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Thanks to the Brigham Young University College of Humanities for the generous support of the Annual Symposium of the Deseret Language and Linguistics Society. We are grateful to those who took part in any way in organizing, chairing sessions, presenting papers or attending the seminar.

The symposium program with names of authors and papers is given on the following page. The Table of Contents contains the names of authors and papers which were submitted for publication in the proceedings. Individual authors are solely responsible for the content and accuracy of their respective papers.

Elray L. Pedersen, Secretary
Deseret Language and Linguistic Society
for Willis Fails
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INTRODUCTION TO THE BOOK OF MORMON CRITICAL TEXT

John W. Welch
Brigham Young University

The Foundation for Ancient Research and Mormon Studies is a non-profit organization that sponsors and disseminates a number of research projects regarding the Book of Mormon. One of the major projects it has sponsored in recent years is the preparation of a working edition of a Book of Mormon Critical Text (CT). That publication is the subject of comment and review in this session of this Conference. These brief comments serve to introduce the CT to this discussion.

The Book of Mormon Critical Text. The first printing of Volume 1, covering 1 Nephi to the Words of Mormon, occurred in June 1984. Volume 2, Mosiah to Alma, appeared in February 1986, and Volume 3, Helaman to Moroni, was finished last year, after about 5 years of work, in May 1987. The first printings had a yellow cover, but as corrections and additions were made, a second edition was published; the second edition has red covers and is currently available in looseleaf form from F.A.R.M.S. A sample page from the CT is attached. Most of the work on the CT was done by Robert F. Smith, in consultation with several others, including participants on this panel. Gordon Thomasson is currently working on making the CT available on computer.

In addition to presenting a reading of the text itself, the CT offers thousands of footnotes. They are most important; they inductively document the story of the text through variant readings and external references to similar phraseology. Several appendices list onomasticon variants, archaic spellings that appear in the early manuscripts and editions, the surviving fragments of the Original Manuscript, the captions that appear in the Original Manuscript, the typographical errors in the 1830 edition, and chronological information regarding the years of the Nephites and Jaredites. While the CT offers a wealth of primary and secondary data in its present form, much work still remains to be done, many issues need yet to be analyzed, and dozens of details need to be improved and corrected.

1 These have been preserved in the CT to show that even though the text has been modernized to conform with modern spelling conventions the archaic spellings were legitimate in earlier times.
The CT, as it now stands, has been released as a Preliminary Report or Working Paper, to be reviewed, critiqued and improved. Hopefully it will result someday in a published volume, with better typesetting and legibility, but exactly how that book will be designed and what it shall contain is yet to be determined. Input from numerous people has been sought and is always welcomed. This conference affords a valuable forum in which to consider and evaluate the status of the project at this point in time.

What is a Critical Text? One of the first things to consider in working with any critical text is what a "critical text" is and what it is not. No critical text is capable of presenting the "original" of a text. Only the original author could give us that. For example, in presenting an excellent critical text of Aristotle's Prior and Posterior Analytics, W. D. Ross generates a synthesis of basically the five oldest Greek manuscripts, but must acknowledge that his synthesis comes from an "unusual array of old manuscripts" dating from ninth to the eleventh centuries A.D, early Syriac (fifth century) and Latin commentators. But what did Aristotle actually write some fourteen centuries before those oldest surviving Greek manuscripts? Despite our best efforts, it is impossible to know the original text. Critical texts exist for most important works from antiquity. Most familiar are probably those of the New Testament, attempting to represent what appears to be the best reading of a given text. Textual variants and parallels are often also supplied.

With the Book of Mormon the needs for a critical text are similar. The Book of Mormon exists in two English manuscripts (that have themselves been emended and corrected), and it has gone through several printings, three of which were prepared during Joseph Smith's lifetime. Thus, there are textual variants to be aware of; there are also interesting parallel texts, both within and without the Book of Mormon, to be noticed. In presenting the English

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2. The printing options for the CT were limited by several factors. The base text used was a computer tape generously made available to the project by the BYU Humanities Resource Center and John Hilton; the text, however, was typed entirely in upper case. Also, the computer word processor on which the project was begun in 1982 had limited fonts and symbols with which to work. A file as large as the CT in many ways pushed the computer software to its limits. Budget constraints limited printing alternatives.

text of the Book of Mormon in its best but earliest form, one hopes to get a step closer to what Benjamin or Abinadi, the Brother of Jared or Ether, actually said.

A critical text is a tool to help us try to understand the state of the text, however shrouded in historical obscurity and however ultimately unrecoverable the original-original may be. Serious study of any text begins by ascertaining the text itself, to the extent that this is possible. This task requires us to push back as far as we can into the history of our text.

It should be noted, of course, that a critical text is not "critical." The purpose is not to "criticize" the text, or to point out problems, although some may misunderstand if they do not know what this term means to people who work with manuscripts. For example, in 1984, when F.A.R.M.S. announced the completion of Volume 1 of the Critical Text, a UPI stringer in the area put a story on the international wire service that a group at BYU had published a major study critical of the Book of Mormon. Needless to say, that is not what this (or any other) critical text is about.

A good definition of what a "critical text" is appeared in The Folio, the Newsletter of the Ancient Biblical Manuscript Center for Preservation and Research at the School of Theology in Claremont, California (July-October 1985), and is quoted in the Preface to the Second Edition of the CT:

Critical text: the text of a piece of literature, whether biblical or otherwise, as it appears in a critical edition, which incorporates the results of a comparative survey of all (or many) available manuscripts containing the literary product. Alternative readings which occur in individual manuscripts or in manuscript families are recorded in an apparatus which accompanies the critical text, usually in a block of notes located at the base of the page. The critical text may either be diplomatic—carefully reproducing the exact text of a selected manuscript, or it may be eclectic—not precisely the same as the text in any extant manuscript but representing in each phrase the text which the editors deem to have been present in the document when it was first written. Critical texts of the Hebrew Bible are usually diplomatic; critical texts of the Greek New Testament are usually eclectic.

In these terms, the CT is eclectic in its choice of readings.

What features should the CT offer? In constructing a Book of Mormon critical text, choices must be made regarding what should be included and what should be excluded. There are several places where the designers of any critical text must make choices.
1. The most obvious issue is which manuscripts and editions should the CT cover. The textual apparatus at the bottom of each page will display differences from one manuscript or edition to the next. The CT compares 0 (the Original dictation copy), P (the Printer's copy), the 15 major LDS English editions from 1830 to 1981, and 5 RLDS editions. Of these, the most important for critical reference are 0, P, 1830, 1837 and 1840, since they were produced during Joseph Smith's lifetime. But the later editions are important also for those studying the history of the text in the nineteenth and twentieth centuries.

2. Another major issue is which reading of the text should be presented in the body of the text. For example, it is difficult to know what punishment was originally prescribed for delinquent debtors under the law of Mosiah (Alma 11:2). Was the punishment "stripping (confiscation and humiliation)," or was it "striping (beating)"? How does one decide? 0 at this point is hard to read. P, 1830, and 1837 have "striped." The 1840 and other editions from 1879 to 1981 read "stripped." No solid textual basis exists upon which to settle this question.

3. To what extent, then, should the CT take other phrases into consideration? Although not dispositive, comparative studies may shed light on the question and tend to make certain alternatives more or less attractive. Concerning the problem seen above in Alma 11:2, a comparison to Deuteronomy 25:1-3 may be somewhat relevant. Like Alma 11:2, Deuteronomy 25:1-3 also sets forth a general legal instruction regarding the punishment of losing parties in civil disputes: "If the wicked man be worth to be beaten, the judge shall cause him to lie down, and to be beaten. . . . Forty stripes he may give him." This passage, thus, lends some weight to the idea that the text in Alma 11:2 originally prescribed "striping," not "stripping." But we cannot be sure.

To aid in deliberations of this sort, the CT gives numerous cross-references to expressions in the Old Testament, New Testament, Jewish Apocrypha, Pseudepigrapha, Talmud, and elsewhere, that are related to passages in the Book of Mormon. Computer assistance was used to identify three-or-more word phrases in the Book of Mormon and in the King James Version of the Bible. By including these parallels, the CT follows the critical text of the Greek New Testament published by the United Bible Societies, which indicates many places where phrases in the New Testament parallel, for example, the Septuagint.

4. A further problem is deciding which variants to report. No critical text shows all of the jots and tittles as they appear in every relevant manuscript. Doing so is virtually prohibitive and rarely necessary. Decisions must and should be made about which textual differences are significant. Those decisions will often be reached subjectively. Thus, for example, a person interested in grammar and syntax will be inclined to select one set of variants, while others more interested in history or theology would be likely to include a different set.
5. Answering questions like the foregoing will turn ultimately on the intended purpose of the CT. What purposes should a Book of Mormon critical text serve? The aim of Robert Smith, as he states in his Introduction, was "to present as technically as possible the English translation of the original texts written by the Nephites." Thus, for example, it was decided to eliminate all punctuation, since punctuation probably did not appear in the original Nephite texts. Punctuation as we know it is not used generally in most ancient scripts, and there is none on the Anthon Transcript. Initial capitalization was also dropped, and the entire text printed in uncialis, since in the Book of Mormon capitalization was added by scribes and typesetters to suit modern conventions. Undoubtedly, the lack of punctuation and upper and lower case letters detracts from the readability of the CT, but its purpose was not be become a reader's Book of Mormon, but a tool for scholarly reference. On the other hand, one component of the United Bible Societies' Greek New Testament textual apparatus deals with the possible ways to punctuate the Greek manuscripts; perhaps such a feature could be added to the CT.

Working assumptions? In preparing the CT, it seems to me that certain assumptions (sometimes explicitly and other times implicitly) were operative concerning the purpose of the CT and about the text it attempts to represent. By way of explanation, and to facilitate further planning and thinking about the CT, it seems useful to mention a few of those assumptions briefly in conclusion:

First, it is assumed throughout the CT that there was an ancient Nephite text, and that it was written in some mixture of Hebrew and Egyptian languages. Thus, the CT has not attempted alone to establish the text, for example, as it was dictated from the lips of Joseph Smith in the nineteenth century. Its goal is broader than that. While it works principally with the Original dictation and Printer's manuscripts, in the few places where textual choices need to be made it also considers subsequent English editions of the Book of Mormon and parallel materials where relevant to generate a text that brings together the best information available to us about the form and meaning of the ancient Nephite record and the earlier sources it abridges.

Second, it is assumed that Mormon's abridgment was translated into English in a way that Joseph Smith and his contemporaries could understand and that would convey the underlying meaning to them as well as possible, given the limitations of language. As D&C 1:24 states: "I am God and have spoken it . . . unto my servants in their weakness, after the manner of their language, that they might come to understanding." Accordingly, the CT does not take the English text to be "absolute" or "infallible." Its authors, abridgers and translators bend over backwards, far more than they needed to, in assuming full responsibility for any errors. It is "the most correct book" and the best anyone could do and therefore deserves extraordinary respect. Indeed, very, very few changes of any substance have occurred since the words
fell from the lips of Joseph Smith in 1829. Nevertheless, language is language; it is only a medium through which thoughts are conveyed, more or less imperfectly, even under the best of inspired circumstances. The CT implicitly assumes that knowledge of a range of information, such as textual comparisons and parallels, will help readers to fathom the essence of the English text of the Book of Mormon as a translation, and not as a frozen version of the text at any randomly selected stage in its transmission.

The ultimate purpose of any translation is to help us come to understanding. We need to seek understanding of the Book of Mormon. What was actually said? By Benjamin? By Mormon? By Joseph Smith? What do their words mean? Why do they say what they say the way they say it? Only through close scrutiny and reflective pondering about the words of this book and the spirit which they convey can we understand the book itself. Hopefully, the CT—already in its present working form, but even more so in future revisions—will be of assistance to readers in this important quest for understanding.

4 One of the next stages in the CT project would seem to be the production of a commentary volume, similar to Bruce M. Metzger's Textual Commentary on the Greek New Testament (London: United Bible Societies, 1971), explaining the evidence on each variant reading.
AND THERE WERE MEN WHO DENIED THE NAME OF THE LORD JESUS CHRIST
AND IT CAME TO PASS THAT HE CAUSED UPON EVERY THOUSAND OF THE NAMES
WHICH WAS PRINTED AMONG THE NET
AND THEY ROOSTETH AND THUS THEY WERE NEARLY DENIED THE NAME
AND HELAMAN ALSO MARRIED YEA EVEN FOR
AND THEY HAD WIFE AND KIDS CAME THAT THERE WERE MEN
WHICH THE LORD PREPARED TO REMOVE THE CAUSE OF DISEASES
BY THE NATURE OF THE CLIMATE
AND THERE WERE MANY WHO DIED WITH OLD AGE
AND THOSE WHO DIED IN THE FAITH OF CHRIST
AND HAPPY IN HIM;
NOW I, AS WE MUST NEEDS SUPPOSE
NOW I, AS WE MUST NEEDS SUPPOSE
AND THOSE WHICH HAD FLED WITH HIM INTO THE WILDNESS
FOR BEHOLD HE HAD TAKEN THOSE WHICH WENT WITH HIM

175. was O P 1830 thru 1911TCC. RLDS 1908; were 1920 1981.
177. very OT P; very 1810 thru 1881; RLDS 1908; was O P 1830 thru 1911TCC.

8. which was subsequent to ma(n) O; which was subsequent to man P 1830;
\[\text{subject P}\]; to which men was subject 1837 1841; to which men were subject
1840 1852 thru 1881, RLDS 1874; to which man was subject RLDS 1808.
179. I P?; we PC 1830 thru 1881, RLDS 1908.
180. Amaleckiah O; Amaliackiah P 1830 thru 1881, RLDS 1808; Amalickiah P sp.

280. ca Aug 76 B.C.
THE AMERICAN TRANSLATORS ASSOCIATION
ACCREDITATION EXAM

Marian McMaster
Brigham Young University

The American Translators Association (ATA) is the largest professional society of translators and language specialists in the United States. One of the many aims of the association is promoting the recognition of translating as a profession. Therefore, in 1963 ATA established the Accreditation Committee with the purpose of developing accreditation exams for translators. In was not until 1972, however, that ATA began to offer such tests. The purpose of the testing program is to accredit translators with the basic skills required to enter the free-lance market and to function as professionals in this field. Accreditation offers translators and clients one measurement of the translator’s competence and commitment [Ref. 1].

ATA is based in Ossining, New York, with local chapters throughout the United States. The accreditation exam is offered once a year during the annual conference held in the Fall. However, Chapters and individual members, who are in good standing and are accredited translators may organize local sittings as often as needed. ATA requires that there be a minimum of 5 candidates in order to approve an accreditation exam at any time other than the annual conference. In order to take the exam, candidates must be members of ATA and pay a fee of $50.00 per exam, or $30.00 if the exam is a re-take for the first time. The accreditation exam is offered as a non-profit service to ATA members [Ref. 1]. Persons who are not members of ATA may join at the time they sign up to take the accreditation exam. Membership dues are $50.00 for regular members and $25.00 for students. All candidates must pre-register to take the exam and pay all fees at that time.

Members of ATA may take accreditation exams in several language combinations: French, German, Spanish, Russian, Portuguese, Polish, Italian, and Japanese into English, or English into French, German, Spanish, Russian, Portuguese, Polish, and Italian. At this time it is not possible to take an exam from, let’s say, Spanish into Italian, or Russian into Polish. The source language or the target language must be English.

The accreditation exam consists of 5 passages. Each candidate has three hours in which to translate 3 of the 5 passages. Candidates should expect at least one passage in each of the following categories: literary, legal or business, scientific or medical, general, and semi-technical [Ref. 1]. Most passages are approximately 200-250 words long. The accreditation exam is an open book test, therefore candidates may bring dictionaries, glossaries, and other resource materials that are normally used when translating. A good rule of thumb is to bring a monolingual dictionary for the source and the target language, a good
bilingual dictionary, and technical glossaries or dictionaries in the fields listed above.

At the beginning of the exam, each candidate receives a packet which has been mailed from headquarters in New York. The packet consists of the 5 passages, instructions to the candidate, lined paper, and an envelope. Each envelope has been coded with a number and the language combination. On the upper left corner there is a statement that each candidate must read and sign. From then on, the candidate is identified only by the code number on the envelope. The exam lasts exactly 3 hours. That is enough time to translate the three passages, review and revise them, and make sure that all the requirements have been met. It is not advisable to do a rough draft with the expectation that there will be time to recopy it. Once the three hours are up the exam is over. There are no extensions.

Accreditation exams have been offered at BYU every year for the last 8 years. As an accredited member of ATA in good standing, I have organized a sitting whenever several members of the community have requested one. In dealing with each particular case, I have encountered candidates who fall under one or several of the following categories: Persons who have had foreign language courses and/or foreign residency and feel that they can translate; persons who are working as translators; persons who have gone through a translator training program; and persons who have done some "translating", but that when questioned further it is clear that they don't know the difference between interpretation and translation, and therefore believe that there's no difference.

In 1976, when I took the exam, I was told that the yearly success rate was about 25%. Last year, I attended a presentation of the Accreditation Committee during the Annual Conference, and it was mentioned that the success rate is about 40% now. Perhaps the success rate has improved because translation has become a little more competitive in the United States, and in the last 10 to 15 years there has been a marked increase in Translator Training Programs at the University level. Nevertheless, the success rate is very low, if we take into consideration that a large percentage of those taking the exam consider themselves translators. Why such failure, then?

When I organize an accreditation exam at BYU, I meet a lot of people who come by my office asking for information. The first thing I ask them is what kind of training they have had in translation. The answers vary: they have translated in the mission field - which as it turns out, it wasn't translation but rather interpretation; they are working at the Missionary Training Center and do some translating -that could also be interpreting instead of translating, but it could also be both; they are studying a foreign language and they like to translate; they have heard that accredited translators get paid "better" and they want to cash in on their language skills. If we add to this that in most of these cases the translating has been into their foreign language, then we have high-risk candidates. ATA defines high-risk candidates as people attempting to translate from their mother tongue into a foreign language or lacking practical translation experience [Ref.1].
In view of the above, it is not surprising that the question I hear most often when proctoring accreditation exams is: "How close of a translation do they want?", which means: "Do I do a literal translation? A word for word translation?" I believe that if a person needs to ask that question, then he or she has no business taking the accreditation exam. Instead, it would be better to take the practice test that ATA offers for $7.50.

In the words of Mildred Larson, author of Meaning Based Translation: A Guide to Cross-language Equivalence, translation is the process of studying the lexicon, the grammatical structure, and the communication situation of the source language text, analyzing it in order to determine the meaning, and then reconstructing this same meaning using the natural forms of the receptor language [Ref. 2]. One of the key concepts in this statement is "using the natural forms of the receptor language." If the translation sounds unnatural, foreign, then it is a poor attempt to translating. On the other hand, if the translator uses the source-text as a guide, and then goes on to write the same ideas in the target-language, he or she may be taking liberties that will also invalidate a translation. Translators deal with form and meaning. If the form is the appropriate one for the target-language, and if the meaning of the source-text has been understood correctly — and in order to do that, it is necessary to have some expertise in the subject matter of the text so as to render it into the target-language with the appropriate lexicon—, then the translator most probably will meet with success.

In view of the above, there are some strategies that may come in handy when taking the accreditation exam.

1. If this is the first time you are taking the ATA Accreditation Exam, take it into your native language. Unless you are a very gifted language specialist, most non-native speakers have problems with collocation, and that in turns, creates unnatural forms in the target language. My favorite example comes from what Americans call "the red, white, and blue" when referring to the flag. If I were to call it "the white, red, and blue" the words would be the same, they would still name the colors present in the American flag, but the collocation of the words would immediately identify me as a non-native speaker. The form that I have used is not natural.

2. Prior to taking the exam, I feel it is wise to "warm-up" in preparation for a very demanding three hours of translating. We all know that there are days when one can translate for hours and the text flows easily. There are times, however, when nothing seems to come to mind. Warming-up prior to taking the exam may very well help you get in the right frame of mind to tackle the task.

3. Read all five passages before you make your selection. It is amazing how often I see people look at the title of each passage, choose one of the passages, and without having read it all the way through, begin translating the first word, and then the next one, and so on. Then comes the complaint that the passage was more difficult than it was expected, and by then it is too late to choose a different one because
of the time constraint. To avoid such problems, read carefully, and choose those passages that best match your field or fields of expertise. Once you have decided on the three that you would like to translate, begin with the easiest one. Don’t forget to double space your translation. Aside from the fact that it is standard practice among translators, one of the rules of the accreditation exam is to double space. In proctoring exams I find that although I stress that rule at the beginning of each accreditation exam, too often I find candidates that start off double spacing and then switch to every line. If you hope to re-copy your rough draft, you may find that there is no time left to do so.

4. Give yourself enough time for each passage. You will be working under pressure, racing against the clock, or so it will seem. Each passage is about 200-250 words long. There is ample time to complete all three if you tackle each one at a regular pace and don’t get hanged up on words. Look for the ideas, for the natural transfer of meaning rather than single words.

5. Spell carefully. Pay attention to rules of punctuation in the target-language. Just because the source-text uses a comma or a semi-colon it doesn’t mean that you should copy them into the receptor language if that is not where they would normally appear. For languages with diacritical marks, make sure that you know the rules and apply them consistently.

6. Watch out for cognates. Any time you are tempted to use a cognate, document the meaning before you use such word. As we all know, there are good cognates and there are false cognates. However, too many times, specially for those living in a foreign environment, false cognates begin to creep into their own native language and they no longer notice the difference. If you choose to use a cognate, make sure that you have checked it out in the dictionary, even if you think that you know the meaning and therefore you won’t make a mistake.

7. Remember that the source text is only a map. As you read it you will find the message that needs to be translated into another language. But, in order to do that, you will have to use the proper form of the target-language, regardless of the form used in the source-text. That means that you do not copy the structure of the source text, that you do not follow the grammatical pattern of the source-language, if the structure of the target-language is, as in most cases, not compatible.

8. Make sure that you leave enough time to review your translations and make revisions. Follow the appropriate pattern: First read the translation. Pay attention to the style. Does it flow? Does it sound natural? Does it read well? Second, read the original text. You have already read it a couple of times while making your selection and translating, but read it now to make sure that you understood correctly. Third, compare both text. This step is very important. Don’t read the source-text and then your translation. That was what you did when you were translating. To review your work, compare the texts in the opposite direction: first the translation and then the original. Does the translation mean the same as the original? Is all the information
there, or does it become complete only when one also reads the original? If that is the case, your translation needs more work.

Once the three hours are up, candidates must return all materials to the coded envelope and seal it. There are no exceptions regardless of the reason. The proctor collects all envelopes and then mails them to Headquarters in New York.

Ruth Harwood Cline, who has chaired the ATA Accreditation Committee, states that the examinations are graded by two or three graders who know the candidate only by number [Ref. 3]. The ATA brochure on accreditation further explains that the graders tend to be established staff and free-lance translators, some with university affiliations, who were selected because of their outstanding performance on the accreditation examination [Ref. 1]. Exams are graded on the basis of the consensus of two graders, if they both agree, or the opinion of a third one in case of disagreement. Judging from what's happened in previous years, it is safe to say that it takes anywhere from 2 months to 10 weeks for candidates to find out whether they have passed or not.

Ms Cline explains that some of the causes of failure are: Omissions, overly-free translations, overly-literal translations, and simply translating only two of the three passages [Ref. 3].

Candidates taking the accreditation exam need to be aware that, as stated in the accreditation brochure, the accreditation examination is not a teaching tool and becomes the exclusive property of the committee. The examination will not be returned, and the results will not be discussed [Ref. 1].

In the meeting that I attended last October, it was stated that during 1987 the committee had read more than 500 exams, and that the most popular language combinations were English into Spanish and Spanish into English. In this area alone, there were three sittings during the 1987-1988 academic year: two at BYU, and one in Salt Lake for the Translation Department of the Church.
REFERENCES


ESOTERIC TEXTS:
A LESSON ON THE CONCEIT OF UNDERSTANDING, INTERPRETATION, AND TRANSLATION (TO SAY NOTHING OF DECONSTRUCTION), INDEPENDENT OF CULTURE, TIME, PLACE AND CONTEXT

Gordon C. Thomasson
Brigham Young University

All too often we assume that a given text, artifact, or other manifestation of a culture is open to anyone's own understanding as easily as we can turn the pages of a book. At the opposite extreme to this kind of pride is another self-deception, based upon an often profound personal experience of meaninglessness, that asserts that whatever human products we, whether as scriptorians, literary critics, philologists, archaeologists, moralists, or just plain persons attempt to "read" are in fact also really meaningless. In the very middle of this continuum is the even more irrational position that every or any text means and can mean only one thing, and that all we need do is let the text "speak for itself." This latter position is, ironically, as common to a style of secular scholarship that systematically ignores the last generation of thought in the philosophy of history, as it is to true biblical fundamentalists who really believe only in plenary inspiration and "infallible" texts (see APPENDIX I).

