social situation, including the roles and statuses of the participants, will predict which code will be selected. Similarly, the use of a particular code variant can be shown to influence the definition of the social situation.

(15.)   Syntax Acquisition in Children.   (Susan Ervin-Tripp, Speech) Detailed observation of the speech of young children (aged roughly $1\frac{1}{2}$ to 4 years) indicates that the developmental sequence has a very strong maturational or innate component and that imitation and reinforcement play a minimal role in the learning of appropriate linguistic behavior.

There has also been considerable graduate student research in language behavior at Berkeley, a good part of which is mentioned in the various Appendices.

The above list of research projects is illustrative of
the kind of work in the area of language behavior now taking
place at Berkeley. As previously noted, this list by no means
exhausts that relevant research that could be mentioned here.
Almost every one of these projects, whether primarily ethno-
linguistic, psycho-linguistic, socio-linguistic, or bio-linguistic
properly includes variables from at least one of the other fields
and ideally should be conducted in a Center of the kind proposed.

In addition to the projects named above, the existence
of the proposed Center is certain to spawn additional collabora-
tive research and will no doubt lead to interdisciplinary semi-
nars as well.

We return now to the six major ways of implementing the
goals of the Center introduced at the end of section 1 and
discuss the structure and functioning of the Center in these
terms.

(1) Space and facilities. Space will be adequate to
accommodate about ten faculty offices, work space for fifteen
students (many of these will be fellowship holders working on
their own projects; others will be graduate and undergraduate
paid research assistants; the full complement of fifteen will
probably not be achieved until the third year of operation),
work space for three administrative and clerical personnel, a
duplicating and reproducing room, a conference room, and two
rooms for laboratory work (observation of child speech, recording
of texts, interviewing of all kinds, small group experiments,

etc.). Conversations with Mason-McDuffie and Claremont realtors indicate that such space is available convenient to the campus. We have entered into preliminary negotiations with one of these agents regarding a three-story apartment building on a street bordering the campus for a figure within that given in the budget. This building would be ideal for our purposes, both in size and layout and in location.

In addition to the direct participants, the Center will serve a wide variety of faculty and students. For example, in the Anthropology Department alone, at least five faculty members not now working primarily in the language behavior field have in the past done research in or directly related to the field of language behavior (Foster, Hammel, Heizer, Mandelbaum, Nader). No doubt similar statements hold for other departments. The proposed Center may be expected to perform the valuable function for the campus generally of serving as a central clearing house for information, consultation, student support, etc. on all manner of social science problems relating to language.

(2) The scientific payoff from high rates of interaction of scholars with mutual interest. A high rate of intellectual interaction among the participants in the Center will be promoted by both formal and informal means. As regards formal means, a regular weekly (or bi-weekly, depending on accumulated experience) seminar will be held on topics of current research by participants in the Center and by other Berkeley and

non-Berkeley persons engaged in research of interest to Center
participants. As regards informal means, the facilities will
contain at least one refrigerator, and general bag lunch in the
conference room will be encouraged. Trivial as this may seem,
previous experience with several research centers has shown that
eating lunch together is a strong stimulus toward intellectual
interaction. A seemingly even more trivial, but nonetheless
relevant, fact is that the presence of a refrigerator and coffee
make regular group lunches more convenient for many people and
hence more generally practicable.

The intellectual fertility fostered by research centers
run on this general plan is attested by several historical cases,
perhaps the most outstanding and relevant being the Cognitive
Studies Center at Harvard. A few of the many possible other
relevant examples with which the participants in the proposed
Center had some contact include several cutting edge groups at
the Center for Advanced Study in the Behavioral Sciences (CASBS),
the Palfrey House Project at Harvard and Anthropology Research
at Stanford. Experience in all these cases has shown that, given
significant overlap of interests, a high degree of interaction
around a blackboard and a coffee pot produces a lot of intellec-
tual innovation and a large amount of collaborative research.

(3) Given the high rate of fellowship support for graduate
students in many departments of the University, it seems likely
that many of the graduate students participating in the Center
will be free to work on their own projects or on joint projects

as co-investigators with faculty or other student participants
in the Center. This fact should yield the dividend of encourag-
ing student originality, which will benefit not only the students
but the entire Center. For these students, the Center will pro-
vide not so much financial support as a stimulating milieu in
which to do their research and grow intellectually. The high
likelihood that interdisciplinary seminars will grow out of
Center activity also promises a contribution to the training of
graduate students on the campus. In addition the Center will
support six graduate students per year as half-time research
assistants.

(4) The Visiting Fellow plan. The Center plans each
year to invite an outstanding scholar in the field of language
behavior to the Berkeley campus. As mentioned above, Professor
A. Richard Diebold of Stanford has expressed interest in the
first fellowship to be offered. If the Center can continue to
attract Fellows of this caliber, and there is no reason to think
otherwise, the fellowship program will be a source of major
enrichment to the Center and to the campus as a whole. The
success of similar visiting fellow programs at the Harvard Cog-
nitive Studies Center and elsewhere is well established.