From outside this entire spectrum I assert that anything we can classify as a "text" so qualifies precisely because it has some intrinsic meaning (or even multiple possible intended meanings), but that for us as finite and temporal human readers and interpreters, no text is sufficient in itself. We must use every means at our disposal to understand both the matrix out of which a text comes as well as what

1A translator of L.D.S. materials faces problems similar to those that confront a person attempting to translate biblical parables which often carry multiple messages.

Frequently [L.D.S.] General Authorities will preach [for example] on repentance and employ words or short phrases (at times perhaps unconsciously) from the temple to make a point. These convey a straightforward message to all hearers, but to those who have received their endowment a second message is given, a reminder of higher and more serious responsibilities. How does a translator choose between the often multiple intended levels of meaning found in Gospel discourses? This is especially difficult due to the fact that translators cannot simply rely on the endowment ceremony ... as a guideline. ... An L.D.S. translator must be made aware of the multiple levels of meaning in the original source, and must either have guidelines as to which level the translation should be addressed to (the world, Judeo-Christians, investigators, new converts, longtime members, endowed members or whoever), or sufficiently gloss the translation to insure that the various messages get through (Thomasson, 1973: 79, note 12).
we bring to it, if we hope to honestly engage in dialogue with it and the humans who conveyed it (intentionally or not) to us, or permit it to speak through us. And it is precisely in the realm of the esoteric that we find the ideal setting for demonstrating the reality and complexity of the problem of discovering meaning when we encounter a text.

Living and working as an anthropologist among the Kpelle people of Liberia in West Africa sensitized me to the reality of the esoteric and the problems it poses even beyond the perspective that my own Mormon cultural background and anthropological and linguistic training had provided, as well as the technical and ethical dilemmas that any esoteric text should impose upon us. Consider especially the methodological and moral problems inherent in studying a culture/religion with a tradition of covenant secrecy (Thomasson, 1987:35-42; 1988). The Kpelle people share a sacred system of meaning, values and ritual which is not to be betrayed to outsiders. Respecting their high moral right to privacy, I avoided any investigation into those areas of their culture that they, rather obviously, feel are none of my or any other outsider's business. Previous generations of non-Kpelle, with the profound disrespect for human rights that is engendered by imperialism and colonialism (including academic imperialism, justified by an hypocritical rhetoric of academic freedom), have done their best to pry into and expose the Kpelle tradition for all to see. What they have produced is virtually worthless, as untrustworthy as the data from Nazi Death Camp "medical experimentation," for most of the same technical and ethical reasons (Alexander, 1949; Moe, 1984). And under cross-examination, this "National Enquirer" school of anthropology is as nonsensical, shallow and contradictory as the average expose of Mormonism. Even where one can record, film or seemingly re-enact a ritual, i.e., that which is essential: what those actions really mean to those persons faithfully performing them, cannot be so captured.

2A good discussion of some of the problems associated with the perspectives of a reader is to be found in Kira Pratt Davis, "What the Author Had in Mind: Text vs. Context in Mormon Scripture" (1986). It should be kept in mind, however, that

The polysemic, pluralistic nature of textual meaning is not a new discovery. It is implicitly perceived in the Talmudic modes of commentary as well as in the scholastic classification of literal, allegoric and anagogic levels of significance. The insight that the interpretation of a text is a process in temporal motion, that individual sensibility and the ideological-social context will alter accepted meanings, is familiar to scriptural exegesis and text criticism after Spinoza. Argued methodically by Schleiermacher, it will form the basis of what is called today (faintly portentously) Rezeptionstheorie or "theory of reception." (Steiner, 1981:5)

3It is disturbing that the most recent, major study of secrecy in religion proceeds almost without exception to ignore the ethical and human rights questions which the uninvited study of someone else's secrets should immediately raise (Bolle, 1987).
Even interviewing willing participants can extract (with years of effort), only shards of the worldview within which the actions are understood. And the supposedly willing informant, who, if he or she is not pulling the wool over your eyes and telling you that culture's equivalent of "stork," "tooth fairy," and "Santa Claus" stories, is usually so shallowly integrated and socialized into the culture (as evidenced by its betrayal), that no real credence can be given to the explanations. And there is no possible independent "control" upon which one can rely to gauge the accuracy of reported meanings.

What is freely admitted among the Kpelle is that within the context of their centuries-old system of universal public education, the Poro and Sande "bush schools," which are the occasion for initiation into the respective mens' and womens' secret societies, children learn an entire new set of meanings for the language which they have heard their elders use before their matriculation. There is an "inside" to the Kpelle language that the outsider and the child is not supposed to, and in fact cannot truly penetrate, without being initiated into the secrets and mysteries of that people, becoming, as it were, Kpelle. To pretend that such esoteric levels of meaning do not exist can only be done by denying both what they report and what one experiences as existential "fact." But to come to understand even the gap between ourselves and any text, let alone one that is esoteric, we must be willing both to admit our finite ignorance and expose ourselves to the potentially relativistic implications of taking another people's way seriously (compare Wendland, 1987). To elaborate, let us begin with a particularly fertile text.

Secular Esoteric Texts

As an illustration of the problem of understanding, I present the following scenario. Imagine some future post-nuclear holocaust archaeologist unearthing an oblong metal box with a strange assortment of implements, artifacts and a weathered piece of paper in it, bearing the inscription:

**Bad boys rape our young girls, but Violet gives willingly.**

Naive to the language of one caste within our long since vanished, to say nothing of our technologically obsolete society, scholars looking back at us through the, in fact, esoteric remnants of the material culture of one minority group at a particular moment in its very rapid evolutionary (or perhaps more accurately, revolutionary)

4It was this sort of would-be ethnographic data, from Australia, upon which Freud relied in his attempts to "understand" religion. For a better examination of what Freud was really doing, however, see the discussion by E.E. Evans-Pritchard (1965:14-15).

5Unconsciously I may have hit on the foregoing framework, but not the following text, which dates from my Junior High School days, based upon the story of Brother Francis of Utah in Walter M. Miller, Jr's. apocalyptic science fiction novel *A Canticle for Liebowitz* (1964).
history (and a very narrow point at that, lasting less that a century),
might, in the spirit of Freudian criticism, at best judge that we had a
curious fixation on sex, if they had nothing more to go on than this
text and the best dictionaries available from our time. But our text,
like every text, is not necessarily what it appears to be at first

"Bad boys rape our young girls, but Violet gives willingly" is not
simply a text in itself. It is a mnemonic device, key to an esoteric
tradition that will forever be invisible to those whose training and
biases predispose them to studied ignorance. Historicists and
positivists, for example, among other things, based on their own
secular culture and consciousness, eliminate a priori the significance
or reality of references to the supernatural from any text. Similarly
and in turn, the modern deconstructionists, following the lead of
Jacques Derrida, Paul de Man, and others, project their own guilt and
angst filled existential experience of the meaningless of modern
secular culture,\(^6\) onto all texts and cultures and conclude that nothing

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<th>I</th>
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<td>BAD</td>
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<td>BOYS</td>
<td>BROWN</td>
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<td>RAPE</td>
<td>RED</td>
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<tr>
<td>OUR</td>
<td>ORANGE</td>
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<td>YOUNG</td>
<td>YELLOW</td>
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<td>GIRLS</td>
<td>GREEN</td>
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<td>BUT</td>
<td>BLUE</td>
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<td>VIOLET</td>
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<td>GIVES</td>
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<td>WILLINGLY</td>
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<td>SILVER</td>
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<td>GOLD</td>
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Table 1

\(^6\)de Man's recently documented Nazism represented the epitome of at
least a mid-twentieth century, morally meaningless, secular culture.
the latter contain means anything either (or, perhaps more accurately, that they contain nothing). But however opaque or meaningless it may seem to be to some readers, every text, in the broadest sense of the word, including everything from our example sentence to an entire library of written documents (the Meroitic corpus, for example), archaeological remains, and examples of the graphic, plastic and musical arts and beyond, does mean something to its creator, participant, or initiate in the culture of origin. That meaning can be approached (or approximated) by outsiders, in some degree, only if they enter into a relationship with their sources with profound humility and awareness of their outsider status and ignorance. 7

If we wish to understand "Bad boys rape our young girls, but Violet gives willingly," we must move far beyond the meaning we could ascribe to it through recourse to a dictionary. On the first level of abstraction, our sentence has two immediate layers of meaning that are obvious to those who have had contact with it in the context of the culture from which it originates.

Column I in Table 1 contains the words of our text, which are all too easily mis-interpreted on a so-called "common sense" level through recourse to one's mental dictionary, by letting the text "speak for itself." But the difficult to scramble, almost unforgettable and ambiguously risque words do not exist in combination for their own sake (or meaning). The sentence is an esoteric key to the twentieth century electrical "color code." Several generations of (mostly adolescent male) "priest-attendants" of our technology (did you ever try and fix your old television set?), learned to chant this mantram as one of the earliest stages of their initiation into the profession. Once they (I) had recited it several times (the whole class in my Electric Shop course said it in unison, and it became a kind of password for us), it stuck in our memory from that time on.8 Another mnemonically tenacious example is the first word in Morse code that many World War II U.S. Navy code trainees were taught, just before lunchtime (an unintended positive reinforcement?), that was intended to overcome a psychological block and show the students they could remember the code. Specifically they were taught to repeat "three dits, four dits, two dits, dah."

7 Failure to do so on the part of supposedly educated Western experts in "development" is responsible for most of the failures and a good part of the starvation resulting from "assistance" programs to the third world. For an overview of this problem see Robert Chambers (1983, 1985). Chambers is, simply, the most profound development theoretician and practitioner in the world today.

8 We can recall here Mark Twain's short story "Punch, Brothers, Punch," (1935:1105-1108), about the demonically possessing chorus:
  Punch, brothers! punch with care!
  Punch in the presence of the passenjare!
which an individual could not stop saying to him or herself, short of starving to death or going insane, unless he exorcised himself by getting someone else to repeat it and thereby become possessed.
This sequence when converted to a word, due to its scatological meaning, was easily and firmly imbedded in their minds.

Column II is a non-random listing of colors, corresponding to the visible spectrum and the rainbow, where the first letter of each color name matches the first letter of the word occupying the same relative position in the original sentence. This second layer of our text, and the sequence (B B R O Y G B V G W) that is repeated or reinforced, is the link to the third level or correlated meaning, for the color names do not exist for their own sake, but to symbolize something beyond themselves.9

Column III is a list of numbers that is linked with remembering the otherwise unwieldy sequence of colors, which in turn can be recalled through the original sentence.

From these relatively simple abstract planes we can go through other levels of abstraction and layers of meaning to various intended "realities" that are symbolized or implied by our text. On a physical/material level of abstraction that correlates to the color names and numbers we can find painted stripes of color on electrical "resistors" (these were far more common prior to the days of micro-circuitry and "chips"), and translate those colors into values of electrical resistance, enabling us to identify, test, match and replace a component, based either on a parts list or schematic diagram or by looking at the original part itself. On yet another plane of meaning, these electrical values symbolize the function of a particular part; what it may contribute to an electronic system as a working whole, either on the workbench or as represented in a circuit diagram or blueprint, which is yet another level of reality from that of the actual equipment in which the part is installed, be it a radio or whatever. In a circuit diagram, yet another symbolic representation of the same component may be found, a "wavy" line (\(-\/_/_/_/_/\-\) ), which may also be described next to the part schematically represented or in an accompanying "parts list" with numbers such as 120K, which again correlate with the colors on the "real life" part. The letter "K" is used to signify thousands when it is used (the last, usually the fourth color band on a part indicated the number of zeros to add to the number code). Sometimes the numbers and the "K" are followed by the Greek letter Omega (\(\Omega\) ), which in turn symbolizes "Ohm" and is the name of the standard unit of measure for electrical resistance. Electrical

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9Silver and Gold, while part of the color code, were not part of the memory aid that is our text, not because no one could write some other easily remembered text that could include them, but for the reason that "everyone knows," so I was taught, that silver is less valuable than gold. These "metallic" colors represent a tolerance of error or precision performance rating, with the gold being most accurate, usually conforming to military specifications.
resistance is the impediment (properly, impedance) which any medium presents to the passage of an electrical current.\textsuperscript{10}

The Ohm, in its turn, is named after Georg Simon Ohm (1787-1854), the physicist who formulated "Ohm's Law" (which is yet another set of imbedded and related symbols: \( E = IR \)), that, among other things, is used to calculate electrical resistance. With Ohm's Law we clearly permute through our original text into the complex worlds of meaning of applied and theoretical physics and mathematics. We have thus moved an incredible distance from the almost naughty text with which we began, in a progression that is coherent and meaningful to those who are part of the tradition.

In review, then, besides meaning sexual assault and/or kidnapping (remember the musical comedy "The Fantastics"), "rape" can also mean "red" that can stand for the real number "2" or for two zeros that follow some other number (-s), depending on where it is painted in a stripe around a small (as little as \( \frac{1}{16} \) inch diameter and \( \frac{1}{2} \) inch long) bakelite cylinder filled with carbon and having wires protruding from either end, thus contributing to the identification of the number of Ohms of resistance the part does or should provide. We can interpret the numbers to be sure the component is of the correct value, based on a circuit diagram, and use our understanding of physics to grasp its role within the functioning of a circuit as a whole.

In rehearsing the above, which is just a fraction of what I learned in Electric Shop classes, I have in part initiated you, the reader, into the group of people for whom our text, "Bad boys rape our young girls, but Violet gives willingly," has a more or less commonly shared and understood complex of meanings, even though those could never, worlds without end, be discovered through the normal dictionaries, schools of literary criticism, textual interpretation or hermeneutics that are our usual recourse when confronted with a text. As a result of this partial initiation, you have potential access to a universe of real and practical meanings that will be inaccessible to others who have not been exposed in one way or another to the culture of those trained in pre-1970s electronics.

It may be objected that our "esoteric" text is only an exaggerated exception to the general nature of language. On the one hand, it may be asserted that consistent interpretation and perhaps even complete computer translation of scientific and mathematical texts may be possible. If this is the case, it is due to the existence and use of internationally agreed upon or conventional meanings (or mathematical equivalents) for key words and symbols employed in these disciplines (e.g.: joule, dyne, \( \Pi \), etc.). But this argument is belied once we leave that ethereal world and turn to the seemingly simple, most

\textsuperscript{10}Not accidentally, a Greek letter Omega was used as the symbol of the "Resistance," the Vietnam War era movement to "stop the draft" and the war. This symbol held additional meanings for Christians involved in the anti-war movement for whom Christ was the Alpha and Omega, the first and the last.
straightforward of everyday prose, let alone a scriptural text or what George Steiner has called "the autonomous life-forms of the poem." It is in the, in fact, almost logically impossible task of accurately translating even non-technical plain everyday speech from one language to another that the true nature of the problem becomes more apparent. Let us examine one example of the absolute impossibility of complete interpretation or understanding, independent of context and culture even where only one language (our own) and no "translation" is involved. To suggest that true meanings can be discovered independent of culture and context is to argue that single meanings can be extracted from what are in fact ambiguous symbols. I am not here simply repeating S. I. Hayakawa's arguments about semantics. Beyond the infinitely different sets or universes of meaning accumulated by each individual for any word, such as the word "cow" (referring specifically to the female quadruped ruminant bovine mammal), we find that a majority of words in any language are in fact multivalent (or have many possible meanings) and therefore are essentially (or by their very nature) untranslatable, independent of the specific culture and context in which they occur. Puns, in other words, are not exceptions but rather are reflections of the very essence or nature of language. The following sentences illustrate this point:

"I don't like the pitch."  "Don't pitch it like that."

These texts are classic examples of totally context-dependent language. What does either sentence mean, read in isolation? What can they mean read together? Let us ignore the other words and just concentrate on the word pitch. In Table 2, below, I have listed a few of the possible meanings for this word based on my own vocabulary for the majority of meanings and recourse to three relatively small dictionaries for the rest (not, by the way, either the *Oxford English Dictionary* or even the current Webster's Unabridged).

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11"Linguistics--so far as they bear on the autonomous life-forms of the poem--will be, uneasily, Whorfian." (Steiner, 1978:163).

12As Werner Winter articulated the problem in his essay, "Impossibilities of Translation," while languages (or words) may be similar to each other, they are never identical ... The system of form and meaning in language A may be similar to that in language B, but it is never identical with it. This statement [which Winter concedes is a tautology--if the two were absolutely identical there would, in reality, only be one!] has a very simple, yet very important corollary: There is no completely exact translation ... There are only approximations, and the degree of similarity possible between original and translation depends on the degree of similarity between the systems of form and meaning in the two languages involved. (1964: 95, italics added; cf. Thomasson, 1973, 1974, 1978, 1981, 1984.)
I have listed in Table 2 only a small fraction of the usages that a dedicated researcher could find for the word "pitch." While it is true that most of these fall into one of several broad categories (to erect or set up, to place in the ground, a measure of height and/or angle, some sort of oscillation, to throw, etc.), such general ideas are, in and of themselves, insufficient to convey the full significance of a specific usage of the word "pitch" by a particular person or group in a given instance. To conclude from this that "pitch," or any other word, lacks any intrinsic meaning is to miss the point completely, however, because what we see is that in every case of communication between finite humans, meaning is the creation of people communicating with each other in the context of their cultures and in response to the environment they are in and the events they are experiencing. And to say that the many uses of a word such as "pitch" are "jargon" completely begs the question. Two carpenters contemplating the roof of a house, two aeronautical engineers discussing a propeller, or any other persons or group succeed in using a word to communicate with each other
precisely because they share a culture, despite the inherently ambiguous nature of their language per se. If even those same individuals use the "same" combination of sounds or word on another occasion or in other social settings or groups, the intended and understood meanings may change. Therefore we must rely upon data outside any text, whether it be a mere transcription of a conversation, a book or manuscript, engraved monument or metal plate, a daily newspaper, audio or video recording or whatever, if we are to discern its meaning with any degree of certainty. No text is completely self-contained—a "set that contains all sets"—for, to be so, it must contain itself, or the key to itself.13 "Interpreters" are necessary, along with any text, unless we prefer the self-delusion of circular logic. Either we admit the necessity of information external to the text itself, or else we must broaden our meaning of the word "text" to include the culture and context of the originator and intended recipient of the communication, as well as taking into account any differences between their background and any other language and culture into which we wish to transfer their words/meanings.

If anyone thinks our example pitch is unique, they should consider many other examples. "Let's forge it" may be a statement of a criminal, a blacksmith, or a trailblazer, among others. Where words have entered English from other languages but sound the same as already extant words, we find one source of such multiple meaning problems, but only one of many, since as human culture changes human language must adapt itself to those changes, and in the process old words are given new or additional meanings. But words are not like old wineskins containing new wine. Words can expand almost infinitely in their possible

13For a text to contain itself, and be unrelated to the outside world is both impossible and undesirable. It would then be totally undecipherable! For study of the Book of Mormon, for example, to be confined to itself it would have to contain a glossary of terms used therein (a few words, such as "priestcrafts" [2 Nephi 27:29] are, in fact, defined within the text, but these are exceptions and far more are left undefined). But then we would need to have a glossary to define the words in the glossary, and so on in either an infinite regression or a path of circular logic. Some, who today would read the text based upon their own command of English and "common sense," ignore crucial details and vital truths. For example, numerous twentieth century commentators have read the word "esteem" (1 Nephi 17:35; Mosiah 27:4; D&C 38:24-25), giving it the "economic" meaning of "to set a high value upon," following contemporary dictionaries, and ignoring the fact that in Joseph Smith's day "esteem" was as or more likely to have meant "to reverence," which makes much better "sense." It is similarly crippling to our understanding and ability to grasp the truth to ignore, for example, Hebrew and the insights that can come from biblical studies and knowledge of the Ancient Near East, and goes completely contrary to the example set by Joseph Smith himself.
meanings. Beyond such problems, we also meet the paradoxes of language, where rules of grammar and syntax as well as lexical values are "correct" and yet a statement is uninterpretable, such as Bertrand Russell's classic example: "This sentence is false." 15

Interpreting Ancient Texts

Parsing

Once we move to the ancient world, even more problems arise. For example, whether due to the shortage and/or high price of writing materials, or perhaps because written texts were often created as aids for memory rather than substitutes for it, many ancient texts were written with all the words run together, without spaces between them. This represents no problem for those who already knew a text by heart, but for anyone else, including everyone now living, it is a substantial barrier to accurate reading and translation. As a result, many ancient texts must be parsed, or divided into significant units before anything else can be done with them.

Parsing is, at best, a subjective process, because in most cases the culture and context from which the document originates are vaguely known, if at all. To illustrate, first consider the following example of a text I created which typifies the problem:

"MYSELFISHEARTHISISOLATED"

From this we could parse a number of possible texts. For instance:

Moreover, it is a dangerous conceit that our, or any human's commentary and glosses can completely exhaust the meaning of a text. George Steiner makes a point paralleling Werner Heisenberg's principle of indeterminacy in physics.

The ardent insufficiency of good criticism, of good reading, is not an inadequacy of technique. The fact that even the most penetrative commentary does not equal or exhaust its text, will not be amended by some historical advance in semantics or the theory and practice of aesthetic interpretation. ... We fall short of total analytic explication, we lack the "decision procedures" in respect of the total complex of meanings and of values in a worthwhile text--one would almost say in any human pronouncement worth receiving . . . . (Steiner, 1981:9)

In an unpublished essay, "Notes Scribbled on 'The Wall,'" I have developed a critique of Sartre's short story titled "The Wall," which is set during the Spanish Civil War. The tale hinges upon the fact that the hero, despite his best efforts at telling an "untruth," an effort in which he wagers his life intending to lose, instead betrays another man. The truth or falsehood of the protagonist's statements depends upon more than his intentions, including in this case the free will of another person. The story also can be seen, in part, as an ironic existentialist commentary upon the curious fixation upon language as a mathematically intelligible phenomenon by philosophers in the first half of the twentieth century (including Lord Russell).
"My self is heart, his isolated."

"My selfish earth is isolated."

Or on the possible assumption that this is a cryptogram or an esoteric and/or mnemonic device, we might unscramble:

"My's elf-fish hear Isis. Sol ate Ted, Ed."

Another possibility, common when copying documents, is that two letters have been merged into one. Restoring a lost letter "h" might produce:

"My selfish hearth is isolated."

One need look no further than the available manuscripts for and legitimate translations of John 8:25 to see that this is not just a theoretical problem. It is a crucial aspect of biblical translation, in spite of our ignorance about the culture and context of the texts. Depending on how they are parsed, the words of countless biblical texts can be read in numerous ways (and we must not forget that many of these words, like the English word pitch, also have multiple meanings). Thus, Christ's response to the Pharisees' question:

"Who art thou?"

in John 8:25 can be rendered:

"Why do I speak to you at all?"*

(Readings marked by an asterisk [*] are from Metzger, 1971:223-224)

"Why am I even speaking to you at all?"

(Kingdom Interlinear Greek English New Testament, [Jehovah's Witnesses])

"Why should I speak to you at all"

(New English Bible)

"That I speak to you at all!"*

"[I am] from the beginning what I am telling you."*

"I am what I told you I was from the beginning"

(J.B. Phillips New Testament in Modern English)

"Primarily [I am] what I am telling you"*

"[I am] what I have told you from the beginning."*

"What I have told you from the very beginning"


"Even what I have told you from the beginning."

(Revised Standard Version)
Comparing the same passage from two Spanish translations we find that the differences are just as great as in the various English readings ("word for word" translations into English are my own):

"Yo soy el principio de todas las cosas, el mismo que
'I am the beginning of all things, the same that [of whom]
os estoy hablando."
[to] ye I am speaking [of].'
(Petisco [Roman Catholic] translation from the
Vulgate, Madrid, 1960.)

"Lo que desde el principio os he dicho."'
'That which from the beginning ye I have told.'
(Revision of De Reina/De Valera Protestant Bible,
Sociedades Biblicas en America Latina, 1960.)

Grammar provides no certain help here, and so, as in many other New Testament passages, theological bias inevitably comes to play as translators, let alone interpreters of the English text, attempt to jump behind or beyond what the documents can tell us, to divine what the writers of the text meant to say. But lacking revelation, this is a most secular and insecure leap, with the landing place predetermined, not by the text itself, but by the conceptual framework and intellectual or theological prejudice which is the only springboard an individual can use to get past the difficulties of the text. There is no single, indisputably correct reading for texts such as John 8:25 that can be established or determined by scholarship! People who expect easy or certain answers to such questions are only asking for translators to be dishonest with them.