(5) Attracting top graduate students to Berkeley. All
the research centers named above (with the exception of the CASBS
groups) have shown themselves to be strong forces in attracting
the best graduate students to their Universities. A case closer

to home in a different but related research area may be cited;
it appears that the Primate Project of the Department of Anthro-
pology has contributed significantly to Berkeley's attracting
perhaps the most outstanding corps of physical anthropology
graduate students in the country. When recommending a graduate
school to a superior undergraduate one usually thinks first of
the places where organized research is being pursued in the
student's area of interest.

(6) The provision of small funds for novel, unproven,
and innovative research projects. The IIS itself has a program
of small grants, which appears, albeit from the outside, to be
motivated somewhat by these ideas. In the social sciences
generally, and particularly in a new area like language behavior,
a Center such as the one proposed should not pass up the oppor-
tunity to encourage highly innovative research, particularly
on the part of advanced graduate students.

References Cited

Diebold, A. Richard, Jr.
    1964   Review of S. Saporta, ed., Psycho-Linguistics, a book
           of readings. Language. 40: 197-260 [Review article].

Gumperz, John and Dell Hymes (eds.)
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           gist 66:6 part 2).

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    1964   Language in Culture and Society: A Reader in
           Linguistics and Anthropology. New York: Harper & Row.

Osgood, C. E. and T. A. Sebeok (eds.)
    1965   Psycholinguistics: A Survey of Theory and Research
           Problems (with A Survey of Psycholinguistic Research:
           1954-1964 by A. R. Diebold, Jr.). Indiana University
           Press.

Romney, A. K. and Roy G. D'Andrade (eds.)
    1964   Transcultural Studies in Cognition (=American
           Anthropologist 66:3).

Saporta, Sol (ed.)
    1961   Psycholinguistics: A Book of Readings. New York:
           Holt, Rinehart & Winston.

Notes

[1] Among the many results, direct and indirect, of the
1953 SSRC conference can be included the following four influen-
tial volumes: Saporta (1961), Romney and D'Andrade (1964),
Gumperz and Hymes (1964), Hymes (1964). For general background
see also Diebold (1964) and Osgood and Sebeok (1965).

[2] For example, in the first four volumes cited in the
previous footnote, names of Berkeley people appear as editors
three times, as contributors nine times, and in personal notes
and acknowledgements with even greater frequency.

[3] Professor Diebold has expressed interest in the pro-
posed Center Fellowship for the next year.

3. Budget

I. <u>Basic Plant</u>
<u>Rental of Space</u>: $800/mo. x 12 mos.[1] $ 9,600
Furniture Rental: $820/mo. x 12 mos.[2]   9,840
Janitorial Service: $300 mo. x 12 mos.[3]   3,600
Xerox Rental: $150/mo. x 12 mos.[4]   1,800
     $24,840

II. <u>Personnel</u>
<u>Director</u>: 1 half-time salary   5,650
Secretary: 1 full time salary   5,772
Typists: 2 full-time salaries at $4,752   9,504
Research assistants: 3 full time salaries
                  at $3,192   9,576
Fellow: 1 full-time salary   14,000
            Subtotal   44,502
            10% employee benefits   4,450
     $48,952

III. <u>Expendable Supplies</u>: $200/mo. x 12 mo.   2,400

IV. <u>Research Fund</u>: (for small student and
                  faculty grants)   15,000

V. <u>Travel</u>: 12 round trips to East Coast
            at $465[5]   5,580

VI. <u>Permanent Equipment</u>
<u>Typewriters</u>: 3 IBM Executive w/ linguistic
                 keyboard) at $536.44   1,609
Tape recorders: 4 Uher (4000 model)
               at $434.72   1,739
               2 Wollensak (standard model)
               at $653.72   1,307
Desk calculator: 1 Monroe (model I.-Q.1-213)   1,215
Mimeograph: 1 (model 865)   735
Addressograph: Elliot Stencil Machine   144
     $6,749

VII. Yearly operating budget (=Total of Items I-V) $ 96,772

VIII. Three year operating budget (= 3xItem VII)   290,316

IX. Total amount requested (Item VIII + Item VII
           [Permanent Equipment] $ 297,065

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[1] Based on verbal estimates by Mason-McDuffie and Claremont realtors.

[2] Based on verbal estimates by AA Office Equipment Co. of San Leandro. Items:

        20 desks
        10 Swivel chairs
        10 Work tables
        50 straight chairs
        30 four-drawer files
         1 14' conference table
        30 3' x 6½' bookcases

[3]Based on verbal estimate by Crosetti & Musanti,Co., Oakland.

[4]Based on verbal estimate of Xerox Company for model 914 at 4,000 copies/month.

[5]Estimated on the basis of one trip per year for the investigators and the Fellow plus four trips for graduate students and other faculty participants. Trip estimate includes $350 air fare plus 5 days per diem at $23/day (=$115).

ERRATA

for

PROPOSAL FOR A CENTER FOR LANGUAGE BEHAVIOR RESEARCH

1. title page: 'Institute for International Studies' should be
                  'Institute of International Studies.'
2. p. 4, line 3 from bottom: 'findoug' should be 'finding.'
3. p. 7, line 7:   'core' should be 'corps.'
4. p. 10, line 4 from bottom: 'Indian Languages' should be
                  'American English.'
5. p. 11, line 2:   'Indian languages' should be 'American
                  'English.'

NOTE: Errata 4 and 5 involve matters of substance.

                                    5/2/67
                                    P.K.