The Prophetic and the Sacred Esoteric

Considering the aforementioned kinds of problems, it should be of little surprise that the epistle of 2 Peter would insist on the necessity of having the Spirit to understand the scriptures, reminding us we should proceed with our study:

Knowing this first, that no prophecy of the scripture is of any private interpretation. For the prophecy came not in old time by the will of man: but holy men of God spake as they were moved upon by the Holy Ghost. 2 Peter 1:19-20

Even more to the point, we must remember that the Pauline epistles reflect at times a Roman citizen and participant in Greek culture concerned with gentile converts in Greek provinces, and at other times a "Pharisee, son of a Pharisee," student of the Rabbi Gamaliel involved with Christians of Jewish ancestry. We should be as sensitive to the kinds of misunderstandings that must necessarily arise when people uncritically read a document from another culture without taking into account the differences that exist, much as the early Christians were cautioned against private interpretations. It is this kind of problem that undoubtedly led to the Petrine admonition:
And account that the longsuffering of our Lord is salvation; even as our beloved brother Paul also according to the wisdom given unto him hath written unto you; As also in all his epistles, speaking in them of these things; in which are some things hard to be understood, which they that are unlearned and unstable wrest, as they do also the other scriptures, unto their own destruction. 2 Peter 3:15-16, emphasis added.

These problems are as significant to members of the Church of Jesus Christ of Latter-day Saints as to any other group, and as relevant to 19th century A.D. historical texts as they are to 5,000 year old inscriptions and other texts.

A classic example of the problems inherent in translating a religious text that has been transmitted within a relatively inaccessible language and a closed (hence esoteric) priestly tradition (both of which the Book of Mormon writers represent themselves to be a part of, and for which there is substantial evidence), is to be found in Naxi culture of southern China.

The Naxis are a Tibeto-Burman people who live in the northwestern corner of Yunnan. They have a very rich ritual tradition and a treasure of scriptures that have been used in this rich ritual life. These scriptures are interesting in that they are one of the very few, and maybe the only, living pictographic, iconic, or hieroglyphic languages or scriptures in the world [Chinese is, by contrast, idiographic]. It's not just an interesting case of the evolution of the script, but you actually have people who can read this, so you know how it was meant to be. This is accordingly a living fossilized language. But time is running out, because this scripture makes considerable use of mnemonic devices, and it is not standardized, so one has to be a trained priest in order to read it. The moment these priests, or tombas, die out, it will join the other dead languages of the world. According to recent Chinese reports, the number of priests who are really well versed in this literary tradition have become "as rare as the morning star."

It so happens that about one-half of the total corpus of twenty thousand scriptures are in the West ... [collected] between the 1920s and the 1940s. ...

The problem is that the day the last capable priest dies, these big and fascinating collections here in the West are like deadwood, because although the pictographs themselves can be understood, you cannot know how the text was meant to be read. It is the things that are not there, that have not been written, that are decisive. (Böckman, 1986:11-12)

One would be hard pressed to give a better description of the problems facing translators of any Egyptian religious texts, whether of a hieroglyphic nature such as in the Book of Abraham, or in a reformed script such as either Meroitic (I examined a number of these texts in the Sudan in 1985) or the very similar Nephite characters found on the
Anthon transcript from the Book of Mormon. The same is true for the recently discovered 1,800 year-old inscription in an undeciphered and as yet unnamed language found south of Veracruz, that was announced at the 12th annual Maya Meeting at the University of Texas in 1988. Such texts are precisely "sealed books" because of the, to us, incomplete nature of the language they contain.

Many Latter-day Saints, when the remnants of the Joseph Smith Egyptian papyri were recovered in 1967, expected that a quick, and word-for-word "translation" would directly correlate with the already extant Pearl of Great Price text of the "Book of Abraham." The fraudulently credentialed and almost totally unskilled Dee Jay Nelson quickly came up with just such an out-of-the-dictionary reading, and it bore no obvious resemblance to the Joseph Smith text. The absurdity is that people expected anything else. People failed to realize that to communicate the meaning of any text, let alone an Egyptian religious document, translators must first educate their readers beyond the naive and false assumption that a "word-for-word 'translation'" is even possible, let alone meaningful. Missionaries rarely ever come to realize how little correspondence there is between the messages they intend to send with their much prided MTC abilities and the actual messages received by their hearers. Any serious student begins by learning that Egyptian culture and/or religion was esoteric. But the L.D.S. public demanded immediate meaning and understanding. What they got from the quick "translations" done in the years immediately


17This is in part because members usually are too respectful to correct the missionaries' errors, and non-L.D.S. who criticize are too often dismissed as simply anti-Mormon. Mormons have no monopoly on such puzzles. Discussing difficulties in translating scriptures, E. E. Evans-Pritchard first notes simple problems: for example that "Feed my sheep" cannot easily be translated into an Eskimo language, as some have tried to do, by substituting, say, "seals" for sheep. Seals are hunted. They are never herded, fed, protected from predators or otherwise shepherded. Caribou are inappropriate for the same reasons, and even "sled dogs" leaves a great deal to be desired. Eskimos are a nomadic hunter-gatherer people, not pastoralists. Consequently, all the significant implications of Christ's pastoral symbolism are lost on them. Complicated examples, on the other hand, make "Feed my sheep" seem easy.

How do you translate into Hottentot 'Though I speak with the tongues of men and angels and have not charity ...?' In the first place you have to determine what the passage meant to St. Paul's hearers; and, apart from the 'tongues of men and angels,' what exegetical learning has gone into the elucidation of eros, agape and caritas? Then you have to find equivalents in Hottentot, and, since there are none, you do the best you can. Or how do you render into an Amerindian language 'In the beginning was the word?' Even in its English form the meaning can be set forth only by a theological disquisition (Evans-Pritchard, 1965:14).
following the scrolls' appearance, to the disillusionment of some, was nothing more than the English equivalent of an Egyptian "Bad boys rape our young girls ...". Many now ex- and anti-Mormons alike thought that God or a scholar with a dictionary could give them knowledge from a text when they took no thought save it was to ask ... But, behold ... you must study it out in your mind. (D&C 9:7-8)

They were disappointed in their requests precisely because of their irrational and uneducated assumptions about the nature of the task of translating any text, let alone one that is obviously both sacred and esoteric.

Since 1967, in countless magazine and journal articles, almost endless lectures, and two books, Hugh Nibley has set about the thankless task of remedially educating the Saints about the nature of texts and translations, and their responsibility to study them seriously (which takes years). He has been met by almost hostile reactions at times because he did not give people easy answers. The third chapter of his "Egyptian Endowment" book is a masterful exposition on the nature of translation, yet almost no one I know who claims to be upset about the issue has ever read it (Nibley, 1975:47-55). Some "philosophers" and other pseudo-scholars with an antipathy to working with original languages, formal logic, and the nature of culture are offended that the texts are not immediately open to their great minds. They then dismiss Joseph Smith's translations as false and trivial in blessed ignorance of any of the facts of the matter. The general public, following their lead, whines that "Nibley is too hard to read," and yet somehow expects that reading ancient Egyptian should be easier than reading Nibley's scholarship. In fact, once the honest student gets past the "Bad boys rape ..." level, the texts and the illustrations of the Joseph Smith papyri are quite clear, with substantial precedents. But the majority continue to wallow in their ignorance at the "Bad boys" level, and in a few cases, publish their studied ignorance to the world. Nibley knows that people cannot be force-fed knowledge, so he does his best to educate the people, but like Jerusalem of old, they "would not."

In spite of all that has transpired, people still continue to expect understanding to be easily obtained. If it is not forthcoming at the speed or with the ease they demand (neither slower nor more dense than television news or USA Today), they assume it is not to be had, and significant texts are dismissed as false (De Santillana, 1969; Frye, 1982). Perhaps the most often dismissed text is the Book of Mormon. And yet that book gives us an incredibly sophisticated articulation of the role that culture must play in grappling with the problem of meaning, understanding, interpretation and translation in any text, a lesson that is wholly unpredictable in terms of its originating in the context of upstate New York in the years prior to 1830 (let alone among
The first Nephi outlines this cultural perspective in his statements on Isaiah's writings that in reality is a good starting point for every honest student of any text:

NOW I NEPHI DO SPEAK SOMEWHAT CONCERNING THE WORDS WHICH I HAVE WRITTEN WHICH HAVE BEEN SPOKEN BY THE MOUTH OF ISAIAH^9 FOR BEHOLD ISAIAH SPAKE MANY THINGS WHICH WERE HARD FOR MANY OF MY PEOPLE TO UNDERSTAND FOR THEY KNOW NOT CONCERNING THE MANNER OF PROPHESYING AMONG THE JEWS FOR I NEPHI HAVE NOT TAUGHT THEM MANY THINGS CONCERNING THE MANNER OF THE JEWS FOR THEIR WORKS WERE WORKS OF DARKNESS AND THEIR DOINGS WERE DOINGS OF ABOMINATIONS WHEREFORE I WRITE UNTO MY PEOPLE UNTO ALL THEY THAT SHALL RECEIVE HEREAFTER THESE THINGS WHICH I WRITE THAT THEY MAY KNOW THE JUDGMENTS OF GOD THAT THEY COME UPON ALL NATIONS ACCORDING TO THE WORD WHICH HE HATH SPOKEN WHEREFORE HEARKEN O MY PEOPLE WHICH ARE OF THE HOUSE OF ISRAEL AND GIVE EAR UNTO MY WORDS FOR BECAUSE THAT THE WORDS OF ISAIAH ARE NOT PLAIN UNTO YOU NEVERTHELESS THEY ARE PLAIN UNTO ALL THEY THAT ARE FILLED WITH THE SPIRIT OF PROPHECY BUT I GIVE UNTO YOU A PROPHECY ACCORDING TO THE SPIRIT WHICH IS IN ME WHEREFORE I SHALL PROPHESY ACCORDING TO THE PLAINNESS WHICH HATH BEEN WITH ME FROM THE TIME THAT I CAME OUT FROM JERUSALEM WITH MY FATHER FOR BEHOLD MY SOUL DELIGHTETH IN PLAINNESS UNTO MY PEOPLE THAT THEY MAY LEARN YEA AND MY SOUL DELIGHTETH IN THE WORDS OF ISAIAH FOR I CAME OUT FROM JERUSALEM AND MINE EYES HATH BEHELD THE THINGS OF THE JEWS AND I KNOW THAT THE JEWS DO UNDERSTAND THE THINGS OF THE PROPHETS AND THERE IS NONE OTHER PEOPLE THAT UNDERSTAND

18I can here only note in passing my recent discovery, using WordCruncher software and the LDS scripture textfiles now available, of the absence of modern color names from the Book of Mormon. Only black, white, and red are (predictably) found, with "scarlets" being used to describe a type of cloth rather than color per se (see Thomasson, 1981; Witkowski and Brown, 1978; Bornstein, 1975).

THE THINGS WHICH WERE SPOKEN UNTO THE JEWS
LIKE UNTO THEM
SAVE IT BE THAT THEY ARE TAUGHT
AFTER THE MANNER OF THE THINGS OF THE JEWS
20
BUT BEHOLD I NEPHI HAVE NOT TAUGHT MY CHILDREN
AFTER THE MANNER OF THE JEWS
BUT BEHOLD I OF MYSELF HAVE DWELT AT JERUSALEM
WHEREFORE I KNOW CONCERNING THE REGIONS ROUND ABOUT
AND I HAVE MADE MENTION UNTO MY CHILDREN
CONCERNING THE JUDGMENTS OF GOD
WHICH HATH COME TO PASS AMONG THE JEWS
UNTO MY CHILDREN
ACCORDING TO ALL THAT WHICH ISAIAH HATH SPOKEN
AND I DO NOT WRITE THEM (2 Nephi 25:1-6, from F.A.R.M.S., 1986-

A Partial Conclusion

Whether we re-translate "manner," "works," "doings," or "things" as
culture or leave the text as it stands, except for those who both
humble themselves and acknowledge the almost insurmountable difficulty
of reading and understanding a text from another place, time, and
language, and who also seek honestly to be "filled with the spirit of
prophecy," Nephi's, and in fact every text will remain, at best,
obscure, giving us little more information than that "bad boys rape."
An honest attempt at understanding, at gaining meaning from another
human's effort to communicate, is an attempt to achieve a communion
with that other person, whether living or dead. Anything less than an
honest attempt at communion is cannibalism, a parasitic using of that
person for our selfish purposes. 21
Finally, we must recognize that

20 A typical example of the misinterpretations that come from not
understanding a culture is to be found in the convoluted
rationalizations and bowdlerizations that pious and victorian readers
impose on Hosea 2:2 where that prophet is commanded to
take unto thee a wife of whoredoms and children of whoredoms: for
the land hath committed great whoredom, departing from the Lord.
Removing the sexual imagery may make the text more acceptable in a
Junior Sunday School, but does little to help us interpret the passage.
Understanding just a little of the "manner of the things of the Jews," such as the frequency with which they fell into Canaanite practices of
"worship" with ritual or temple prostitutes or hierodules, helps us to
see that Hosea's prophetic acts were, to Israelites of that time, a
very effective symbolic condemnation, precisely mirroring the way in
which many were in fact "departing from the Lord."

21 Compare John Freccero's analysis of Inferno 32-33 to contrast
communion and cannibalism (1977). In George Steiner's view, the reader
Encounters the poetic fact ... with an informed, scrupulously
sensitized awareness both of the vital orders of responsibility, of
answerability in his response, and of the necessary shortcomings of
this response. He does not aim "to master" the text, except in the
purely technical, formal sense of the term. He aims to be mastered
texts have meaning, not independent of, but rather completely dependent upon 1) context, which is to say the culture the text comes from, and 2) the spiritual condition in which we receive it, which topic would require us to begin another lesson entirely.

by it. I have sought elsewhere to give some account of the processes of self-immersion in a text which accompany any full reading, any reading in depth. I have suggested that these processes, of which learning texts by heart is a decisive, representative aspect, can best be compared with the suspension of disbelief towards, with the testing acceptance of a "real presence" in the text (or work of art). What I mean by "real presence" is that substantiation of articulate form, of expressive representation into "being," as experienced in the presentness of an ikon or in the dynamics of symbolic immediacy in communion. Only some such analogy, be it on a severely secular plane, will, I think, begin to give any useful account of the perfectly literal experience every true reader has had when a poem, a scene from a play, an episode from a novel, have entered into him, have solicited or unbidden, taken root in the core of his consciousness ...

It is, I am persuaded, only some such analogy with the psychology of revelation, an analogy implicit, as it happens, in the descent of modern textual hermeneutics from scriptural exegetics, which can hope to throw light on such phenomena ... Indicatively, the epiphany of the literary persona is a challenge, at once central and commonplace, about which structuralist-semiotic-deconstructive schools of reading find nothing to say. (Steiner, 1981:12-13, emphasis added.)
A prime example of the [disingenuous?] claim that they, as scholars, were just "letting the text speak for itself" are the defenses offered by Brigham D. Madsen and Sterling M. McMurrin of their Studies of the Book of Mormon (1985). Those authors' essays actually put B. H. Roberts' ideas and beliefs into a very particular context, a frame (pun intended) that does anything but allow Roberts or his text (which he intended should never be published, and this is a crucial, moral point) to supposedly speak independently.1 They indulge in a fallacy I learned to avoid from the very first book I read on the philosophy of history, some two decades ago, Hans Meyerhoff's The Philosophy of History in Our Time (1959). To make the explicit obvious, if I were to circulate a photograph of Professor McMurrin, for example, mounted on a white mat that had parallel red lines printed along each side of the photo, meeting at each corner with a circle that contained within it a black swastika, could I be justified in saying that the likeness speaks for itself? Of course not. The context in which I would have placed his photo, what I have included as much as what I have chosen to omit, biases our perception, just as do the editors' essays. There is simply nothing in Roberts' life that reflects anything but a good will to bear witness, and the editors seek to turn that attempt to bear testimony upon its head.

Taking the position that some texts are esoteric, or have an esoteric level of meaning that is not universally accessible, and that no text is complete and self-sufficient, also contradicts the basic assumptions of "fundamentalism." William D. Russell, in a naive, and (in terms of the Utah L.D.S. community) irrelevant article in which he urges us to go "Beyond Literalism" (1986), misunderstands both the essential nature of biblical fundamentalism and its relationship to the Mormon tradition. While (at the insistence of reviewers) he cites James Barr, I have touched on some of the social and political liabilities incurred by the present-day (black) arts of "un-reading." But the crux is moral. A just reading of a text is fully concordant with our understanding of speech as it is uttered to us by another human being. In both cases, the cardinal principle is that of "answerability," by which I mean that of a response that is adequate, reciprocal, complementary, informed by intelligibility and courtesy of heart. In short, it is "responsible" in the strong sense of the word. Faced with the finally mysterious activities of human(e) discourse, with the unelucidated experience of the radical depth and uniqueness of human linguistic exchanges, we seek to "respond responsibly." We seek to make our answer answerable to the autonomous presence before us, to the deployment, always vulnerable to misprision, to misappropriation, to trivialization, but always charged with creative, metaphoric, innovative energies towards us and the world, of being. (Steiner, 1981:7, emphasis in original)
the latter's analysis of fundamentalism is totally at variance with Russell's picture.

It would be well to keep Barr's cogent distinction between fundamentalism and "literalism" in mind with regard to our discussion of the nature of the esoteric in texts.

The 'plain man' ... will commonly say that a fundamentalist is a person who 'takes the Bible literally'. This, however, is far from being a correct or exact description. The point of conflict between fundamentalists and others is not over literality but over inerrancy. Even if fundamentalists sometimes say that they take the Bible literally, the facts of fundamentalist interpretation show that this is not so. What fundamentalists insist is not that the Bible must be taken literally but that it must be so interpreted as to avoid any admission that it contains any kind of error ... no error of any kind—not only theological error, but error in any sort of historical, geographical or scientific fact, is completely absent from the Bible. In order to expound the Bible as thus inerrant, the fundamentalist interpreter varies back and forward between literal and non-literal understandings, indeed he has to do so in order to obtain a Bible that is error-free. (Barr, 1978:40)

One need go no further than the eighth Article of Faith to see how unrelated the slur/labels of "fundamentalism" and "literalism" are to anyone, Joseph Smith especially, who takes Mormonism seriously. Mormons are not snake-handlers, strychnine drinkers, offending eye pluckers, hand cutters or anything else remotely resembling biblical "literalists," and are equally uncommitted to inerrancy. Like William Russell's diatribe, Martin Marty's almost obscenely funded current project on "fundamentalism" appears to be proceeding in total oblivion to this fact, polemically labelling contemporary Mormonism as a fundamentalist group in reckless disregard of the facts.
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Twain, Mark (Samuel Clemens)

Wendland, Ernst R.

Winter, Werner

Witkowski, Stanley R., and Cecil H. Brown
Most readers these days don’t find *Measure for Measure* a very funny comedy. In fact, classifying it as a comedy—as the First Folio does—can be a stumbling block to interpretation even though historians of the genre can justify doing so on the basis of precedents classical or medieval. F. S. Boas solved the difficulty by reclassifying *Measure for Measure* as a problem play in 1896, grouping it with other troublesome works such as *Troilus and Cressida*.

The term problem plays has, since then, served as a tacit condemnation of the plays. Presumably a problem play is one that does not meet our expectations; we have trouble placing it—its plot, characters, and style fail to stir our souls as does tragedy and fail to delight us as does comedy. They leave us with mixed feelings. It seems that critics have never been truly satisfied with leaving their problem unsolved.\(^1\)

W. W. Lawrence mentioned tragicomedy in connection with these plays as early as 1930, and contemporary critics are attempting to solve their problematical status by examining them as tragicomedies. In general, characters in tragicomedies are challenged, death threatens some of them (that’s the tragic), but the resolution of the play is "happy and fortunate" despite disturbing incongruities in tone and content (that’s the comic; see James G. Taaffe 166-7). There is general agreement that merely alternating comic and tragic material, as when Shakespeare places the porter’s ribald lines (MAC 2.03) between the murdering of Duncan, and the discovery of the murder, does not make tragicomedy. Critical discussion is primarily about whether a play has successfully blended these disparate genres.

That definition of tragicomedy so satisfactory in the abstract is not always helpful in the particular. For example, critics differ about what constitutes a happy or fortunate ending. Vivian Thomas suggests that tragicomedy’s complex mix is of particular interest to contemporary audiences disillusioned with the happy endings supposedly achieved via governments, religions, or marriages. Of the marriage of Helen to Bertram at the conclusion of *All’s Well* she writes, "After three hours of observing the nasty little egotist, could anyone really feel that here is a man who will retain the tolerant and good humoured regime established by his father and continued by his mother?" (167)

Similar dissatisfactions with other characters (Isabella’s frigidity, Cressida’s infidelity), or features of the plot (bed tricks, endings featuring marriage as a cure-all, Pandarus’s advice) have been as vigorously expressed. Sometimes the style of the plays is also condemned, although stylistic analysis lags behind other critical approaches.

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Marvin T. Herrick, after tracing the theory and practice of tragicomedy from classical times through the Christian Terence to the dramatists of 16th and 17th century Italy, France, and England proposes (with reservations) that seven of Shakespeare's plays be viewed as tragicomedies: Much Ado, Merchant of Venice, All's Well, Measure for Measure, The Winter's Tale, Cymbeline and Pericles. He bases that proposal on the fact that these plays contain at least some of the following elements of tragicomedy: noble and base characters, a variety of incident and diction, some use of soliloquy, oracle, chorus, and rhetorical, sententious speech (Tragicomedy 249-60).

I found the conventions of language use Herrick listed intriguing—if a play is a tragicomedy, shouldn't we be able to identify in it a mixture of the tragic and comic styles? Ignoring the sensible impulse to do a paper on something else—since there is so much disagreement about language conventions of genres, and the topic is too big for a short paper anyway—I propose to briefly explore aspects of the language in Measure for Measure that could be traced to the tragic or comic traditions. There are many that might prove fruitful; I've examined only one from each genre: the use of heightened language in the tradition of Senecan tragedy and the use of sexually equivocal language, part of the comic tradition.

The Senecan Style in Measure for Measure

Despite the disagreement about how English drama absorbed and changed classical traditions, I think it is safe to say that some of the appeal of Shakespeare's tragic protagonists lies in their linguistic dominance of a play. They are obviously the major characters—larger than life, sometimes nasty, big egotists. They have soliloquies or other long speeches in the Senecan style—verse that may include the use of emotive interjections, apostrophe, classical allusions, standardized horror words, hyperbole, detailed descriptions or comparisons, or a mixing of Germanic or colloquial and Latinate vocabulary (sporiasmus). Their anger, madness, or obsessions are displayed in their language use. They give us the memorable, the quotable quotes: for example, here are two Senecan passages from Macbeth. In the first, 1.05.40-54, Lady Macbeth's working herself up for the murder of Duncan.

Come, you spirits
That tend on mortal thoughts, unsex me here,
And fill me from the crown to the toe topful
Of direst cruelty! Make thick my blood,
Stop up th' access and passage to remorse,
That no compunctious visitings of nature

The influence of Senecan tragedy can be seen, for example, in the following passages (this list is not complete):

Hamlet 2.02.450-518—the player's speech, followed by Hamlet's working himself up to revenge in his soliloquy in 550-88.
Lear 3.02.1-24—Lear challenging the storm.
Macbeth 1.05.38-54—Lady Macbeth preparing for murder.
Othello 3.03.442-69—Othello and Iago swear revenge.
Shake my fell purpose, nor keep peace between
Th' effect and [it]! Come to my woman's breasts,
And take my milk for gall, you murth'ring ministers,
Wherever in your sightless substances
You wait on nature's mischief! Come, thick night,
And pall thee in the dunnest smoke of hell,
That my keen knife see not the wound it makes,
Nor heaven peep through the blanket of the dark
To cry, "Hold, hold!"

(1.05.40-54)

She appeals directly to forces of evil with the apostrophes, Come, you spirits, Come ...
... you murth'ring ministers, Come, thick night; she uses a sting of words connoting
the horrible: mortal (41), direst cruelty (43), blood (43), fell (46), murth'ring (48), night
(50), hell (51); and mingles phrases heavily Germanic with Latinate (soriasmus), e.g.,
Make thick my blood. / Stop up the access and passage to remorse. / That no
compunctionous visitings of nature / Shake my fell purpose (43-47).

In the second passage (2.02.54-60) we see Macbeth leaning toward madness with a list of
his symptoms: jumpiness, viewing his hands as though they were not his own, the
grotesque image in 56 of plucking out his own eyes (a metaphor for the horrified
surprise that the hands are his?) Whence is that knocking? / How is't with me, when
every noise appalls me? Hah! they pluck out mine eyes. (2.02.54-56) After the
plucking out of the eyes—which bloodies the hands, as did murder--Macbeth borrows an
image from Seneca's Hercules Furens and his Hyppolytus, questioning whether rivers and
oceans can wash guilt away, an expression of the enormity of his crime in global terms
via soriasmus (making the green one red, a colloquial restatement of the multitudinous
seas incarnadine.) Will all great Neptune's ocean wash this blood / Clean from my
hand? No: this my hand will rather the multitudinous seas incarnadine. / Making the
green one red. (57-60)

Though the Duke is the major character in the play (he's given over 29% of the lines),
his language in Acts One and Five, and in between, befits an administrator busy
obscuring his own actions rather than a tragic hero wrestling with fate. His verse
contains inverted syntax, copia (e.g., 1.01.3-15), and imagery that ranges from the
abstract to the disjointed to the sexually equivocal (e.g., 1.03). Notice in 1.01.3-15, a
passage so obtuse that editors suggest a lacuna in 8-9, the use of inverted syntax,
pleonasm, abstract terms, pairs, and triads. The pairs and triads suggest balanced,
reasoned speech, but the abstractions and inversions contribute to the feeling the reader
has that the sense is vague--a typical response to the language of a bureaucrat.

See Jo-Ann Shelton, Seneca's Hercules Furens, 76-83, which discusses the
imagery of the play which Shakespeare has, to some degree, paralleled in Macbeth, e.g.,
characterizing a warrior via metonymy as his hands. Note the use of hand here.

See James C. Bulman's The Heroic Idiom of Shakespearean Tragedy, 179.
Bulman's discussion includes the standard topoi of Senecan drama.

Note in 1.01.26-45 the string of abstract entities: character, virtues, Spirits, Nature, scruple; the abstractions allow him to flatter Angelo in a semi-impersonal way.
In 1.03 he first uses a sexually equivocal image in 1-6, "the dribbling dart of love ... aims and ends of burning youth." Then in 19-31 he moves from bits and curbs to lions, fond fathers, to liberty, justice, babies, nurses, and decorum. Friar Thomas seems
unimpressed by this confused partial explanation.
Duke. Of government the properties to unfold
Would seem in me t'affect speech and discourse,
Since I am put to know that your own science
Exceeds, in that, the lists of all advice
My strength can give you. Then no more remains
But that, to your sufficiency, as your worth is able,
And let them work. The nature of our people,
Our city's institutions, and the terms
For common justice, y' are as pregnant in
As art and practice hath enriched any
That we remember. There is our commission,
From which we would not have you warp. Call hither,
I say, bid come before us Angelo. (1.01.3-15)

The Duke does not intend to reveal his plans to anyone before he leaves. He's described Escalus (3-13) as his obvious deputy, but then gives Angelo the authority: Escalus' reply in 22-24 could be seen as politely noncommittal. Friar Thomas in 1.03, however, does not so easily agree to give the Duke authority to pose as a Friar, and the equivocal language used by Vincentio in 1-6 is not reassuring.

Duke. No; holy father, throw away that thought;
Believe not that the dribbling dart of love
Can pierce a complete bosom. Why I desire thee
To give me secret harbor, hath a purpose
More grave and wrinkled than the aims and ends
Of burning youth. (1.02.1-6)

The obvious sexual imagery is puzzling; has the Friar assumed that the Duke was seeking romantic entanglements? Unlike the comic use of bawdy, this use seems not to be presented for comic effect extrinsic to the plot. Vincentio strings images together in 19-31 in an attempt to justify his actions: weeds in 20, to a lion in 22, fathers and children, birch twigs and rods in 23-25, liberty (an abstract personified) plucks justice (another personified abstraction) by the nose in 29, and in 30 the baby beats the nurse, causing decorum (a personified abstraction) to tumble quite athwart.

Duke. We have strict statutes and most biting laws
(The needful bits and curbs to headstrong weeds),
Which for this fourteen years we have let slip,
Even like an o'ergrown lion in a cave,
That goes not out to prey. Now, as fond fathers,
Having bound up the threat'ning twigs of birch,
Only to stick it in their children's sight
For terror, not to use, in time the rod
[ Becomes] more mock'd than fear'd; so our decrees,
Dead to infliction, to themselves are dead,
And liberty plucks justice by the nose;
The baby beats the nurse, and quite athwart
Goes all decorum. (1.03.19-31)

Rather than using the images to explicate the problem or to lend heroic stature to his deeds, the imagery, is repetitive and confused. Friar Thomas' dissatisfaction with that
explanation is clear in his pointed comment in 31-34 that it is the Duke's responsibility, not Angelo's, to restore justice and decorum.

His sententious couplets in 3.02 summarize the plot and the imminent bed trick, but could not be considered part of heroic idiom, nor do they really provide insight into his own character and motivation as do some protagonists' soliloquies. They are old-fashioned end-stopped couplets, neither inspiring nor emotive. It could be argued that his administrative language reflects the plot of the play--he is not in the extremities faced by Hamlet or Lear--but that won't make the couplets more palatable.

After 260 lines of prose in the scene, a significant portion of it Pompey's and Lucio's derogation of the Duke and his administration, the first few lines of verse are confusing--is Vincentio referring to himself or to Angelo as the one bearing the sword of heaven?

He who the sword of heaven will bear
Should be as holy as severe;
Pattern in himself to know,
Grace to stand, and virtue go;
More nor less to others paying
Than by self-offenses weighing. (3.02.261-266)

His condemnation of Angelo in lines 267-282 clears the initial confusion, but the lines contain no heroic imagery, no heightened diction other than the verse sometimes considered little better than doggerel. This is not the speech of a tragic hero.

Shame to him whose cruel striking
Kills for faults of his own liking!
Twice treble shame on Angelo,
To weed my vice, and let his grow!
O, what may man within him hide,
Though angel on the outward side!
How may likeness made in crimes,
Making practice on the times,
To draw with idle spiders' strings
Most ponderous and substantial things!
Craft against vice I must apply.
With Angelo to-night shall lie
His old betrothed (but despised);
So disguise shall by th' disguised
Pay with falsehood false exacting,
And perform an old contracting. (3.02.267-282)

Much of the Duke's language throughout the play is devoted to furthering the plot or untangling it, not to the typical tragic protagonist's anger, madness, revenge, or soul-searching. Perhaps his most Senecan use of language is in his role as Friar giving sententious Stoic (albeit Christianized) advice to Claudio in 3.01.5-41: Be absolute for death; either death or life / Shall thereby be the sweeter. Reason thus with life; / If I do lose thee, I do lose a thing / That none but fools would keep.

6 See for example Macbeth 5.05.1-28; Lear 2.04.149-54; Hamlet 3.03.73-96.
Generally the Stoicism in the Senecan style receives less attention than the heroic idiom; but it is there, as in HAM 3.01. Notice the argument format; imagery of life/death as a dream; the antithetical, the view of life as useless; the nobility in facing death bravely.

While we may admire the Stoicism of the warrior--Antony, Macbeth, or Othello--which propels him to greater acts of courage, the Stoicism used to reconcile victims of apparent injustice may not be recognized or may seem anticlimactic. Though Claudio gives Stoic reply, "I humbly thank you" (41-3), he does not believe himself guilty (1.02.145-171), seeks Isabella's help (3.01.111-35), and, unlike Othello, has no last grand speech to punctuate with his death (OTH 5.02.338-56). He is a lover, not a warrior.

I think that some of our disappointment with the play is in the frustration of our expectations that the protagonist use grand Senecan style. The plot does not give the Duke and his audience a cathartic experience, nor does his language establish him as predominately admirable. We may almost agree with Lucio that "It was a mad fantastical trick of him to steal from the state, and usurp the beggary he was never born to," but we are uncomfortable laughing at our tragic heroes. If he can't act the part of a hero, it would be nice to have him talk the part.

The Use of Sexually Equivocal Language in Measure for Measure

Early in the play (Act I, Scene 2) Lucio shows himself to be the master of bawdy. He banters with two gentlemen about the effects of venereal disease and puns with Mistress Overdone when she announces that Claudio has been imprisoned for Juliet's pregnancy (1.02.11-110). Their openly frivolous, cynical attitudes toward sex not only reflect the theme of the play but also are uncomfortably paralleled by the more subtly equivocal words and images of the Duke, Isabella, Angelo, and Claudio.

Bawdy is used in the tragedies to provide comic relief, openly sexual language to represent madness. Lear, for example, rails against sexuality as part of his disillusionment with family and society (4.06.109-67). Hamlet uses sexual language to convince Ophelia he is mad (3.02.245-51); Ophelia's madness is expressed in the ballad of the betrayed maiden (5.05.23-66). In the comedies we expect a certain amount of bawdy

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7 Stoic warrior speeches include ANT 4.24; MAC 5.08.27-34; and OTH 5.02.338-56. Braden suggests that the Stoicism of Hamlet's "To be or not to be" soliloquy in 3.01.55-87 and some of his other speeches has not been recognized (216-23).

8 Isabella, though widely considered an unsympathetic character, is given the most memorable lines in the play, 2.02.73-79:

Why, all the souls that were were forfeit once,
And He that might the vantage best have took,
Found out the remedy. How would you be
If He, which is the top of judgment, should
But judge you as you are? O, think on that,
And mercy then will breathe within your lips,
Like man new made.

9 For example, MAC 2.03.1-41 (the Porter's scene); the Fool's comments in LR 1.04.51-2; 2.03.122-6; ROM 1.01.32; 2.01.6-41. It can, of course, be argued that the bawdy serves as commentary on the other action of the play.
that seems neither to move the plot along nor to reflect the theme--it's there to elicit laughter, as in the bawdy punning in *Love's Labours Lost*. Comic witbouts--flying--are amusing for their creativity, an earthly creativity which values a witty, well-timed insult. Some of the sexual language of the comedies has been interpreted as a celebration of the pleasures of the marriage bed, which should not appear incongruous in plays ending in marriages all around.\(^\text{10}\)

But in *Measure for Measure* both sexually equivocal language and bawdy sometimes play different roles. The Duke's status as a good ruler is undercut by the sexual imagery in his speeches in Act One (*th' dribbling dart of love*--1.03.02), by his inability to do more than sputter about Lucio's affectionate slanders in 3.02.114-86, and by Lucio's reducing him and Escalus in Act Five to delivering straight lines for equivocation. Lucio's persistent use of sexually equivocal language, especially in 5.01, undermines the Duke as status as an admirable protagonist, and marriage as a suitable cure for sexual liberty. Lucio speaks unbidden seven times (5.01.74-85, 127-49) during the Duke's staging of Isabella's grievance against Angelo, then five more times during Mariana's testimony. As Mariana reveals the Duke/Friar's plot, Lucio undercuts the importance of the charge by eliciting laughter.

*Mari.* My husband bids me, now I will unmask.  
[Unveiling.]

This is that face, thou cruel Angelo,  
Which once thou swor'st was worth the looking on;  
This is the hand which, with a vow'd contract,  
Was fast belock'd in thine; this is the body  
That took away the match from Isabel,  
And did supply thee at thy garden-house  
In her imagin'd person.  

*Duke.* Know you this woman?  

*Lucio.* Carnally, she says.  

*Duke.* Sirrah, no more!  

*Lucio.* Enough, my lord.  

(5.01.206-15)

Again and again Lucio speaks enough to make the major characters look silly.

Lucio's opinions of the Duke, Isabella, and Angelo are not so different from those of others, except that he couches his opinion in overtly sexual language--he refuses to be polite; he makes explicit the sexual senses implicit in the language of others.\(^\text{11}\) In this way he invites the audience to see them as ridiculous seemers, an unpleasant proposition for those who prefer to accord them more dignity. He moves easily between the social outcasts and the nobility, exhibiting his cynical view of sexuality for both groups. He is capable of referring to sex as "a game of tick tack" (1.02.190) or speaking of it with respect: "your brother and his lover have embrac'd" (1.04.40). By insistently interjecting bawdy lines in the final scene of the play, Lucio reduces the tone of solemnity and

\(^\text{10}\) See AYLI 5.04.108-46; MV 256-307; MND 5.01.363-422; and TMP 4.01.75-138 (a pastoral comedy?).\(^\text{11}\)

\(^\text{11}\) Compare his description of Angelo and the Duke in 3.02.88-184 *passim* with opinions of Angelo expressed by the Duke in 1.03.12, 50-54, by Angelo in 2.02.161-86, inferred from Escalus' lines in 2.01.1-32; expressed by Isabella 2.04.139-54, 5.01.28-119 *passim*. Angelo and Escalus in 4.04.14, the Duke as Friar in 5.01.292-322; his description of Isabella as cold 2.02 *passim* is echoed by many critics.
mars the Duke's affable solutions. By the end of the play Lucio has the Duke tacitly agreeing with his condemnation of forced marriages:

Lucio. Marrying a punk, my lord, is pressing to death, whipping, and hanging.
Duke. Slandering a prince deserves it. (5.01.522-24)

By play's end we are not convinced that the Duke, who cannot by command stop Lucio's bawdy, has accomplished his task of restoring order to his city. Lucio challenges the Duke's linguistic dominance of the play with his ability to use the Duke's words to produce laughter, thus controlling the focus of the audience. This linguistic challenge prevents the ending from fully satisfying the comic convention; we feel that just as the Duke must yet again promise to explain his actions, Lucio will continue to demonstrate his taste for the equivocal.

This short examination of aspects of comic and tragic styles in MM is incomplete, but it may offer a possible explanation for some of the dissatisfaction critics and audiences feel for the play.

The Duke's sententious Stoicism and Lucio's relentless bawdy are not the elements of the language of tragedy and the language of comedy that we expect or find satisfying. In this tragicomedy the language conventions have been given a twist, leaving both the tragic and the comic mere shadows. Their intensity is lost, and that may account for our lukewarm response.

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12 There is a similar use of bawdy in the last lines of AWW and TRO.
REFERENCES


PHONETIC VARIATION AND CHANGE:
An Analysis of steel and still

Michèle Petersen
Brigham Young University

Phonetic change is a subject of interest to linguists in many parts of the world. Depending upon their interests and hypotheses, linguists have traditionally sought to relate observable phonetic changes to various other fields of study such as language acquisition, perception, and comparative and historical linguistics. As a result of the wide applicability of phonetic phenomena, linguists are interested in the various types of phonetic change occurring in the world around them.

One area of phonetic change which in recent years has been the subject of several studies is a paradigmatic change which seems to be occurring primarily in the Inter-Mountain area of the United States. This perceptual change is characterized by 'washed out' tonality distinctions as perceived by the decoder of the speech act in a specific environment. Specifically, with vowels which precede velar /l/, there seems to be no perceptual distinction between tense and lax tonality features. Words such as meal and mill exhibit this environment.

Not only is it hypothesized that velar /l/ is the conditioning environment for the change manifest by increasingly difficult perception of the tense/lax distinctions, but it appears that /l/’s liquid counterpart /r/ already conditions a similar lack of perceptual tonality distinctions as is shown by the lack of minimal pairs closed by /r/. (See Appendix 1) For some speakers, there appear to be minimal pairs with opposing tense/lax vowels in words closed by /l/ but not in words closed by /r/. For example, for many people, feel, fill are minimal pairs while /fir/ and /fIr/ do not form minimal pairs distinguishable by a difference of surface meaning. Further examination of the situation reveals that many consonants of the English language demonstrate this same lack of tonality distinctions in preceding vowels.

1Special thanks to Willis Fails, Rey Baird, and John Robertson of the Brigham Young University Linguistics Department for their observations regarding these tonality changes.
In these paradigmatic changes, words which were previously minimal pairs are becoming indistinguishable perceptually, and are now perceived solely by context. Examples of these words include words with off-glides such as /iY/ in which the tendency to bring the sound to a higher pitch is lost when the vowel sound is followed by the consonant /1/.

Despite the fact that for many English-speaking U.S. citizens words such as steel and still form minimal pairs differentiated by tense and lax tonality distinctions, for an increasing number of people, these distinctions appear to be lost, causing vowels such as these to be pronounced and subsequently perceived as the same sound in the conditioning environment of velar /1/.

In order to prove (in the sense of both test and prove) that there actually is a change occurring in the dialect of the Inter-Mountain area, I did a study testing whether the distinction between tense and lax vowels could actually be perceived when the differing vowels were pronounced in words prior to /1/ by a native Utahn.

In the following paragraphs the procedures for the study are outlined. Following the explanation of the testing procedures, I will interpret the results and suggest some possibilities for future studies.

TESTING PROCEDURES

The speaker informant I chose to analyze was a female of twenty-one years of age who has lived in Utah for her entire life. I presented the informant with the following sentences (without underlining the word of focus) and asked her to read them so that I could tape them. In executing the stated process, in order to produce characteristic speech in a normal and unbiased fashion, the informant was left unaware of the purpose of the study and the hypothesis involved. The test sentences were:

1. The profits are increasing at Geneva Steel.
2. The moonshine is in the new still.
3. The semester still has a week left.
5. Steel is made of iron and other processes.
7. Steel, aluminum, and silver are all metals.
8. Some new cars are part steel and part aluminum.
9. Even though I'm still a student, I have a job.
10. Boss Hogg found the hidden still full of moonshine and arrested the Dukes.

The sentences were formulated to accomplish several purposes which included providing context for the speaker
informant, and also varying the position of the word containing the conditioning environment. I elected to investigate the words steel and still, although many other words such as meal/mill and seal/sill appear to be changing in the same manner.

Following the eliciting process, I took the tape of the speaker informant's sentences and digitalized the speech in order to separate the words from their context. In general, the cutting and re-taping procedure occurred without mishap, producing the tape which will be termed the "perceptual tape" in subsequent discussion. The perceptual tape features the ten words under investigation, each one followed by a short pause.

The next step in the study was to create a questionnaire to use for recording the perceptions of the perceptual informants. After copying the questionnaires, I gathered data from a sample of current Provo/Orem residents of whom the majority were students. In the study, in order to discount the influence of other possible variables, I sought to eliminate large variances in several of the common influential informant characteristics. A sample of informants with as little variance as possible according to their age, and a fairly consistent and even ratio of males to females in each group aided in achieving this goal.

In each instance, I asked the perceptual informant to listen to the tape, which presented the ten digitalized words separate from the context of the sentence, and to circle one of the two choices illustrated on the questionnaire. (See Appendix 2) Each informant was given the freedom to listen to the tape more than once if he or she desired to do so.

In order to ascertain if the portion of perceptual informants who generally ignore the tonality distinction in speech, are actually looking at other perceptual cues in decoding, I divided the total number of perceptual informants into two groups. One group was composed of informants who were raised in various areas of Utah, an area in which the change is widely apparent, while the other (larger) group included informants who listed their childhood home as a place outside of the Utah area. These places included other areas of the United States as well as some foreign countries. The following data summarizes the perceptual informant variables as stated thus far:

**PERCEPTUAL TEST INFORMANT INFORMATION**

<table>
<thead>
<tr>
<th>Number of informants:</th>
<th>Average age of informants:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utah: 14</td>
<td>Utah: 24</td>
</tr>
<tr>
<td>Elsewhere: 34</td>
<td>Elsewhere: 22</td>
</tr>
<tr>
<td>Total number: 48</td>
<td>Total average age: 23</td>
</tr>
</tbody>
</table>
Percentage of each sex:                         Males                      Females
Utah:                               43%                      57%  
Elsewhere:                           41%                      59%

With such similarity between the characteristics of the two groups, it appears that any significant difference in perceptual response to the words MIGHT be related to the difference in childhood home which is so influential in developing speech and accent, a fact which has been heavily supported by in depth research performed by language acquisition specialists.

After analyzing the results of the questionnaires for each group, I find that the difference in childhood residence does not seem to cause a difference in analysis of perceptual cues, because on the average, both groups appeared to answer correctly to a similar percentage of questions. The results of the test are as follows:

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Number of group members who perceived the words correctly</th>
<th>Percentage of group members who answered correctly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utah</td>
<td>Elsewhere</td>
<td>Utah</td>
</tr>
<tr>
<td>1. steel</td>
<td>2/14</td>
<td>2/34</td>
</tr>
<tr>
<td>2. still</td>
<td>9/14</td>
<td>30/34</td>
</tr>
<tr>
<td>3. still</td>
<td>9/14</td>
<td>28/34</td>
</tr>
<tr>
<td>4. still</td>
<td>7/14</td>
<td>21/34</td>
</tr>
<tr>
<td>5. steel</td>
<td>5/14</td>
<td>13/34</td>
</tr>
<tr>
<td>6. still</td>
<td>6/14</td>
<td>21/34</td>
</tr>
<tr>
<td>7. steel</td>
<td>8/14</td>
<td>16/34</td>
</tr>
<tr>
<td>8. steel</td>
<td>6/14</td>
<td>7/34</td>
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<tr>
<td>9. still</td>
<td>11/14</td>
<td>30/34</td>
</tr>
<tr>
<td>10. still</td>
<td>7/14</td>
<td>19/34</td>
</tr>
</tbody>
</table>

The percent of difference between the responses of the groups in relation to the various questions is as follows:

Percentage difference between the groups

<table>
<thead>
<tr>
<th>Question</th>
<th>Percentage difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>8%</td>
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<tr>
<td>2.</td>
<td>24%</td>
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<tr>
<td>3.</td>
<td>18%</td>
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<tr>
<td>4.</td>
<td>12%</td>
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<td>5.</td>
<td>2%</td>
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<tr>
<td>6.</td>
<td>20%</td>
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<td>7.</td>
<td>10%</td>
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<td>8.</td>
<td>22%</td>
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<tr>
<td>9.</td>
<td>9.9%</td>
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<tr>
<td>10.</td>
<td>6%</td>
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</table>

As is illustrated the results of the test demonstrate a near perfect Bell curve with the majority of the informants scoring near the center of the range while a small percentage of the informants scored at the extremes of the scale.
### Range of scores for the groups:

<table>
<thead>
<tr>
<th>Place</th>
<th>Score</th>
<th>Number of perceptual informants with this number correct</th>
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</table>

In relation to the entire test, the groups performed approximately the same with an average of 50% correct for the Utah group while the group with informants from various childhood backgrounds had a slightly higher average with 55% of the total questions answered correctly. The similarity in average percentage scored between the two groups suggests that the Utah group does not in fact have another means of perception to distinguish words in which the tense/lax tonality features are masked. These results suggest that there is little or no perceptual difference in the traditional minimal word pair *steel* and *still* when produced by a speaker in the Utah area.

The perceptual absence of tonality features can be demonstrated in several ways. First, in administering the test, a large proportion of informants expressed frustration because they felt that all the words sounded the same. Secondly, since there were only two possibilities for an answer, if the informants made a totally random guess, a 50% score would be expected, and this is nearly manifest in both instances. Thirdly, in retrospect, I administered the test to the speaking informant, and found that she only scored 50% when perceiving herself. These three evidences demonstrate that the hypothesized lack of distinction of tonality features is a reality in the particular environment studied.

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2The informant was led to believe that the words were in an order different from the original order of the sentences in order to allow for an unbiased judgement of the words.
CONCLUSIONS

There are several areas which I feel could be improved in further study. Some suggestions include:

1. Sentence #4 is ambiguous in the sense that still could mean continuous or it could mean a device used in relation to liquor distillation.

2. More variant words could have been included in the test sentences to see if these other variants in meaning would be distinguishable and thus form minimal pairs in the conditioning environment. The list of words which could have been used includes: steel (metal), steal (rob), still (continuous), and still (liquor distillation device).

3. The questionnaire could have been more specific in several areas. For example, in the section identifying childhood home, stating the exact age period of focus would have clarified the question. Also, the question inquiring about the current home might have asked for current address to eliminate confusion between home and hometown. This problem was illustrated when some of the informants did not write Provo/Orem as their current home, although they are current residents of this area.

4. It would be interesting to have the same people listen to a tape which features a speaker informant from another area of the country producing the identical words clipped from the same group of sentences in order to see the perception of the vowels produced.

Notwithstanding the areas where the study could be improved, it appears to be a success because it provides evidence to support the following hypotheses:

a) There is indeed difficulty in perception of the tense/lax tonality features of words produced by speakers native to the Inter-Mountain area (specifically Utah in this study).

b) The difficulty in perception is manifest by decoders as a whole, not solely by non-Utah childhood residents.

With the strong evidence provided by this study, I conclude that each of these facts appears to be a reality in the Inter-Mountain area.
# Appendix 1

**Compact Consonants: Minimal Pairs**

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</table>

*I*--These words used to be minimal pairs but in many areas they are now changing as a result of the changing tonality features prior to /l/.

**r**--Ladefoged (1982:81) says tense/lax V don’t contrast in r-closed syllables.
Appendix 2

PERCEPTUAL TEST
Informant Information

NAME: _______________________________________________________
CURRENT HOME (CITY, STATE): ________________________________
CHILDHOOD HOME (CITY, STATE): _____________________________
AGE: _______________________________________________________
SEX: _______________________________________________________
OTHER AREAS OF RESIDENCE AND PERIOD OF RESIDENCE:

**********************************************************
INSTRUCTIONS: Listen to each of the words on the tape and CIRCLE the letter of the word which you hear.

1. a) steel
   b) still
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3. a) steel
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4. a) steel
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5. a) steel
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7. a) steel
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8. a) steel
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9. a) steel
   b) still
10. a) steel
    b) still

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Thank you for your help!
BIBLIOGRAPHY

INSCAPING THE SPIRIT IN "AS KINGFISHERS CATCH FIRE"

P. Karen Todd
Brigham Young University

As kingfishers catch fire, dragonflies draw flame;
    As tumbled over rim in roundy wells
Stones ring; like each tucked string tells, each hung bell's
Bow swung finds tongue to fling out broad its name;
Each mortal thing does one thing and the same;
    Deals out that being indoors each one dwells;
Selves--goes itself; myself it speaks and spells;
Crying What I do is me: for that I came.

I say more: the just man justices;
    Keeps grace: that keeps all his goings graces;
Acts in God's eye what in God's eye he is--
    Christ--for Christ plays in ten thousand places,
Lovely in limbs, and lovely in eyes not his
To the Father through the features of men's faces.

(Poems 90)

Hopkins critics as respected as Gardner and MacKenzie have seen in the fiery imagery of "As Kingfishers Catch Fire" a reaching toward philosophical profundities. Gardner asserts that the "live and glancing blowpipe flame typifies the first conception of 'immortal song' in the poet's mind; and the fire is the visible sign of vital activity when . . . 'kingfishers catch fire' and 'dragonflies draw flame'" (I: 155). MacKenzie notes that "the kingfisher's azure back and wings (and sometimes its red breast) scintillate fire as the sun's rays catch it . . . . The dragonfly jets flame like a blow-pipe, unmistakably itself" (149). He also suggests a parallel with Psalm 148, a psalm of praise for creation. Without focusing specifically on sacramentalism, MacKenzie has noticed it: this sonnet glorifies God like the devotions of the faithful in prayers or anthems. But in that tendency to praise lie deeper implications.

Hopkins's kingfishers shine far beyond literal significance, beyond philosophical constructs such as "immortal song" and "vital activity," beyond representing God's creations as in Psalm 148. Closer examination sheds light on another aspect of the images in this sonnet as emblems of the indwelling spirit of Christ present in all His creations. In his study of Hopkins's "Ignatian spirit," Downes asserts that Hopkins was more than a sensuous recorder of detail in nature:

One must ask what individuated Hopkins' artistic nature . . . . He perceived God behind it all . . . . Has any poet sacramentalized the world of being as he did? . . . There is always present in his sensibility a supremacy of the beauty of the spiritual over material reality, as beautiful as the material one
is. So basic was this in his sensitive soul that he talked of mortal and immortal beauty.

For me as for Hopkins, "This is the very core of the matter... The mortal beauty of the transient world of natural being serves to proclaim the immortal beauty of the intransient world of supernatural being" (76). In this one sonnet alone, "As Kingfishers Catch Fire," several concrete images take on a sacramental dimension and "flame out" from the "world of supernatural being."

The Victorians revived the popularity of the emblem. But no Victorian poet illuminated the capacity of the emblem for poetic incarnation more vividly than Hopkins did out of the richly allusive texture of his newfound Catholic perspective. With a subtle effectiveness few other poets have achieved, Hopkins the poet serves a priestly office by invoking grace and evoking spiritual responses in his readers. His emblematic images sanctify the natural world to remind us of the "whole scheme of redemptive history" as his intensifying sonnet structure leads us through a sacramental experience.

Much of the beauty of Hopkins's art is that he does not give us merely literal nor exclusively symbolic kingfishers--they are at once the real birds and the evidence of Christ in the world. Even as the sun glints off their brilliant wings, the kingfishers, infused with Christ's spirit as part of His handiwork, ignite with tongues of flame like those seen on the day of Pentecost. In the same way, the dragonflies "draw flame"--they reflect not only the sunlight but also the fire of the Holy Ghost, which in Hopkins's view indwells all nature.

The light in this sonnet also attains to a traditionally symbolic aspect for all Christians through familiar biblical metaphors. The apostle John links the creation with this light: "All things were made by him; and without him was not anything made that was made. In him was life; and the life was the light of men" (John 1.3, 4). All of Christ's creations, then, contain His light; this light sacramentalizes nature, makes divine emblems of the kingfishers as they "catch fire."

When from that fiery image Hopkins moves to a cooler one, the new image is no less emblematic: the wells, reminiscent of Christ's "well of water springing up to everlasting life" (John 4.14). This emblem has a long tradition even before Christ refers it to Himself; He may draw upon Isaiah, who also uses the well as a symbol of God's life-giving power: "with joy shall ye draw water out of the wells of salvation" (12.3). Like these "wells of salvation," the wells in Hopkins's sonnet contain holy water, water sanctified by the glory of God. Thus in the first two lines of this sonnet Hopkins has alluded to two of the believer's most central and richly allusive symbols of deity: the light of the world and the water of life.

The water and the fire recur as frequently in Hopkins's sonnets as in the Bible. And again as in the Bible, they often occur together, as they do here. Particularly when they are linked, they may represent an "underthought" of the "baptism by water and by fire" that Christ told Nicodemus was necessary to salvation: "Verily, I say unto thee, Except a man be born of water and of the Spirit, he cannot enter into the kingdom of God" (John 2.5). Hopkins felt that "the world is charged with the grandeur of God" and that seeing God in nature could bring man to God with almost the same salvific efficacy that the sacraments could. With the Psalmist, Hopkins seems to be saying, "The earth is the Lord's, and the fullness thereof" (Ps. 24.1)--the earth as well as the "heavens declare the glory of God" (Ps. 19.1). The kingfishers and the dragonflies reflect His light; the well rings with rippling echoes of Christ's living water; together they whisper of baptism by fire and by water.
Perhaps the kingfisher can even be seen as a symbol of Christ. But it might be more clearly viewed as christological not so much because of a noncanonical link with the Christian fish symbol one critic has noted (Beyette 712) as because of a biblical link with Christ. Christ was often called a king in the Bible; in Matthew the King is shown as Savior: "Then shall the King say unto them on his right hand, Come, ye blessed of my Father, inherit the kingdom prepared for you from the foundation of the world" (Matt. 25.34).

And Christ is also identified in this salvific aspect with fishers, as when He called His apostles Peter and Andrew. "And Jesus, walking by the sea of Galilee, saw two brethren, Simon called Peter, and Andrew his brother, casting a net into the sea: for they were fishers. And he saith unto them, Follow me, and I will make you fishers of men" (Matt. 4.18, 19). The image of the fishers, then, has come to be a symbol of one who catches men, who brings them to God's shore in the net of Christ, that master fisher of men. Hopkins was fond of puns; considering these two images linked with Christ, the "king" and the "fisher" of men, perhaps the "kingfisher" is a Hopkinsian pun: Christ as the king of the fishers of men.

The bell in line four also resounds with emblematic evidence of Christ. That bell tolls us to the central theme of this sonnet, that all things in proclaiming their own individual inscape also tell of Christ. "Each hung bell's / Bow swung finds tongue to fling out broad its name" (3, 4). Given Hopkins's penchant for punning, the bell's bow can be read also as the verb "to bow." As it is coupled with the word "tongue," one can almost hear the bell ringing out that "at the name of Jesus every knee shall bow, of things in heaven, and things in earth, and things under the earth; And that every tongue should confess that Jesus Christ is Lord, to the glory of God the Father" (Phil. 2.10, 11). Thus the bell not only flings out its own name but also rings out His name, the name of Christ, Who has made everything and given everything its particular qualities of self. From this reading the next line follows neatly: "Each mortal thing does one thing and the same": each mortal creation of Christ also does as the bell does, "Deals out that being [Being] indoors each one dwells"--gives out the essence of the indwelling Christ along with its own inscape; "Selves--goes itself; myself it speaks and spells."

Christ is thus both visible and audible in the emblematic imagery of this poem from the kingfisher in line one to the final line of the first stanza. "What I do is me" paraphrases the words of Jehovah himself, as the Old Testament God telling Moses His name, "I am that I am" (Ex. 3.14). The latter half of the line, "for that I came," clearly refers to the New Testament as Christ approaches His great sacrifice. Beyette calls this a "Biblical underthought, ... a subtle but deliberate echo of Christ's reply to Pilate" (711): "For this came I into the world; that I should give testimony to the truth. Every one that is of the truth heareth my voice" (John 18.37)--a voice that rings out in all nature, a voice as clear as a bell.

In the sestet Hopkins illuminates his belief concerning the immanence of Christ in God's highest creation, people. Here Hopkins seems to be fulfilling not simply the expectation set up by his octave but also answering the question put by the Psalmist, "What is man, that thou art mindful of him? and the son of man, that thou visitest him? For thou hast made him a little lower than the angels, and hast crowned him with glory and honor" (Ps. 8.5, 6). Hopkins says that in God's eye man is Christ. Made clearer by Hopkins's magnified vision of it, this is a rather hazy doctrine familiar to all Christians from the Bible: "He shall abide with you and shall be in you... In that day you shall know that I am in my Father: and you in me, and I in you" (John 14.17, 20). Hopkins meditates in the last three lines of the sonnet on important aspects of man's
relationship to Christ implicit in this indwelling of Christ: "For Christ plays in ten thousand places, / Lovely in limbs, and lovely in eyes not his / To the Father through the features of men's faces." As Christ is the soul of the church, the members of the church are His "limbs" and "eyes"; it is a symbiotic relationship. Although Christ is certainly the more powerful part of the partnership, we are through God's grace part of His body: "For as the body is one, and hath many members, and all the members of that one body, being many, are one body: so also in Christ" (1 Cor. 12.5).

Thus the images in the penultimate line of the limbs and eyes are reminiscent of the literal body of Christ, which He sacrificed that we might live. Those images embody our relationship to Christ as members of His church, the figurative body of Christ. And we partake of Christ's nature in the sacrament of the Lord's Supper; as we eat the bread and drink the wine (or water) that represent the body and blood of Christ, we are sanctified and become new creatures in Him. Cotter points out that "Christ's members become whole and complete through him: 'God has made all things subject under his feet and appointed him head over all the Church, which is his body, the fullness of him who fills the universe in every part' (Eph. 1:22-23; adapted)" (41).

Hopkins uses another aspect of this bodily imagery to show the power of Christ to make us whole and truly alive—subliminal allusions to two of Christ's major healings in the New Testament. As Christ made the lame to walk and the blind to see, so He is now "Lovely in limbs, and lovely in eyes not his"; through His presence He transforms us all from the spiritually halt and blind to those who walk and talk with God, who see Him face to face: "To the Father through the features of men's faces." For as Paul explains, "Now we see through a glass darkly; but then face to face: now I know in part; but then shall I be known as also I am known" (1 Cor. 13.12). In Hopkins's christological terms we are known as what we truly are in God's eye, as He sees Christ in our own faces when we are spiritually healed and made new creatures in Christ. "If any man be in Christ, he is a new creature: old things are passed away; behold, all things are become new" (2 Cor. 5.17).

In this pervasive bodily imagery Hopkins sounds the stops upon several metaphors in the Bible. These metaphors echo and ring (like the wells and the bells in the poem) with emblematic significance, evoking "the whole scheme of redemptive history" for the reader and thus greatly enriching the poem. The images, like the Christ they incarnate, are simultaneously immanent and transcendent. As Beyette asserts, "the specific imagery of the sonnet's underlying structure is Biblical or exegetical.... Although the specific images of kingfisher, dragonfly, and stone are 'natural,' they seem ultimately to function as spiritual symbols, suggesting, as Hopkins once observed, 'the sensible thing so naturally and gracefully uttering the spiritual reason of its being'" (711). Every concrete image in the poem is at once itself in the physical world and a reminder of Christ as He indwells and is revealed by every aspect of His creations, from the fire of the Holy Ghost to the well of living water, from the tongues that confess Christ to the limbs, eyes, and faces of people made whole in unity with Christ.

"As Kingfishers Catch Fire" is thoroughly informed by a series of theologically rich emblems and incarnating natural images. But the sacramental aspect of the poem runs deeper, into the very bones of the poetic structure. The movement of the poem may lead the reader through a process like receiving a sacrament. The sacraments typically take the communicant through a series of spiritually intensifying actions that lead from the mundane world to the sacred. For example, that most universal of sacraments, the Lord's Supper, begins with the mundane bread and wine and leads to grace through symbolically partaking of Christ's sacrifice. Poetry that achieves something similar has
a characteristic that Robert Alter describes in *The Art of Biblical Poetry* as "structures of intensification":

The two basic operations of specification and heightening . . . lead to an incipiently narrative structure of minute concatenations, on the one hand, and to a climactic structure of thematic intensifications, on the other hand. . . . What is primary is a predicament, an image, or a thematic idea that is amplified. . . . Poetic form acts in these cases as a kind of magnifying glass, concentrating the rays of meaning to a white-hot point. (63)

Alter posits that the sonnet is usually antithetical to this process of intensification; but later he admits, "Having cited the sonnet at the outset of this discussion as a counterexample . . ., I should add that one can certainly find sonnets--in English, some of those of Gerard Manley Hopkins come to mind--that evince something like a structure of intensification" (84). One of Hopkins's sonnets that comes to my mind as evincing structures of intensification is "As Kingfishers Catch Fire." The sound structures intensify throughout the poem, a result of Hopknsian "heightening" of language and of his sensitive ear for the inscapes of words.

Often, of course, Hopkins foregrounded the language for its own sake; but more often he foregrounded it for a poetic purpose similar to onomatopoeia. Hopkins believed in an onomatopoeic etymology, as attested by many of his journal entries. More than that, he believed that words had an inscape of their own, an inscape essential to the sacramental quality of his poetry: "often, over-and-overing, aftering of the inscape must take place in order to detach it to the mind and in this light poetry is speech which afters and oftens its inscape, speech couched in a repeating figure" (JP 289). In this journal entry Hopkins explains a kind of structure of intensification that results from repetition. He also wrote that he thought "poetical language" should be "the current language heightened" (LR 89).

Exactly that sort of intensification or heightening results from the structure of the poem we've been examining. As James Milroy has shown in his book The Language of Gerard Manley Hopkins, the sound patterning is much more complex than alliteration; it involves such Hopknsian practices as "vowelling off" (48), "gradience" (148) and "skothending" (144). Since Milroy has examined these techniques so thoroughly, I will not; but I will illustrate with a few examples how they "inscape the Spirit." Throughout "Kingfishers" Hopkins uses repetition and concatenations that intensify. Note, for example, the alliteration of the /r/ sound in the following lines:

Stones ring; like each tucked string tells, each hung bell's
Bow swung finds tongue to fling out broad its name;
Each mortal thing does one thing and the same:
Deals out that being indoors each one dwells; (3-6)

And these ringing sounds echo the /r/ in kingfishers--as if the kingfisher itself were ringing out its own particular inscape and the name of its Creator.

As in many of Hopkins's mature poems, initial alliteration also plays an important role in the sound patterning. For Hopkins this sound-play was not merely arbitrary; he believed that "within particular languages, certain phonetic structures may carry sense associations" (Milroy 157) and "that many words 'rhyme' with the texture, shape and sense-impressions of the things they stand for" (158). Here Hopkins has chosen to repeat "strong" velar stops (/k/ and /g/) in "kingfishers catch" and in "grace" and "God's," adding them together in "Keeps grace that keeps all his goings graces; / Acts
in God's eye what in God's eye he is--/Christ." This phonetic connection points to a semantic connection between the kingfisher and Christ. But it also shows that this is what the poem, beginning with the kingfisher, leads up to: all creation--from the kingfishers upward to the highest creation, humankind--tells of Christ, "speaks and spells" His name. Stop consonants, in fact (including /d/ and /t/), tie the poem together and accumulate until that climactic line, "Christ--for Christ plays in ten thousand places." And then the sound of the poem takes a sharp turn with the "softer" liquids (/l/ and /r/) and fricatives (/s/ and /z/) that cluster in the stressed words of the final two lines, "Lovely in limbs, and lovely in eyes not his /To the Father through the features of men's faces." Aurally the effect is like that of a rise to a climax followed by a denouement. Spiritually it is much like the transformation to a "new creature" in Christ of which Paul wrote (2 Cor. 5:17). The semantic content is enhanced and intensified by the music of the poem.

Hopkins was alert not only to the sound inscapes of words but also to what he believed were essential etymological inscapes. In his journals he often recorded series of words that he thought were linked by sound and therefore by a similar origin. He studied philology and ascribed to the then-prevalent notion that sound--particularly in the common and current language of the people--indeed echoed sense. Thus he chose his diction with attention not only to the sounds but also to the subtle significances of words, even of connotations connected with etymologies long buried. He also ascribed to certain words senses peculiar to his own philosophies. "Catch," for example, meant in his Journal "to observe, to understand and succeed in describing something accurately, to 'catch' an inscape" (Milroy 234). Thus the "kingfishers catch fire" not only in the ways we have already discussed but also by "catching" an inscape. The word "bell" was also "charged" for him; this is "especially relevant to No. 57, in which the 'name' of the bell is its sound" (233).

And as the bell catches the inscape of its individuality, other words whisper of Christ. "Features" and "faces," for example, in their echoing finality, may speak of the the all-pervasive creation: the OED gives their etymology from the Latin "facere," to make. This verifies by subconscious linguistic suggestion what Hopkins has just said, that we are God's creatures made in the image of Christ, that we proclaim Him even in the individuality of the features of our faces.

In moving from the kingfishers and the dragonflies to the wells and bells and finally to human beings--all of them infused with Christ's spiritual fire--Hopkins has presented in this sonnet "a climactic structure of thematic intensifications...an image, or a thematic idea that is amplified." Creating his own "structure of intensification," Hopkins has conducted us from the kingfisher's reflected sunlight to the Father of lights himself" (MacKenzie 151). With the sacraments as guide, Hopkins has taken us in this sonnet on an increasingly intensifying journey from the beauty of the natural world to God.
WORKS CITED


MicroMATER: a Proposed Standard Format
for Microcomputer Terminology Files

Don Chapman and
Alan K. Melby
Brigham Young University

This paper will first discuss a few reasons why a standard for microcomputer terminology files is needed and then explain the proposed MicroMATER standard. Finally GLOSnost, a software program developed by the Translation Research Group (TRG) at BYU, will be described.

I. Why a standard is needed

To begin with, three observations should be noted:

Observation 1:

Language is dynamic, and one of the most characteristic features of language change today is the constant addition of new terms to our vocabulary. Because of the rapid technical growth in today’s society, new terms are continually coined to describe new inventions, processes, objects, etc. In the last 50 years, for example, terms have been invented to describe everything from space exploration to genetic engineering. Of course most of these terms remain specialized within the field that they grew out of, such as the names of the parts of a clutch for a BMW. Many terms, however, have probably reached general status. Since microcomputers have become a consumer item, for example, most adults have probably acquired such terms as word processor, floppy disk, and database.

Observations 2:

English is not the universal language of the world. While English may be more of a global lingua franca than any other language, the other languages of the world aren’t going away. If anything, the idea of national languages is becoming stronger. Just a few years ago, few companies bothered to translate the manuals that accompanied their products. The rationale, apparently, was that if a company in Denmark wanted to use a mainframe computer built in the U.S., it would have to find someone who knew English to run it. Now, most consumers won’t be as willing to find someone who understands English to help them with their new computer; they’ll just buy a computer from a company that has already translated the instructions. In other words, as technical products become more consumer-oriented, the need to translate the documentation accompanying them becomes greater.

Observation 3:

Companies in the United States must not ignore the consumers of other
countries. The U.S. trade-balance is bad enough, and most would agree that the U.S. should try to even the balance in any way possible. Naturally, American companies stand a better chance of selling products if they make them accessible to the consumer; if that means companies should translate more documents, then let them get busy translating. Imagine how well Toyotas would sell if their dash boards came with only Japanese characters and owner's manuals written only in Japanese.

From these observations, two points about translation should emerge:

1. The need for translation increases as international trade increases.
2. Many of the documents being translated (owner's manuals, technical documentation, etc.) are filled with new and specialized terms.

These characteristics of translation present a couple of problems for the modern translator. First, although a person may be a qualified translator, that person probably doesn't know all the terms used in a technical document. Say, for example, that a competent German-English translator has been hired to translate the parts list of a packaging machine made in Austria. Would she be able to translate that list without help? Probably not. She would probably have to consult a specialist to find out the English equivalents for the part names.

Second, the translator ought to be uniform in the use of a term throughout the document, even though several equivalent terms in the target language may often be available to the translator. If a person is translating a car repair book and calls a particular part a headlight dimmer in chapter 1, then that person should not turn around and call that same part a lantern intensity reducer in chapter 5. It would be confusing. And to add to the problem of keeping terms uniform, a document is often translated by more than one person, each working on a separate part. In this case it becomes crucial that all translators have access to the translation equivalents which have been agreed upon for key words.

These problems underscore the importance of managing terminology. Previously, terminology management has been largely a tedious chore for translators, which has involved consulting with a specialist to come up with equivalents for key technical terms, maintaining a file of terms, and perhaps even creating a glossary. Including several translators on a project has compounded the problems of terminology management since any changes to one glossary must be made accessible to all translators on that project. Understandably, managing terminology with manual methods, such as using 3 x 5 cards and creating paper glossaries, proves bothersome to translators. Most translators don't like to interrupt their work to shuffle papers or look up a term in a glossary. Electronic terminology managers, on the other hand, make these tasks much simpler. A translator merely needs to gather his terms and store them in a computer file. The terminology manager can then keep track of the terms, and when it comes time to look up a word, the translator simply types a few keystrokes, without even leaving the word processor.

Currently three such terminology managers exist: ABCWord (tm) from ALP Systems, Term Tracer (tm) from INK International, and Mercury/Termex (tm) from LinguaTech International. These terminology managers certainly
make it easier to maintain uniform translations of new and specialized terms. However, the presence of three different terminology managers brings up the problem of compatibility among the proprietary formats of the terminology managers. A glossary created on Termex (tm), for example, cannot be accessed on ABCWord (tm), nor can a glossary created on ABCWord (tm) be accessed on Term Tracer (tm). So what is to be done? Should all translators agree to use the same terminology manager so they can easily exchange files? Perhaps, but a more reasonable solution is to adopt standard conventions for terminology files so that those files can be exchanged among any terminology managers. With the existence of a standard, the companies that produce these terminology managers can readily accommodate their clients by writing one set of conversion routines that changes their proprietary format to the standard format and vice versa. Thus a translator could create a glossary using Termex (tm), convert it to a standard exchange format, and give it to a friend who uses Term Tracer (tm). That friend could then convert the glossary from the standard exchange format to Term Tracer (tm) format. In this paper, MicroMATER is proposed as that standard exchange format.

II. What is MicroMATER

The International Standards Organization (ISO) has already defined a standard called MATER for exchanging information between mainframe term banks via industry-standard 9-track 1/2 inch tapes. MATER is an important step and means that each term bank need only write one import/export utility that converts between its proprietary format and the MATER format. Given the explosive growth of the use and power of microcomputers over the past few years, the next logical step is a companion standard to MATER suitable for microcomputers as well as mainframes. This is the MicroMATER standard the BYU-TRG is proposing. (The MATER standard can be obtained from ISO by specifying that it came from ISO/TC 37 and is standard number 6156.)

The MicroMATER standard consists of five conventions. A file conforms to the MicroMATER standard if it conforms to these conventions which are grouped together as follows:

1. General conventions.
   a. Each MicroMATER file must consist of any number of lines, each ending with an EOL character (CR/LF or LF, depending on the operating system).
   b. A soft return in MicroMATER is represented by the sequence "(@EOL" (at-sign followed by a semi-colon followed by an End of line character). The soft return allows lines to be shortened without losing information. One reason for using soft-return is that many text editors and telecommunications programs allow only 70 characters per line. When using these programs, a person can insert a soft-return after 65 characters, and then reconstitute the lines to their full length for programs that don't specify limits for line lengths. (It is suggested that lines be no more than 65 characters long for maximum portability).
   c. The "(@ character (at-sign) is a literal signal, and a character following it is taken as a literal character (except for the ", which is taken as a soft-return). A literal at-sign, then, is
represented by "@@" (two at-signs).

2. Format conventions.
The MicroMATER format conventions essentially provide the structure of a glossary by defining beginnings of entries (which are varying length records), ends of entries, beginnings of terms, ends of terms, and other aspects of the structure. Briefly, the Format Conventions consist of a header at the beginning of a glossary, any number of records delimited by the Format Marks (which aren't given here, but can be found in the MicroMATER definition accompanying GLOSnost), and the MicroMATER end of file mark.

3. Term Conventions.
   a. Each term must be unique. When two terms are identical, it is suggested that uniqueness be enforced by modifying one of the terms in some way, such as appending two spaces and some distinguishing label. For example, "term [part 2]" is made distinct from "term" by adding two spaces and the label "[part 2]."
   b. A term may be any length, but it is suggested that a term be no more than 60 characters long. If a term exceeds 60 characters, it is suggested that the term be truncated to 60 characters and the remaining characters be placed as the first field of that entry.

4. Field Names.
Glossary entries often give several pieces of information about a term, such as usage notes, grammar notes, and contextual examples. In MicroMATER, each separate piece of information is represented as a field. The names of these fields are given between curly braces such as "{2}". The standard field names haven't been established firmly, and are open for debate (Infoterm and others have proposed various naming systems), but provisionally, these suggestions apply:

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Field Meaning</th>
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<tbody>
<tr>
<td>a</td>
<td>abbreviation or acronym</td>
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<tr>
<td>c</td>
<td>contextual example</td>
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<tr>
<td>t</td>
<td>translation of contextual example</td>
</tr>
<tr>
<td>d</td>
<td>definition</td>
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<tr>
<td>f</td>
<td>field (i.e. subject matter, such as chemical engineering, biology etc.)</td>
</tr>
<tr>
<td>g</td>
<td>grammar note (e.g. gender, number, case, tense, etc.)</td>
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<tr>
<td>n</td>
<td>note (some piece of information that does not seem to fit in any of the other categories.)</td>
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<tr>
<td>o</td>
<td>opposite or antonym</td>
</tr>
<tr>
<td>p</td>
<td>preferred (i.e., a given translation is preferred by a specific client, etc.; it would be followed by the client's name)</td>
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<tr>
<td>s</td>
<td>source of the term (i.e., a particular reference, document, person, etc.)</td>
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<tr>
<td>u</td>
<td>usage note (e.g. Country X only)</td>
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<td></td>
<td>cross reference</td>
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</tbody>
</table>
Any number not accompanied by one of these abbreviations is a field name for a translation equivalent (e.g. \{1\}). If a number precedes one of these abbreviations, then the abbreviation refers to the translation equivalent that shares the number. For example, \{1g\} is a grammar field that gives information about translation equivalent \{1\}. If the abbreviation is by itself, for example \{g\}, then that field refers to the entire term.

5. Code Conventions.

The European languages use several characters that aren't used in English, such as the u-umlaut or the c-cedilla. The representations of these characters among micro-computers and various software programs such as word processors is hardly uniform. For that reason, MicroMATER defines code conventions for representing the non-English characters. These codes consist of accent letter codes for representing accented letters and punctuation codes for representing punctuation marks, such as the upside-down question mark in Spanish.

These accent letter codes and punctuation codes are represented by two characters. The first character (called a signal) more or less modifies the second character. For example, \''n represents the Spanish enyay. The character codes are as mnemonic as possible—the ‘a suggests an a-grave and the two circles in the percent sign suggest an umlaut in %a.

In addition, any character signal, (%,/\,etc) can be given a literal representation by preceding it with an at-sign. Thus, there is no ambiguity in representing accented and punctuation characters.

There has been some work towards creating a standard for representing non-Roman character sets, such as Arabic and Cyrillic. In the future, MicroMATER will incorporate this work and provide a standard definition for several character sets.

To summarize, the five MicroMATER conventions consist of:
1. General Conventions.
2. Format Conventions.
3. Term Conventions.
4. Field Name Conventions.
5. Character Conventions.

The benefit of dividing the MicroMATER standard into these conventions is that a document may conform to some of the conventions, but not others, and still be manipulated by software tools such as GLOSnost. For example, a person may want to send a letter to a friend via a network. Of course that person won't want to make the letter a glossary (i.e. include a header, records and fields), but he or she may still need to use accented characters. To do so, the person can make the letter conform to the Character Conventions, and then use GLOSnost to adjust the line sizes of the letter and prepare it for sending across telecommunications channels.

III. What is GLOSnost

GLOSnost is a play on the term glasnost made popular by Gorbachev and is intended to suggest openness in the exchange and manipulation of glossary
information. The current version of GLOSnost was written in the C programming language by the TRG and runs under the PC-DOS operating system. It is the intent of the TRG to enhance GLOSnost considerably over the next few years and to make it available under several popular operating systems. In keeping with its name, GLOSnost is a software program which, although copyrighted by Brigham Young University, can be freely copied and distributed so long as the University is not held responsible for results of any problems in the software. Please send any enquiries concerning GLOSnost to

Alan K. Melby
Linguistics Department
2129 JKHB Brigham Young University
Provo, UT 84602.

GLOSnost is used to manipulate files that conform to the MicroMATER standard. The TRG will make no outlandish claims about this program--GLOSnost doesn't clean rooms, make beds, or regulate the oxygen level in houses. Instead it is a collection of utilities. Yet, even if some of these utilities are pedestrian and devoid of glamour, they can come in surprisingly handy for those who work with MicroMATER files or who share files with other systems. For example, the first function, SANITIZE, is useful when a person receives files from another person, via telecommunication networks or otherwise. Often such files contain control characters--perhaps from garble of the network transmission, or perhaps from the word processor that the sender used, or perhaps from something else. These control characters often foul up word processors, so until the control characters are removed, the file is inaccessible. SANITIZE provides a tool to remove those irksome control characters.

Probably the most exciting function in GLOSnost currently is the REVERSER which reverses the language directions of a file that conforms to the MicroMATER standard. For example, a German to English glossary can be changed into an English to German glossary by merely running it through the REVERSER.

The other functions in GLOSnost convert MicroMATER character codes to IBM PC characters and vice-versa, and verify whether a file is in MicroMATER format.

In the future, several more features will be added to GLOSnost, such as
1. Conversion to and from Dbase III (tm) format;
2. Specialized sorter;
3. Secondary key generator;
4. Duplicate term processing;
5. Glossary comparison;
6. Term extraction

IV. Conclusion

It certainly is time to adopt a standard in microcomputer terminology files. Nearly everyone will benefit from having a standard. Translators will benefit since it will be easier to exchange terminology files. Companies
that produce terminology managers will benefit, since they will only have to write one set of conversion routines to and from the MicroMATER standard. The BYU TRG hopes that MicroMATER catches on and that GLOSnost can help persuade people to use MicroMATER conventions.
Appendix

SAMPLE GLOSSARY

Glossary: MANENG2

Language(s): German-English

----------------------------------

4 Adapter
{1} adapter
{l} p.s.
{d} electronic adapter used to test circuits

4% andern
{1} change
{n} make a change in something, such as changing a dimension; see also wechseln
{l} p

4 Andrückrolle
{(a)\{p\}} Haspeländrückrolle
{l} p

4 anfahren
{1} drive
{f} press control system
{s} press safety materials
{c} Die beiden Endschalter sind so zu montieren, daß sie von getrennten Kurvenscheiben angefahren werden.
The two limit switches should be assembled in such a way that they are driven by separate cam plates.{f} p

4 angelassen
{1} hardened and tempered
{a} as {l} p

4 anhebbare Rollen
{1} lifter rollers
{c} Zur leichten Verfahrbarkeit sind anhebbare Rollen vorgesehen auf dem Wagentisch. {s} Weingarten materials
{l} p

4 Anheberollen
{1} lifter rolls
{c} Anheberollen im Tisch a.d. Schmittstufe und Umformstufen {s} Weingarten invoice {f} p
Glossary: MANENG2 (reversed)
Language(s): German-English (reversed)

adapter
1} Adapter
1f) p.s.
1d) electronic adapter used to test circuits

change
1} %ndern
1n} make a change in something, such as changing a dimension; @; see also wechseln
1f) p

drive
1} anfahren
1f) press control system
1s) press safety materials
1c) Die beiden Endschalter sind so zu montieren, da$ sie von @; getrennten Kurvenscheiben angetrieben werden. The two limit @; switches should be assembled in such a way that they are @; driven by separate cam plates.
1f) p

hardened and tempered
1} angelassen
1a) as
1f) p

lifter rollers
1} anhebbare Rollen
1cG) Zur leichten Verfahrenbarkeit sind anhebbare Rollen @; vorgesehen auf dem Wagentisch.
1s) Weingarten materials
1f) p

lifter rolls
1} Anheberollen
1c) Anheberollen im Tisch a.d. Schnittstufe und Umformstufen
1s) Weingarten invoice
1f) p
GLOSnost Menu

GLOSnost MicroMATER Utilities
Version 1.0
(C) 1988 BYU Translation Research Group

S) Sanitize a file (convert control characters to question marks
A) Convert from IBM (8-bit) characters to microMATER (7-bit) ASCII codes
I) Convert from microMATER (7-bit) ASCII codes to IBM (8-bit) characters
R) Reverse language direction of a glossary in MicroMATER format
V) Verify file for correct MicroMATER conventions
X) Exit
Ergativity in Indo-European

John D. Frauzel
Indo-European Doctoral Program, UCLA

Ergativity

It might be best to explain what an ergative language is by beginning with what it is not. Almost all Indo-European languages, including English, may be classified as nominative-accusative languages: in transitive constructions, the subject is nominative and the direct object is accusative; transitive and intransitive subjects are identical in form. In examples (1) and (2), three grammatical functions are filled by two nominatives and one accusative:

(1) I see him. (nom. sbj. with trans. verb and acc. obj.)
(2) He left. (nom. sbj. with intrans. verb)

Ergative languages treat these distinctions very differently. The subject or, as the terminology prefers, the agent of a transitive action is marked ergative, and the object of the action, or rather the patient, is marked absolutive. The absolutive is generally more weakly marked than the ergative; in fact it is often marked by zero. The agent of an intransitive action is not marked ergative, but rather absolutive. Ergative languages include Basque, Georgian, many aboriginal languages of Australia, and some North-American Indian languages. Example (3) and (4) are from Dyirbal, an Australian language:

(3) Balan d'yugumbil baŋgul yaŋangu balgan. (classifier) woman (abs.) man (erg.) hit
The man hit the woman.
Bayi yaƙa baninYu.  
(classifier) man (abs.) came-here  
The man came here.

Absolutive is marked here by zero, and ergative by the suffix -ngu. Thus in nominative-accusative languages, function is determined by whether a nominal element is the source of an action, whereas in ergative languages, the crux is rather whether the nominal element directly affects a patient. Example (5) contrasts this overlap in syntactic function.

<table>
<thead>
<tr>
<th>nominative-accusative</th>
<th>ergative-absolutive</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT (trans)</td>
<td>AGENT(trans)</td>
</tr>
<tr>
<td>SUBJECT(intrans)</td>
<td>OBJECT</td>
</tr>
<tr>
<td></td>
<td>AGENT(intrans)</td>
</tr>
<tr>
<td></td>
<td>PATIENT</td>
</tr>
</tbody>
</table>

This initial definition of ergative languages needs to be somewhat refined. First of all, it is an oversimplification to classify a language as either ergative-absolutive or nominative-accusative. Recent work on the typology of ergativity indicates that very often, a language may be "split-ergative," that is, some nominal features are marked ergative-absolutive, others may be neutrally marked, and still others may be marked as nominative-accusative. In fact, Silverstein (1976) has proposed a hierarchical ordering of such types of marking, as shown in example (6).

Although Silverstein's hierarchy is useful in establishing general tendencies, I would not insist as strongly as Rumsey (1987) on using the hierarchy to constrain reconstructions. After all, one may note by examining the top half of the chart that English disagrees with it in explicitly marking the first person pronoun, (I::me) while marking the second singular pronoun neutrally (you::you). In any case, it is worth noting that split combinations of ergative-absolutive, neutral, and nominative-accusative marking are typologically very common.

Just as many nominative-accusative languages offer an inversion of the transitive construction, the passive, many ergative languages show a construction which inverts the roles of agent and patient, the so-called
antipassive. Thus sentence (3) above may also be expressed as follows:

Bayi yara bagun d'Yugumbilgu balgalan'yu. (7)
(class.) man-(abs.) (class.) woman-(dative) hit-(antipassive)
The man hit the woman, the woman was hit by the man.

Here the man is no longer viewed simply as the source of an action with a patient. Instead, the absolutive marking suggests action not directly focused on a patient, while the dative marking of woman also suggests an indirect relationship with the agent. In some ergative languages, such constructions are used to indicate incomplete or partial transfer of action between agent and patient.6

Remains of Ergativity in Indo-European

As early as 1901, Uhlenbeck proposed that Indo-European was once an ergative language. He noted that the neuter nominative and accusative were undifferentiated and identical with the masculine accusative (singular). This form he referred to as _Passivus_ or _Patiens_ ('patient'). It was opposed to a form marked by -s, which he referred to as _Aktivus_ or _Agens_ ('agent'). Thus figure (8), the familiar paradigms for IE masculine and neuter in the nominative and accusative cases, would have arisen from an earlier paradigm shown in figure (9):

(8) masc. neut. (9) anim. inanim.
nom.-os -om (9) anim. inanim.
acc. -om -om erg. -os ----

The reason why no inanimate ergative form occurs, according to Uhlenbeck, is because inanimates could not function as agents of transitive verbs.7 This matter turns out to be more complicated than Uhlenbeck suspected, and will be discussed in greater detail below.

Ergativity in early Indo-European was treated much more fully by Vaillant (1936), who elaborated Uhlenbeck's treatment of the animate and inanimate case endings and drew attention to two additional phenomena: two classes of verbal conjugation (active and middle) and patterns of suppletion in pronominal stems. Vaillant identified the ergative -s ending
as derived from an earlier ablative. He saw the -mi conjugation as a verbal noun with suffixed pronominal elements. This verbal conjugation Vaillant refers to as pseudo-transitive, derived from an earlier passive construction. With a lative object marked by -m to denote the patient, the original construction would have been something like g\textsuperscript{\textit{when}}-mi to-m 'there is hitting by me in reference to him.' Vaillant also demonstrated that Indo-European pronouns show a split similar to the pattern in nouns. Thus, for many of the personal pronouns, the nominative is built on a different stem than the other cases, eg. Latin \textit{ego}, but \textit{mē}, \textit{mihi}, \textit{mēd}, etc. Similarly, the demonstrative pronoun uses one stem, so- for animate nominative, but another, to-, for inanimate nominative-accusative, (i.e., the absolutive) and for the oblique of all genders.

Kurylowicz also treated ergativity in his 1935 discussion of nominal forms and their suffixes. \textit{Contra} Uhlenbeck, Kurylowicz concluded that the historical nominative is not a continuation of the earlier ergative, but rather a transformation of the absolutive, generalized to ergative functions in transitive sentences. Although Rumsey (1987) prefers Kurylowicz' explanation of ergativity on typological grounds, many details present problems from the point of view of Indo-European reconstruction. The -m case marker, Kurylowicz suggests, is a lative (not his term) like \textit{a} in Spanish \textit{veo a la hija}, originating with animate beings. For Kurylowicz, the ergative case is preserved in gen.-abl. -ēs. The absolutive is the endingless accusative, and an old oblique case, -ē, has disappeared. He suggests that the entire question needs to be considered in conjunction with problems of transitivity and voice, positing two verbal voices requiring two separate ergatives, thus ergative in -e for verbs of sensation ("he appears to me > I see him") and ergative in -s for action verbs ("he dies by me > I kill him").

In discussing contributions to the ergative theory since Vaillant and Kurylowicz, I will proceed topically rather than chronologically. All of the issues except the last, absolute constructions, have been treated previously, especially by Schmalstieg (1981) and (1986), Shields (1978/79) and (1982), and Laroche (1962). Recently, reconstructions of Indo-European as an ergative language have been criticized on typological grounds, especially by Villar (1984) and most recently by Rumsey (1987).
The reconstruction of -s as an ergative marker implies confusion or identity at one point between the ergative and the genitive-ablative (these two were undifferentiated in early Indo-European). Traces of this confusion survive, especially in the form of genitive-ablative subjects. Such constructions are attested in many Indo-European dialects. On the one hand there are genuine passive constructions in which the logical subject is marked by the genitive, as in example (10), a sentence from the Greek New Testament which, interestingly enough, retains its syntactic marking quite literally in the Gothic translation, as indeed it does in English. Here, then, the logical source of the action is denoted by a genitive:

kai ἐσονται πάντες διδακτοί θεοῦ.  
(kai esontai pantes didaktoi theou.)
jah waître and allai laisidai gudis.
And all will be taught of (by) God.

More interesting are constructions like (11) in Latin, where the logical source of the action is genitive, (earlier ergative) and the patient or object is accusative (absolutive), but the verb is transitive. This construction would match closely what is proposed as a typical transitive construction in Indo-European before the rise of nominative-accusative syntax.

taedet me illius, pudet me tui, etc.  
(It) bores me of him, (it) shames me of you, etc.
He bores me, I am ashamed of you, etc.

Lithuanian preserves a similar construction in which the agent is genitive, and the verbal form is the neuter passive participle:

Piemeñs dúonas dúota.  
(of the shepherd (gen.) some bread (gen.) is given (neuter past ptc.)
The shepherd gave some bread.

The word for bread, duonas, is genitive here because of its partitive function. Similar constructions occur also in Indo-Iranian, where they are known as mama krtam constructions after the Sanskrit form. Example (13) is from Old Persian.
ima tya manā kartam. (13)
This is what I have done (is done of me). (Darius Behistan I.27 and passim; Kent (1953:117)

In all of these cases, the source of the action is marked as genitive. Where an object occurs, it is marked as accusative. We have then, the pattern familiar from example (3), typical of ergative languages. A closely related pattern presents the logical source of the action in the genitive case, but as a grammatical object. This construction would be similar in origin to the type suggested above by Kurylowicz, 'he appears to me,' which then develops semantically into 'I see him' via the intermediate forms 'me see of him' and then 'I see of him.' It is this last construction which is preserved in Greek in connection with ἀκούω 'I hear,' a verb of perception, just as one would expect.17

Neuters, generally regarded as descended from an earlier category of inanimates, are also associated with ergative constructions. In Latin, archaically, and in Russian, when an inanimate functions as the subject of a transitive verb, the subject is recast as an ablative (or instrumental in Russian, which lacks an ablative). The object remains accusative.

si hominem fulminibus occisset... (14)
If it kills a man by thunder, if thunder kills a man...

ubilo čeloveka derevom. (15)
It killed the man by a tree, a tree killed the man.

Hittite preserves a similar construction, but it is attested much more widely and regularly. In fact, the Hittite examples should be regarded as the oldest historically attested evidence of ergative syntax in Indo-European. Laroche (1962) has documented numerous occurrences for over 70 neuter nouns in Hittite which fit into this pattern:
nu-wa-mu apat watar pešten.

to me that water give (Give me that water.)

parkunummas-wa kuiš witenanza ešhar ... parkunuzi.
of purification which water blood purifies
(Which water of purification purifies the blood.)

In the first example, *watar*, an *-r/-n-* stem, appears in the accusative singular. In the second example, from the same sentence, *watar* is used as the subject of a transitive verb. The suffix *-anz* (from suffix *-nt-*) is added to the oblique stem *witen*-.

Interestingly, the suffixed neuter is now modified by nom. animate *kuiš*. The semantic metaphor inherent in an inanimate agent is therefore matched by a transformation of grammatical category. In numerous examples from the Hittite corpus, it can be shown that when an inanimate, neuter noun functions as the subject of a transitive verb, the suffix *-anz* is added.

The Hittite ergative suffix itself is quite interesting. Aside from the similarity to regular Hittite ablative in *-az* or *-z*, both with original final *-t*, the form *-ants* is highly suggestive of the ending of the present participle as well as the oblique form of *-r/-n-* stem neuters as in Greek gen. sgl. ὃδςατος < ὃδς-ντ-ος. I would suggest that such Greek forms with *-nt-* instead of *-n-* as the oblique of *-r-* may in fact be archaic, and that the three forms, Hittite ergative *-anza*, Greek *-ntos* as genitive of inanimate *-r/-n-* stems, and the Indo-European present participial suffix *-nt-* are closely related. In each case, the semantic notion is 'the one doing.' In the case of the participle, it is the one doing the action expressed by the verbal root. In the case of the Greek and Hittite forms, it is an inanimate agent which is nevertheless performing the action expressed by the transitive verb of the sentence.19

Absolute Constructions

Indo-European offers another constructions in which the subject appears in an oblique case, frequently the genitive or ablative, and which to my knowledge has not been previously viewed as a survival of ergative syntax. This is the so called absolute construction, attested in most dialects. After a
brief digression on several problems associated with the absolute constructions, I will conclude by suggesting how the absolutes may have developed from earlier ergative constructions, especially considering some forms attested in Indo-Iranian and Armenian.

Absolute constructions are attested in Greek, Latin, Sanskrit, Avestan, Baltic and Slavic, Germanic, and Armenian. Aside from Albanian and Tocharian, both of which significantly restructured their case systems, and Hittite, where the evidence is not conclusive, only in Old Irish are absolute constructions not attested.20 They typically provide background information to the sentence, and are almost inevitably translated by a subordinate clause introduced by such words as 'when, after, although, because, etc.' Absolute constructions present several problems, three of which I will briefly discuss here. Can an absolute construction be reconstructed for Indo-European; if so, what was the case; and how did the construction arise?

Suggestions that absolute constructions arose independently in the various dialects are usually based on the diversity of cases represented in the historical languages. This is not really a serious objection. Sanskrit alone presents two absolute constructions, locative and genitive, but one would hardly propose that they must have therefore arisen independently within Sanskrit. In fact, Holland (1986) points out that in almost Indo-European dialects, absolute constructions occur in more than one case. Far more plausibly, several closely related constructions co-existed, or some dialects have diverged from the most commonly attested forms, genitive and ablative.

There is then great diversity among the attested languages in regard to the case of the absolute construction. Furthermore, almost all of the dialects permit absolute constructions using a variety of cases, although this is generally not fully appreciated by the traditional grammars. Determining an original case for the absolute constructions is not easy. In fact, one must almost certainly conclude that more than one case is involved. Beginning with Sanskrit, one could reconstruct genitive or locative, since both forms occur. Since locative absolutes are attested only in Indo-Iranian, however, they probably do not reflect the original construction. The Greek genitive absolute could continue either a genitive or an ablative, both cases having conflated into the genitive in Greek. On the other hand, the Latin ablative
absolute could continue an ablative or an instrumental. Baltic, Slavic, and Germanic attest a dative absolute. Germanic could be either ablative, instrumental, or true dative, while Balto-Slavic could represent either ablative or dative. Armenian is unambiguously genitive. It should be clear from the preceding that although concensus is not possible, attempts at reconstruction of the original case should center on the ablative (Latin, Germanic, and Balto-Slavic) and genitive (Greek, Armenian, and Indo-Iranian). As I have mentioned, in the earliest phases of Indo-European, genitive and ablative were undifferentiated.

Several attempts have been made to demonstrate that absolute constructions are late, secondary formations. Most prominent among these is Brugmann's (1904) "Verschiebung der syntaktischen Gliederung." (Shift in syntactic division). According to this explanation, absolute constructions began in situations where the subject of the absolute could also be understood as the object of a verb in the main clause:

\[
\text{τοῦ δ' ἵθυς μεμαωτος ἄκόντισε Τυδέος υἱός} \quad (18)
\text{tou d'ithys memaotos akontise Tydeos huios}
\text{The son of Tydeos shot at him as he was rushing forward. (Iliad 8.118)}
\]

In this case, τοῦ δ' ἵθυς μεμαωτος could be interpreted either as a genitive absolute or as supplying an object to ἄκόντισε, which takes the genitive case. After phrases of this type were reinterpreted as absolute, the grammatical category would have become established, and non-ambiguous examples would have spread from this point. Holland (1986) has argued convincingly against this interpretation. Examples (19) - (25) provide further illustrations of absolute constructions in various Indo-European dialects.

\[
\text{id ratibus ac lintribus iünctis trànsibant De Bello Gallico 1} \quad (19)
\text{They were crossing this (river) by tying together rafts and boats.}
\]

\[
\text{ταῦτ' ἐπράχθη Κόνωνος στρατηγούντος} \quad (Greek) \quad (20)
\text{taut' eprakhthē Konōnos stratēgountos.}
\text{These things were done while Conon was in command.}
\]
We invoke Indra as the sacrifice proceeds (Sanskrit: RigVeda. 1.16.3)

When it was night, when the sun went down, they brought to him all the sick and possessed. (Gothic: Mark 11.32)

While he was going across the fields, his disciples plucked ears of grain and ate. (Old Church Slavic: Luke 6.1)

Brothers and sisters, take heed to me and read, And when this is read, consider (it). (Lithuanian: The Catechism of Martynas Mažvydas, 1-2 (written 1547))

And as (he) was coming to Capernaum, a centurion approached him. (Matthew 8.5)

The Armenian genitive absolute is closely related to the periphrastic perfect in the same language. Benveniste (1952) notes "l'étrangeté de cette construction ....énigmatique." The chief difficulty he finds is that with intransitive verbs, the subject is nominative, but with transitive verbs, the subject is genitive and the object is accusative, thus:

Yisus ekeal ēr.
Jesus came.

z-ayn nšan arareal ēr nora.
This miracle done is of him, he performed this miracle.

Given the examples of genitive subject as a relic of ergative syntax, these forms should not be so startling. Particularly interesting here is the nearly
identical absolute construction in Armenian, which differs in deleting the conjugated verb 'to be,' and in using the genitive for both transitive and intransitive constructions. Significantly, the participle does not agree with its subject in the genitive case, although the Armenian participle does inflect for case. Another important feature of the Armenian construction is its role in the sentence. Its subject can differ from the subject of a main clause, as is obligatory for other absolute constructions, but it much more frequently agrees with a main subject, as below:

Oroc tareal z-t'ul't-n, patahecin nma j-Erusal'ém. (28)
they taking the-letter, met him in-Jerusalem
They took the letter and met him in Jerusalem.

This raises an interesting question. Does the Armenian genitive absolute reflect more accurately the state of the earliest absolute constructions, or is it rather a later development? If the answer were based only on a comparison of the absolute constructions in various dialects, the Armenian form would of course be considered secondary, since it varies considerably from the others. However, given several other archaic Indo-European constructions considered earlier in this paper, the Armenian forms may actually reflect a more archaic state than other absolute constructions, one midway between the *mama krtam* construction of Indo-Iranian and the absolute constructions of the other Indo-European languages. The earliest ergative constructions had the form:

\[
NP\text{-erg.} \quad V \quad NP\text{-abs.}
\]

where the first nominal expression appeared in the ergative, later confused or conflated with the genitive-ablative. The SVO order is arbitrary here. The verb was very weakly inflected, quite possibly in origin a verbal noun, and very much like the neuter *-to* participle in the Lithuanian example (12). The verb was typically transitive, with direct object, as would be expected if the subject were ergative. The final nominal form was absolutive, probably marked as zero in the earliest periods, and perhaps assimilated to lative *-m* marking at a later time. The expression did not function as background or subordinate information to a main clause.

The Armenian absolute construction differs in only one respect from the
description above: the verb may be transitive or intransitive. All other Indo-European absolute constructions agree in this detail. It is the only significant difference between the Armenian absolute construction and the other examples with genitive-ablative subject discussed earlier. Even here, we may see in the periphrastic perfect an earlier stage in which genitive was associated much more closely with transitivity.

It seems therefore quite attractive to consider the Armenian absolute construction as an archaic remnant of an earlier Indo-European ergative construction. The non-finite nature of the absolute constructions in the historical dialects is derived from the uninflected status of the early Indo-European verb as preserved in example (12). That such verbal constructions could nevertheless function in independent clauses is however clear not only from this Lithuanian example, but also from the mama kṛtam constructions of Indo-Iranian and the genitive absolute of Armenian. On the other hand, it is the non-finite, nominal character of the verb in such expressions that led to their eventual status as absolutes in the later Indo-European dialects, after the finite verb had seen the enormous development of distinctions in person, number, tense, voice and mood so evident in Greek, Latin, and Sanskrit.

Notes

1. Examples 3, 4, and 7, as well as the examples in fn. 3, are derived from Comrie (1981: 106, 108).

2. The distinction is so basic that it affects the notion of what the subject of a sentence is. As Comrie (1981) points out, the definition of subject as "the intersection of agent and topic," which works so well in nominative-accusative languages, simply does not describe the fundamental syntactic processes of an ergative language.

3. Subject deletion in coordination provides an interesting illustration of this grouping. In English, given the following sentence with deletion of subject in the second clause:

   The man hit the woman and came here.

the subject of the second clause can only be the man. But in an ergative language, since the subject of an intransitive verb is absolutive, in the "same" sentence, the implied subject of the second clause must the woman:

   Balan δυγομβιλ διγολ γαραγυ διγαγ, βανινγυ.
   The man hit the woman and (the woman) came here.
4. The chart is from Rumsey (1987: 27)

5. It is irrelevant that *you* is historically plural in English. The methodology of typology requires us to ignore historical considerations, and to treat modern and earlier forms of English as two or more separate languages. Alternatively, if one accepts the results of typology too literally, it means that when a second plural pronoun is reinterpreted as singular (as happened in English) then during the process, a mark distinguishing the nominative and oblique forms must develop. Clearly, this did not happen, and one suspects that historical processes regularly ignore typological constraints with malicious glee.

6. Schmalstieg (1981) quoting Anderson (1976) gives the following two contrastive examples, illustrating ergative and accusative usages respectively, from Bzhedukh, a West Circassian language:

   c'Yaaala-m c'ogW-ar #-ya-zwa.
   boy (erg.)    field (abs.)  3 sg.-3 sg.-plows
   The boy is plowing the field.

   c'Yaaala-r c'ogW-em maa-zwa
   boy (abs.)    field (obl.)  3 sg.-plows
   The boy is trying to plow the field, the boy is doing some
   plowing, in the field.

7. Uhlenbeck further connects nominative -s with demonstrative *so*, suggesting the origin of the case marker as a post-positive definite particle. He also suggests a connection between thematic noun stems and patient, a notion taken up recently by Schmalstieg (1981) (see below fn. 14). Uhlenbeck further notes, in connection with the idea of neuter, that names of fruits in Indo-European are neuter, whereas the tree (the agent in the process) is generally a masculine (ergative) noun formed from the same stem.

8. Vaillant saw the -mi conjugation as a verbal noun suffixed in the first and second persons by pronominal elements (thus g^W hensi 'you hit' from earlier g^W hent-t-i, with t > s, and g^W henni 'I hit' from g^W hent-m-i, etc.) The third singular of the verb was originally simply the uninflected verbal noun, perhaps with deictic -i, the third plural was a much later addition. This verbal conjugation Vaillant refers to as pseudo-transitive, derived from a passive construction.

9. "La forme du nominatif sing. masc.-fém. (à allongement+s) prouve qu'il y a eu remplacement d'une construction à ablatif ou à un autre cas oblique par une construction à ancien nominatif (ancien «c. passif»), ou, ce qui revient au même, extension de la forme du sujet des phrases nominales et intransitives au dépens de l'ancien «c. actif» fonctionnant dans les phrases transitives." Kurylowicz (1935) 162.

10. Rumsey prefers Kurylowicz chiefly because his approach does not require postulating that IE neuters could not function as ergatives. Typologically, one finds, quite in contrast to Uhlenbeck's (1901) claim, that the neuters are in fact particularly
susceptible to ergative marking (see below, fn. 17).

11. Kurylowicz' explanation of *potêr*, for example, with ë as a reflex of lengthened vowel ergative, is doubtful; much more probable is loss of *s* after *r*, or of the cluster *rs*, with resulting compensatory lengthening, and subsequent restoration of *-r* by paradigmatic analogy.

12. Kurylowicz proposes that the form *-om* cannot be correctly interpreted until the distribution of the two neuter markers in Indo-European, *-o* and *-om* is settled, especially in Anatolian and Balto-Slavic.

13. The two methods of forming the ergative case (lengthening and *-s*) represent another problem for Kurylowicz' explanation.

14. For a more recent discussion of ergativity and transitivity, see Schmalstieg (1981).

15. The main thrust of the objections is based on the hierarchical nature of nominal elements subject to ergative, neutral, or nominative-accusative marking. Three major problems emerge here. First, as I indicated very briefly above, in fn. 5, the hierarchy may not yet be sufficiently defined (although Rumsey (1987: 28) strongly maintains the contrary). Secondly, it may well be that reconstruction of Indo-European ergativity can be redirected and refined by typological considerations. Thirdly, when historical reconstruction and typology do conflict, one must often simply choose between the two, admittedly on the basis of background, training, and preference. I acknowledge my preference to the historical approach, and suggest two articles in defence of this approach, Dunkel (1981) and Schlerath (1987).

16. The *-to* verbal form, which functions here as a "finite verb" in spite of its usual nominal connections (as the marker of the past passive participle in Indo-Iranian, Balto-Slavic, Greek and Latin, and Germanic), is of some interest. It may well be such a form, or this very form, which served as a transitional form between nominal ergative sentences such as AGENT-*os* VERB-*to* PATIENT-# (there is/was action as expressed by VERB done by AGENT to PATIENT) and the later attested IE construction SUBJECT-*os* VERB-*ti* OBJECT-*om*. The earlier form and sense of the verb would then have survived in a nominal expression of the verb, the participle.

17. It has been noted for example by Schmalstieg (1986) that this Greek construction, which finds parallels in Vedic and Slavic, requires a genitive animate object but an accusative inanimate object. This is not as inviting as it would seem at first, and we should not interpret it, as did Uhlenbeck nearly a century ago, as due to the inherent nature of inanimates which prohibits their being felt as the source of a transitive action. After all, the accusative object functions here grammatically in a manner identical to an animate ergative: whether or not an inanimate is by nature typically the source of an action with a patient, it is here *de facto* such an agent. Second, Rumsey (1987) has pointed out that inanimates are very low on Silverstein's hierarchical scale. If any element above marks for ergative, then inanimates will mark for ergative. Contrary to expectation then, inanimates are particularly susceptible to ergative marking if they function as agents of transitive actions (see Rumsey 1987: 28-29, 31)). And finally, we shall shortly see that one Indo-European
dialect, Hittite, actually preserves an ergative marker for inanimates. How is the genitive-accusative distinction then to be explained? Schmalstieg (1986: 167), suggests that this construction reflects an original "agentive genitive" case for the later genitive, with absolutive marking for the later nominative. As the system was remodeled from ergative-absolutive to nominative-accusative, "the nominative subject became the agent and the original agentive genitive came to be interpreted as a special kind of object.... The genitive was either reinterpreted as bearing special meaning (in Slavic, a partitive) with verbs of perception or else the genitive replaced completely by the accusative case." Admittedly, this explanation is not entirely satisfactory.

18. Ernout (1966: 112). Ernout emmends *fulminibus* to *fulmen Iovis* to avoid the ablative subject.

19. This explanation would require, of course, that the -nt- of the Greek oblique cases originated in the genitive-ablative and spread from there to the other cases by paradigmatic analogy.

20. Hittite is generally not thought of as attesting absolute constructions. Holland (1986: 177-9), who sees nominative absolutes as important in the development of oblique absolutes, does however give examples of nominative absolutes in Hittite.

21. Similarly, Old Irish lacks a true infinitive. The heavy use of the verbal noun, which no doubt replaced the infinitive, may likewise be responsible for the loss of absolute constructions.

22. Holland (1986: 165-6) summarizes several of these arguments. They rest chiefly on the diversity of case in the attested languages. More recently, the fact that Hittite does not attest an oblique absolute construction (although it does attest a nominative absolute, see Holland (1986: 177-9) has added evidence to these views.

23. See below, fn. 25

24. This is the view of several authors cited by Holland (1986: 165-6), notably Wackernagel, Meillet and Vendryes.

25. Holland (1986) gives examples from practically every dialect to show that within a given language, the absolute construction could be expressed by more than one case.

26. Sommer (1931: 104), Schwyzer and Debrunner (1953: 398), Chantraine (1953: 324) and Smyth (1920: 461) argue similarly. Delbrück (1888) presents a similar argument for the Sanskrit locative absolute. Here the explanation is obviously more forced, since ambiguous examples such as the genitive construction above are truly rare for the locative in Sanskrit.

27. Jensen (1959: 135) offers only this one example from early (New Testament) Armenian (Mt. 8.5), with several later examples from Movsês Khorenatsi. Actually, Armenian genitive absolutes in which the subject of the absolute differs from the subject of the main clause are extremely rare, and could probably be entirely explained as due to Greek influence. However, absolutes which agree with the subject
of the main clause are very common.

28. Benveniste (1952: 57). Benveniste further notes that Caucasian influence seems to have played no part in the formation of the construction.

29. One other minor difference is that while other Indo-European dialects form absolute constructions from at least two participles, past and present, Armenian uses only the past participle in -eal to form absolutes. A possible explanation is that either the construction originated with the past participle and spread to the present in the other dialects (which is not as unlikely as it might sound at first, given the pivotal role of -to verbals in this process, discussed above) or that Armenian has lost the present absolute construction. None of the several other participial formations in Armenian correspond formally to the IE -nt participle.
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A SEMANTIC ANALYSIS
OF THE CHINESE NEGATIVE FORMS: BU AND MÉI (YÔU)

Zhou Yun
Brigham Young University

Introduction

Negation in Mandarin Chinese is a system that is quite complicated. But very few grammarians or linguists have made an effort to analyze the different negative forms in detail, and even fewer have carried out a discussion in terms of their semantic values. Some grammar books do not even mention them or they cover the whole question with a few remarks. (e.g. Chao, 1968; Lin, 1981)

However, language is created according to its intrinsic logic. If the Chinese negative forms are as simple as they are regarded, why should such a variety of markers exist and why can one not be replaced with the other without changing the meaning of the sentences in which they were embedded? Why will a beginning Chinese learner produce negative sentences that mark him as a non-native simply because he has shuffled the Chinese negative forms and put them in the wrong 'slot'? All these questions suggest that different Chinese negative forms carry their own sets of instructions that determine their usages.

Peirce held that the instructional meaning of a word is general, atemporal and subconsciously existing. All the interpreted meanings that are assigned to a word in specific contexts are the logical variants of the general instructional meaning of the word. Habit, the generalized set of instructions in Peirce's notion, is the essence of this meaning. It is this kind of generalization that is important to our understanding of words. In this theory, the different usages of the Chinese negative forms result in the invariant meaning of the individual forms. This paper is an effort to search for the invariant meaning of the two most common Chinese negative forms: bu and méi (yōu), and to investigate the different uses of these two negatives determined by their sets of instruction.

The Basic Usages of bu and méi (yōu)

Grammarians try to differentiate bu and méi (yōu) by saying that bu is neutral negation while "méi (yōu) is only a negative marker used with action verbs for the past tense or the perfective aspect." (Lang 1983:47) This theory
therefore can not account for the fact that méi (you) is also used to negate the possessive and existential verb you which is obviously not an action verb. One easy way to get out of this difficulty is to say that méi and méi (you) are two individual morphemes, and you is optional in méi (you). Even for those grammarians who consider méi (you) as a single morpheme, they can not solve the problem of its 'contradictory' usages. Therefore, they claim that méi (you) is used to negate action verbs except before the stative verb yǒu.

The author of this paper proposes that méi (you) is one single morpheme and its applications are not inconsistent but determined by its invariant meaning. It is suggested that méi (you) marks the negation of immediate existence, while bu, the negation of mediated existence. Immediate existence is something that exists in the concrete and factual world. It can be seen or touched in the physical reality and everyone will observe the same results without the requirement of any mental interaction such as inference. Such existence is recognized immediately since it is a plain fact. For instance, an action that has been completed is in immediate existence; so is the fact that there is a book on the desk or he has six brothers. The mediated existence differs from immediate existence in that it requires certain kind of mediation in the fulfillment of an action or a statement. For instance, actions that will happen in the future or modal verbs that imply personal attitude are examples of mediated existence. In other words, mediated existence is not a factual existence that can be reflected in the physical world. This opinion will be discussed in relation to the negation of action and non-action verbs, of adjectives, and of sentences with different aspect markers in the following sections.

Negation of Action Verbs

Both bu and méi (you) can negate verbs of action, but the meanings carried by these two markers are different. Let us compare the following minimal pairs:

1. a. tā bu hē chá
   3sg not drink tea
   S/He does not drink tea.
   S/He refuses/refused to drink tea.

   b. tā méi (you) hē chá
   3sg not drink tea
   S/He did not drink tea.
   S/He hasn't drunk tea.

   We can see that when bu and méi (you) negate the statement "S/He drinks/drank tea", méi (you) simply denies the fact
of his drinking tea without implying any additional reasons. It is simply an immediate flat statement of fact. But when **bu** substitutes for **méi (zhòu)**, the negation goes beyond the denial of plain facts. It can never indicate "he did not drink tea". Let us look at some other examples:

2. a. tā **bu** géi wǒ qián  
   3sg not give me money  
   S/He won't give me money.  
   S/He refused to give me money.

b. tā **méi (zhòu)** géi wǒ qián  
   3sg not give me money  
   S/He didn't give me money.  
   S/He hasn't given me money.

2a indicates that he is/was not willing to give me money while 2b states the fact that he did not give money.

Chao (1968:782) explained "when applied to verbs of voluntary actions in the past, **méi (zhòu)** is used for simple negation, while **bu** usually has the effect of 'would not'." Furthermore, "with acts of events, **bu** as a negation expresses some futurity." (Lang, 1983:47)

Whatever explanations and examples were given, they all fit into our paradigm that **méi (zhòu)** negates the immediate existence and **bu**, the mediated existence. When an action/event happened, it thereafter existed in reality, and became a fact. No mediation is required between the event and its existence. Therefore it is an immediate existence. **méi (zhòu)** is applicable to all the action verbs and marks that the action did not happen, or has not happened. **bu**, on the other hand, can not indicate the noncompletion of an act; it denies the existence that is mediated. If the event did not occur because of the subject's unwillingness or personal habit, we have to see the mediation of the subject's attitude, indicated by this specific negative marker **bu**, along with the unfulfillment of the action. If the event will not happen in the future, this event does not exist in reality in the first place, and therefore it is not an immediate fact. The future event exists in a plan, which is a mediator. This mediation of temporal aspect results in the use of the negative form **bu**.

To illustrate this point, let us look at some further examples:

3. a. wǒmén **bu** tīng dào zhèige xiāoxi  
   we not hear this news  
   We didn't hear/haven't heard this news.

b. wǒmén **méi (zhòu)** tīng dào zhèige xiāoxi  
   we not hear this news  
   We didn't hear/haven't heard this news.
The event of 'being heard' cannot be mediated by the subject's will. It can only be a plain fact whether the news is heard or not. Therefore, the immediacy of its existence determines the only correct choice of the negative marker méi (yǒu).

4. a. wǒmén bù tīng zhèige xiāoxì
   we not listen this news
   We don't want to listen to this news.
   
   b. wǒmén méi (yǒu) tīng zhèige xiāoxì
   we not listen this news
   We didn't listen/haven't listened to this news.

When the word hear is replaced by listen, these two sentences work perfectly well. 4a again implies the subject's unwillingness to listen and 4b is a flat statement of the negation of the action of listening. Mediation in 4a is seen through the interaction of the subject's intention in not listening to the news and 4b is a mere negation of the action without any implied reason. This case is also true of some other verbs such as see/look (kàn dào/kàn) and touch/feel (mō dào/mō).

These examples reveal the flaw of the previous grammar rules as stated by Li & Thompson (1981:424) "There are, however, no verbs that cannot be used with bu." Actually, hear takes méi (yǒu) instead of bu which is claimed to be able to negate any kinds of verbs.

5. a. zhèige lìbàiwǔ bù shàngkè
   this Friday not have-class
   (We) do/will not have classes this Friday.
   
   b. zhège lìbàiwǔ méi (yǒu) shàngkè
   this Friday not have-class
   (We) did not have classes this Friday.

The messages of these two sentences differ in that 5a refers to the event in the future, since bu can not deny immediate past existence. So this sentence must be spoken some day before Friday and 'this Friday' is a future time reference. 5b can only refer to a past event, and the sentence must be spoken on Saturday. Thus, 'this Friday' becomes a past time reference.

Things that happened in the past are obviously existential facts while things that will happen in future are not, and they can only be taken into account through the mediation of time. This minimal pair again supports the hypothesis that bu negates mediated existence and méi (yǒu), the immediate existence.

6. a. tàiyáng bù chūlái
   sun not come out
   The sun is not going/willing to come out.
b. tài yáng méi (yǒu) chū lái
sun not come out
The sun didn't/hasn't come out.

Whether the sun comes out or not is a natural phenomenon and is not usually considered to be the result of the sun's intention/willingness. That is the reason that 6a sounds strange to the natives and is usually starred as impossible or ungrammatical. But if we put it in a magic world or wonderland, it is not hard to picture the sun speaking to the people "you have done so many evil things, and I will not give you light any more." bu is perfectly grammatical in this situation, because the sun has its own control whether it is going to come out or not. If it does not, its own intention is playing its role and the mediation of its subjective attitude exists. That is exactly what bu instructs us to see. However in reality, the sun's coming out can only be an immediate existence, and therefore bu is not a possible form of negation. Again it is congruent with our theory that when the sun's rising can be decided by the sun's subjective attitude, bu is correct, while this possibility is eliminated, bu becomes unacceptable in the same sentence.

Negation of Non-action Verbs

It is claimed, as mentioned before, méi (yǒu) does not negate stative verbs except the verb yǒu. The mediation and immediacy theory proposed in this paper may shed light on the underlying reason of this seeming contradiction. Action is particular, and an action that is completed is a solid fact that becomes part of the immediate reality. But stative verbs or other non-action verbs usually tell people to look at it in some kind of mediation. For example:

7. tā shì wáng jiàoshòu
3sg be wáng professor
He is Professor Wang.

Being Professor Wang is meaningless unless you know the referent of the particular name. Therefore, the verb to be does not belong to the concrete physical existence.

8. tā zhīdào zěngyǎng kāi chē
3sg know how drive car
S/He knows how to drive a car.

Knowledge is always mediated since you need to rely on other linguistic sources to claim your knowledge. You need to employ your linguistic competence to clarify or illustrate your knowledge to show that you know it. Language is a mediation to indicate the existence of your knowledge and oftentimes you realize that you do not really know what you think you know when you try to explain it.
All these sentences have to use *bu* to mark the negation of the stative verbs.

But when we say:

9. **tā méi yǒu qián**
   3sg not have money
   He has no money.

we see the money and his possessing it more as a fact, and the existence of the money does not require any mediation.

The model verbs, conveying the mood of the subjects, no doubt indicate mediated existence. Modal verbs denote the subject's ability, intention, or obligation. They do not indicate something that exists in the physical world. Therefore *bu* is the only possible negative marker. For instance:

10. a. **nǐ bu néng táoxué**
    you not can escape class
    You can not play truant.

*b. nǐ méi (yǒu) néng táoxué*

**Negation of Adjectives**

Adjectives are modifiers of nouns, and they categorize nouns in certain groups. When we say "he is tall", or "tā gāo" (he tall) in Chinese, we are classifying him to be one instance of the characteristics of tallness. He is not equal to tallness, nor is tallness the only feature he has. Therefore adjectives are not absolute facts. According to our theory, this kind of mediated existence should be negated by *bu*, and in the vast majority of the cases, this is true. For instance:

11. a. **tā bu nénggàn**
    3sg not capable
    S/He is/was not capable.

*b. tā méi (yǒu) nénggàn*

But consider the following minimal pair:

12. a. **tā bu pàng**
    3sg not fat
    S/He is/was not fat.

b. **tā méi (yǒu) pàng**
    3sg not fat
    S/He did not get fat. (gain weight)
    S/He has not gotten fat.

When the sentence is negated by *bu*, it indicates that the subject is not related to the characteristic of fatness, but when *méi (yǒu)* is used, fat becomes a verb meaning
'getting fat'. It is not categorization any more. Again méi (yóu) denies the plain fact of his getting fat.

Negation of Sentences with Inceptive Aspect -qılıáı

An event undergoes different stages after it occurs, such as its start, its progressiveness, and its completion. "In Chinese, each of these states is specified by adding one or more appropriate aspect markers around the nucleus of a predicate." (Tiee, 1986:110) Let us first look at the inceptive aspect marker qılıáı. It would be assumed that something that started to happen existed in reality and the proper negative marker would be méi (yóu).

13. a. tă méi (yóu) chàng qılıáı
   3sg not sing qıllalı
   S/He did not start singing.
   *b. tă bu chàng qılıáı

But some other examples given by Peter Lang (1983) seem to provide another picture.

14."Tă bu kųgılıáı cáı giuai ne
   he not cry-start would-be strange NE
   It would be strange if he doesn't start crying."

15."Nı bu mà tă, tă kų-bu-qıllalı
   You not scold him, he cry-not start
   If you don't scold him, there's no way he will start crying."

16. Nı mâle tă, tă dào méi (yóu) kųgılıáı
   you scold-PERF him, he unexpectedly did-not cry-start
   When you scolded him, he didn't start crying,
   (though I expected him to." (148)

Superficially these examples seem to contradict our theory, but, giving them a second thought, we will see they are the best evidence in support of our observation. Of sentences 14, 15, and 16, only 16 is a negation of the fact of his not having started to cry. If we substitute méi (yóu) with bu here, the sentence would be unacceptable, since the context of the sentence (Unexpectedly he did not start crying, though you scolded him.) requires a factual negation and bu, as we have discussed, can not fulfill this task. Neither sentence 14, nor 15 marks the negation of the immediate existence of his starting to cry. Sentence 14 is the negation of a supposed condition, while sentence 15 indicated he would not be able to cry with the negative marker bu following a verb instead of preceding it. Therefore, the existence of his starting to cry has to go through certain kinds of mediation in these two sentences.
One feature we should notice is that when *bu* follows a verb in structures with inceptive marker *qilái*, it implies the meaning of not being able to complete the action. In other words, the structure "Verb *bu* *qilái*" means "not be able to Verb *qilái*". That is why *bu* is used with *qilái* only in this pattern, while the ordinary pattern "*bu* Verb *qilái*" is incorrect, nor is "Verb méi (yòu) *qilái*". That is to say, in structures with the inceptive marker *qilái*, *bu* cannot appear before a verb and méi (yòu) cannot appear after a verb because of the inherent meaning carried by the two structures. One more example is listed below:

17. dēng liàng *bu* *qilái*
   light/lamp light not *qilái*
   The light/lamp is not able to be lit up. (The light/lamp doesn't work.)

Another fact which supports our theory is that *bu* rather than méi (yòu) should be used in any kinds of conditional clauses. For instance:

18. a. rúgǒu tā *bu* lái, wǒ jiù dǎ diànhuā gěi tā
    if he not come I will call phone to him
    If he does not come, I'll call him.
    *b. rúgǒu tā méi (yòu) lái, wǒ jiù dǎ diànhuā gěi tā*

Since his not coming is a supposed condition in the future, méi (yòu) turns out to be an unacceptable negative marker.

**Negation of Progressive Aspect**

The progressive aspect marker in Mandarin Chinese is *zài*. With this aspect, the action is mediated by time. To illustrate, the continuing of the action is inseparable from time aspect. The progressive aspect marker sets the constraint that the action must be seen as an ongoing event at the specific point of time stated.

19. zuòtiān wǎnshàng tā *bu* *zài* xiěxìng
    yesterday evening 3sg not zai write-letter
    S/He was not writing letters yesterday evening.

20. wǒmén *bu* *zài* kàn bāozhī
    we not zai read newspaper
    We are not reading newspapers.

21. míntiān nèi shíhòu tā *bu* *zài* shuìjiào, tā yǐ qíchuàng le
    tomorrow that time he not zai sleep he already get up le
    He won't be sleeping at that time tomorrow. He will have been up (already).

In all the above sentences, méi (yòu) is incorrect since
the action is mediated by time.

Negation of Sentences with le and qùo

In negative sentences le is incompatible with méi(yǒu), and qùo incompatible with bu. In order to understand why this should be the situation, we need first examine the difference between le and qùo. Grammarians have labeled le as perfective marker and qùo as experiential aspect marker. We can have an idea about their differences from the examples given by Li and Thompson (1981:227-228)

22. "a. nǐ kàn jiàn le wǒ de yǎnjìng ma? you see perceive PERF I GEN glasses Q Have you seen my glasses (recently, around here? I can't find them)?
   b. nǐ kàn jiàn qùo wǒ de yǎnjìng ma? you see perceive EXP I GEN glasses Q Have you ever seen my glasses?

23. "a. tà qùnián dào zhōngguó qù le 3sg last year to China go PERF S/He went to China last year.
   b. tà qùnián dào zhōngguó qù qùo 3sg last year to China go EXP S/He went to China last year."

The final picture generated by these two examples is the same. But sentences a and b indicate different intentions of the speaker and different underlining meanings. 22a asks the question because the speaker is looking for the glasses, while 22b just asks the fact whether or not you have ever seen the glasses. 23a indicates the action has some present effect and it is possible that he is still in China. But 23b informs us that he had the experience of going to China last year and now it is over. S/He is now back. The distinction is therefore clear that le is more mediated through time and qùo simply denotes a past experience. It can be confirmed by the fact that le can be used in the future time while qùo can not:

24. a. wǒmén mintiān fāng jīa le we tomorrow have vacation le We will have(begin) our vacation tomorrow.
   *b. wǒmén mintiān fāng qùo jīa

An event that has not happened yet can not be regarded as an experience, and thus the experiential aspect is impossible. In conclusion, le instructs you to see an completed action mediated by particular time references, and qùo only tells an event that has been experienced before. Consequently, bu can negate sentences with le, but méi(yǒu), which is the only negative particle for
experiential aspect ɡùo, can not.

25. *a. tā bu zòu ɡùo fēijī
   3sg not sit guo plane
b. tā méi (yǒu) zòu ɡùo fēijī
   3sg not sit guo plane
He hasn't taken a ride on a plane. (He does not have the experience of riding on a plane.)

This example also supports our observation that méi (yǒu) is the only proper negative in sentences with ɡùo, which indicates a plain past experience.

Conclusion

This paper analyzes the two most common Chinese negative forms bu and méi (yǒu) semantically. The semantic analysis of the linguistic forms reveals that all the interpreted meanings of a single linguistic form are in harmony with its invariant meaning. And the semantic analysis provides us with access to the problem of Chinese negatives that no any other approaches otherwise can. We observed that bu is used to negate the mediated existence and méi (yǒu), the immediate existence. All the variations of their usages center around their own sets of instruction. The semantic values of these little markers further manifest that all language phenomena are essentially meaning-oriented. "Only the study of meaning, which is after all the final cause universally shared by all languages, can permit us to come to an understanding of the nature of language." (Robertson, 1987:15) The study of meaning is the only way to solve the problems of language controversies, and it can be applied to tackle other problems in Chinese that appear confusing and unexplainable, and have long been considered unsolvable.
References


The interest to do this study stems from a German composition class I had as an undergraduate at Arizona State University. The professor of that class strove to not only strengthen our command of German grammar and vocabulary, but also to help us understand German writing style. One aspect he particularly stressed was avoidance of the pronoun ich ('I') in sentence-initial position in our essays. He taught us that Germans greatly down-play the first person in their writings. I had been similarly instructed to avoid first-person in a high school English writing class, but only in reference to persuasive essays. I sensed a difference in the reasons for avoidance in the two languages. With nothing documented to back it up, it simply seemed to me that the reason I was taught to avoid first person in English was for strictly stylistic purposes. The reasons for avoiding it in German, on the other hand, seemed more bound to the actual mentality and culture of the German-speaking people. In other words, the de-emphasis of first person in German seemed much more than just a learned writing skill: it seemed to me to be a reflection of the entire German mentality.

Gustave Le Bon, (1960:27) a French sociologist, made the following statement at the end of the nineteenth century:

The most striking peculiarity presented by a psychological crowd is the following: Whoever be the individuals that compose it, however like or unlike be their mode of life, their occupations, their character, or their intelligence, the fact that they have been transformed into a crowd puts them in possession of a sort of collective mind...There are certain ideas and feelings which do not come into being, or do not transform themselves into acts except in the case of individuals forming a crowd.

Dr. Sigmund Freud, (1921:6,7) commenting on Le Bon's work stated, "When individuals in a mass are bound into a unit, there must then be something which binds them together, and this means of binding could be just that which is characteristic for the mass."
What is this 'something' which binds the mass of native German-speaking individuals together? What kind of 'collective mind' do they possess which might reflect in their written language? To answer these questions and to better understand the attitude towards the first person among German speakers, a look into the history of Germany, Austria and Switzerland will shed some light.

Though much can be learned from a look far back in time, reflecting only as far back as World War I is extremely revealing in regards to the forming of the 'collective mind' found in modern-day German speakers.

Both World War I and World War II were devastatingly destructive for Germany. Even years after World War I, its effects were still felt by those who had lived through it, as illustrated by the following words as quoted by Whalen, (1984:181-182) taken from the opening address of the fifth annual convention of the Reichsverband in Berlin, delivered by Willibald Hanner, a disabled veteran from Saxony, on July 30, 1930, a dozen years after the close of the war:

We know and feel that the war didn't only have external effects. It did not just change the map of the world, it changed the soul of human beings. We ourselves cannot entirely sense the enormous impact of the war on the human spirit, because we were part of it...we who have lived through this inferno can never be free from it. It has affected all our lives...A gash goes through all our lives, and that gash is the war. With a brutal hand it has torn our lives in two...

Whalen (1984:182) observes that there was, in Hanner's speech, a complete absence of the heroic ideal which had reigned in Germany at the war's commencement in 1914 and that this ideal had been replaced by melancholia. A loss of ich identity and worth was evident, or perhaps better stated, a loss of wir ("we," or group unity) and, as discussed by Freud and Le Bon, this lack of wir was displayed as a group of individuals lacking ich.

Whalen, (1984:183) quotes a speech given by President Seims of the Volksbund in 1927 to proclaim a German memorial day further discloses the collective soul which existed among the Germans following World War I:
A point must be found somewhere in the German people, where unity of our torn people can be achieved... Such a point can never be found in politics, or in religion, or in economic or social or artistic relationships. Shouldn't it be possible to unite the German people...? Germany must live!

Again, the unity into which the Germans were bound at that point was weakened and torn and though the need to restore strength was clear to the individuals comprising that unit, the way to go about it was not clear.

Mallinckrodt, in discussing the foreign propaganda during the first World War, states the belief of many post-war German observers that such propaganda contributed to the German defeat, most particularly "...through softening of the morale on the homefront." (Mallinckrodt 1980:23) This is another example of the circle effect of lack of ich and subsequent lack of wir, and vice versa.

Skipping several years to the onset of the reign of the Third Reich shows a major change in the mass spirit among the Germans as Hitler was able to do for them what no other had up to that point, namely, to pull the country's economics, and thus the citizens' spirits out of the despair in which they had wallowed. Germany once again, after years without it, possessed a very powerful wir and thus her citizens could each possess an ich.

Unfortunately, this national identity was linked to the power, charisma and promises, some fulfilled, others not, of one man, Adolf Hitler. With the infamous turn of events in Stalingrad, London, Normandy and other key cities, this one man's powerful reich was destroyed, and he destroyed himself in an ultimate act of ich cowardice, suicide.

That the nation he left behind should be devoid of wir and ich identity is clear. Patriotism was pulled out from under Germany's feet and thrown in her face.

Austria and Switzerland too, though not as devastated as Germany, also suffered losses and faced restructuring and re-alignment at war's end.

Both world wars were perhaps the greatest factors in the last century affecting the ich of the German-speaking peoples. How did these same wars affect America? Much can be said, but let it suffice in this context to mention only a few factors. First, America, though heavily involved in both wars, experienced no combat on her own soil. (Pearl Harbor excepted.) In addition, America was victorious in both wars and thus emerged from each war able to move forward...
with a strong sense of national \textit{wir}. America was becoming
a super power and her citizens, basking in the strength of
their motherland, were thus able to move forward individually
with a strong sense of \textit{ich}.

The two world wars were likely the most powerful influence
on the modern-day Massenseele or 'group mind/soul' of
America and the German-speaking nations. Certainly though,
other factors, both cultural and linguistic, affect and/or
reflect in this Seele as well. A few of these possible
factors sharpen the American/German contrast:

- \textit{ich} is capitalized only in sentence initial position.

- 'I' is always capitalized.

- All second person pronouns are capitalized in personal
  letters in German, thus emphasizing the recipient and
de-emphasizing the \textit{ich}.

- Subject-verb-object is the prevalent word order in
  English sentences. This is not so in German, which
allows great variance in word order. For example, that
which one wishes to emphasize in a sentence, or the
"goalword," as Mackensen calls it (1964:142) is normally
placed at the end of the sentence, but can also be
placed in sentence-initial position. The following
German sentences, for example, are all correct
possibilities, depending on what the speaker wishes to
emphasize;

\begin{itemize}
  \item Ich gehe heute zum Geschäft. (lit: I go today to
      the store.)
  \item Heute gehe ich zum Geschäft. (lit: Today go I to
      the store.)
  \item Zum Geschäft gehe ich heute. (lit: To the store go
      I today.)
\end{itemize}

Mackensen, in his handbook written for native German speakers,
discusses the correct writing style and form of many different
items, e.g. reports of events, (personal and professional)
theses, letters, etc. Some interesting information relating
to the use of first person in German writing can be found
therein.

In a given example of a personal journal entry, first person
pronouns are entirely missing. (Mackensen 1964:134)

In listing basic rules for the letter writer, Mackensen
(1964:157) includes this: "Transfer yourself into the
situation of the receiver." He continues, "That is difficult
for most people, since they are bound up in their 'I.'"
In another section listing rules for the report writer, he states, "Describe only facts...The sequence of the event should be laid fast, and nothing more. Therefore, personal feelings and the opinion of the author should have no place in the report." (Mackensen 1964:255)

Similarly, Neuse, (1962:23,24) in his style/form book for non-native students of German, includes an entire section of examples and practice entitled "Impersonal Means of Expression" and names as the second rule of thumb for German style the following: "Germans have a preference for impersonal means of expression. (Subject - it, one, inanimate subject) English prefers a personal subject." Some examples he includes from German are the following: Was mich angeht, 'where I am concerned...' (was, 'what' is the subject here) Es ist mir kalt, 'I'm cold.' (es, 'it' is the subject in this sentence.)

I casually interviewed several native German speakers, both students and professors, and asked them what they had been taught in school in regards to first person. They all said they could not remember when they had been explicitly instructed to avoid ich, but just recalled growing up knowing that avoidance was expected.

With such historical and linguistic evidences regarding German and English as background, the forming of the following hypothesis emerges, namely: when given the same writing assignment, native German speakers and Americans will react differently in regards to first-person pronouns, with Germans avoiding ich in both sentence-initial position and throughout the writing more than Americans will avoid the use of 'I' in the same contexts. It is further hypothesized that this use of first person is a culturally-rather than linguistically-bound phenomenon. In other words, Germans will show greater avoidance of first person in both German and English and Americans will show greater use of first person in both languages than Germans. The following study was designed to test this hypothesis.

THE SUBJECTS

Five native German speakers and five native Americans were the subjects for this study. They ranged in age from early twenties to early thirties.

The native German speakers, (Group 1) all college students, are from the following countries: two from West Germany, one from Austria and two from Switzerland. All of them had been in the United States from one to six years and all of them speak fluent English. There were four women and one man.
The native Americans, (Group 2) also all college students, had all had varying degrees of German instruction as well as target environment exposure. All five had served as missionaries for the Church of Jesus Christ of Latter-day Saints either in West Germany or Austria for periods ranging from 16 to 22 months. In addition, three of them had other study and/or living experience in Germany or Austria. All speak with native or near-native fluency in German. There were three men and two women.

THE STUDY

Each of the ten subjects was asked to write two short compositions, one in English and one in German. The topics assigned to them were as follows: 1) "My most embarrassing experience," (in German) and 2) "My plans for the next five years." (in English) One of the German natives switched the topics and languages around, writing about his embarrassing experience in English and about his five-year plans in German. The effect this variable may have had on the data was not considered in this study.

The subjects were allowed to write the compositions unsupervised on their own time, but were given the following general guidelines: 1) to write spontaneously as their thoughts on the subject came to them, i.e. no rough draft and final copy, and 2) to make it no longer than one side of one page. Typed or hand-written was not specified, which resulted in great variance in composition length. How this variance was worked with will be discussed later.

Though most of the subjects asked, they were not told what the purpose of the study was, nor what I would be looking for in their writing. This was, naturally, to avoid influencing their writing.

Once the compositions were turned over to me they were first analyzed for two features: 1) Average number of T-units per composition and 2) average number of words per T-unit. A T-unit is a minimal-terminal unit and is a means devised by grammarians to standardize the measuring of sentences. A simple yet clear example of how a T-unit and a sentence may differ is the well-known sentence, "I came, I saw, I conquered." This string of words, though only comprising one sentence, makes up three T-units, since three separate and complete thoughts are represented.

These T-unit figures eliminate problems associated with varied composition length and provide a basis against which to measure the use of first person in the compositions. Whenever the term 'first-person pronouns' is used in this study it shall refer only to first-person singular, nominative pronouns in both German and English, i.e. ich and 'I.'
For use in reference to the tables, Group 1G refers to German natives writing in their L1, Group 1E refers to the same individuals' writings in their L2, English. Group 2G is the native Americans and their writings in their L2, German and Group 2E is the Americans and their writings in their L1.

Table A: Average # T-units and average T-unit length

<table>
<thead>
<tr>
<th>Group</th>
<th>Average # T-units</th>
<th>Average T-unit length</th>
</tr>
</thead>
<tbody>
<tr>
<td>1G</td>
<td>16.8</td>
<td>10.78</td>
</tr>
<tr>
<td>1E</td>
<td>14.0</td>
<td>11.52</td>
</tr>
<tr>
<td>2G</td>
<td>17.2</td>
<td>11.06</td>
</tr>
<tr>
<td>2E</td>
<td>8.2</td>
<td>18.32</td>
</tr>
</tbody>
</table>

Each group of writings was then analyzed in regards to the use of the first-person pronouns. Due to the limited scope of this pilot study, only three major aspects were examined: 1) percentage of first-person pronouns to total words, 2) fronting of ich or 'I,' and 3) total use of the same pronouns.

The data regarding the percentage of first-person pronouns to total words, as seen in table B, is not significantly revealing, with percentages ranging from four to six percent, among all four groups. Somewhat surprising and unsupportive of the hypothesis is the fact that the native Germans writing in their L1 showed the highest percentage of first-person pronouns, though a mere one percent higher than the Americans writing in their L1.

Table B: Percentage of first-person pronouns to total words

<table>
<thead>
<tr>
<th>Group</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1G</td>
<td>6%</td>
</tr>
<tr>
<td>1E</td>
<td>5%</td>
</tr>
<tr>
<td>2G</td>
<td>4%</td>
</tr>
<tr>
<td>2E</td>
<td>5%</td>
</tr>
</tbody>
</table>

The next two items analyzed show substantial contrasts between the groups. In looking at the percentage of total sentences fronted by ich or 'I,' (see Table C) a significant fourteen percent difference appears between native Germans writing German (1G) and native Americans writing English (2E). This is in strong support of the hypothesis.

It should be noted that the units analyzed in Table C are actual sentences and not T-units since a pronoun appearing at the front of a T-unit is not necessarily at the front of a sentence.
Interestingly, both groups 1 and 2 greatly increased the fronting of first-person pronouns when writing in their respective L2, with a two percent increase for the Americans and a large eleven percent increase for the Germans. This can probably be attributed to the fact that for both groups, concentration when writing in their L2 was on form rather than style, and that each individual, in his/her L1 is able to more easily concentrate on style, including use of first person. This shows, in contrast to the hypothesis, that the control of first person is, to an extent, linguistically bound.

Significant also in Table C is the fact that the Americans' overall percentage of fronting is higher than for the Germans, indicating an expected lack of concern with the use of first person, though this is not to be judged as negative or positive.

<table>
<thead>
<tr>
<th>Group</th>
<th>Percentage of sentences fronted by first-person pronoun</th>
</tr>
</thead>
<tbody>
<tr>
<td>1G</td>
<td>9%</td>
</tr>
<tr>
<td>1E</td>
<td>20%</td>
</tr>
<tr>
<td>2G</td>
<td>27%</td>
</tr>
<tr>
<td>2E</td>
<td>25%</td>
</tr>
</tbody>
</table>

Finally, of the total first-person pronouns used in the compositions, the percentage of these pronouns appearing in sentence-initial position was analyzed. (see Table D) This analysis provides the most striking and hypothesis-supporting data of all.

The Germans writing in German fronted a mere eleven percent of their total pronouns while the Americans writing in English fronted twenty-eight percent.

Both groups show an almost identical increase in fronted pronouns when writing in their L2. For the Germans, this increase was fourteen percent, from eleven to twenty-five percent and for the Americans, a fifteen percent increase, from twenty-eight to forty-three percent. This is likely due, as discussed in regards to Table C, to the fact that the concentration in the L2 for both groups is on form rather than style, particularly since they were asked to write spontaneously. This, again, is evidence that the use of first person is somewhat linguistically bound.

That Group 2, the Americans, shows a significantly higher overall fronting of first-person pronouns, (seventeen percent higher than the Germans when writing in the L1 and eighteen percent higher than Germans when writing in the L2) again supports the hypothesis that German speakers
avoid the use of first person better than Americans and that it is greatly culturally bound.

Table D: Percentage of total first-person pronouns appearing in sentence-initial position

<table>
<thead>
<tr>
<th>Group</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1G</td>
<td>11%</td>
</tr>
<tr>
<td>1E</td>
<td>25%</td>
</tr>
<tr>
<td>2G</td>
<td>43%</td>
</tr>
<tr>
<td>2E</td>
<td>28%</td>
</tr>
</tbody>
</table>

Conclusions and Recommendations for Further Research

As stated previously, the scope of this study is small and great potential exists for expansion. Conclusions more definite or concrete than those already laid out in the body of this study should not be made until a study of greater magnitude, with many more subjects is performed.

Additional items in an extended study might include a look at first-person plural pronouns, (wir, uns, 'we,' 'us') as well as at first-person object pronouns. (mich, mir, 'me') The following variables, namely the age and gender of subjects as well as the specific language background of each subject, particularly time spent in the target language environment, could add important insight. Also interesting would be a study of first person use in spoken language.

Applications for Language Teachers

Since this study concentrates on writing, its results will probably be of most help to college teachers at the third semester level and above, and for teachers of second, third and fourth year high school students. A difference in the use of first person between German and English is here evident, despite the small nature of the study. If this aspect of the language is, in fact, one which is bound to the culture and mentality of the peoples involved, teachers, especially those of GSL, should make an understanding of this mentality an integral part of writing instruction, hand in hand with spelling and grammar, just as language and culture are interwoven, inseparable and hand in hand.
References


A Universal CV Tendency?--
Another Look at the Syllable Structure in First Language Acquisition

Rushen Shi
Brigham Young University

Theoretical background

Phonological theory on universals can be dated back to Jacobson a few decades ago. In his book Child Language, Aphasia and Phonological Universals, Jacobson (1968) claimed that children learn contrasts, not just individual sounds in acquiring the phonology of their native languages. He also attempted to predict the order in which sounds are acquired by saying that the first sounds that children acquire are those of maximal contrast. His hypothesis that there is a universal order of acquisition was made through surveying various diary data. With respect to syllable structure acquisition, he believed that children have a universal tendency of CV or CVCV syllables at the early stages of phonological acquisition.

Later a new theory developed out of generative phonology--Stampe's (1969) "Natural Phonology". In addition to supporting Jacobson's idea of universals, Stampe hypothesized that children are born with an adultlike knowledge of phonological processes common to all languages, and that their innate universal tendencies (including CV or CVCV syllable tendency) are gradually suppressed and eliminated in the course of their phonological development.

While Stampe's formulation began with phonological universals from languages of the world, Ingram (1976) used Stampe's idea of phonological processes in a more descriptive way to discuss the error patterns in phonological acquisition. These processes include substitution, assimilation and such other processes as cluster reduction, deletion of final consonants, deletion of unstressed syllables and reduplication. Ingram was among those who believed in the children's individual variations in their phonetic preferences and abilities, and their perceptual capacities (Ingram, 1976; Vihman et al., 1986; Studdert-Kennedy et al., 1986; Lund et al., 1983). He discussed his idea in the following way:

There is another striking way in which children construct a phonological system that results in marked differences between children. This is the result of individual phonological preferences from child to child. ... A phonological preference is used here to refer to a preference by a child
for a specific articulatory pattern. This preference may be for a particular class of sounds, such as fricatives or nasals, or for a particular kind of syllable structure. (Ingram, 1976:145)

The above brief review of theories provide us a clearer view of how linguists see differently such universals as a CV tendency. Since the concern of this paper is on the syllable structure in L1 acquisition, the following review of research will focus on this issue. More specifically, we will mainly look at the data on final consonant deletion, consonant cluster reduction and reduplication--the major processes to be applied for a simplified CV or CVCV tendency.

Review of Literature

Many studies have been published on the syllable structure of L1 acquisition. Some have demonstrated evidence of a CV/CVCV tendency, and others have demonstrated counter-evidence.

Smith et al.(1981) examined a male twin (H) who was 1;4 years at the outset of the initial three months of evaluation. Data was drawn from a 10-month study of this child. They claimed that the typical output of the child was of an open syllable format, with occasional reduplication occurring. In a study done by Ferguson et al.(1983), the data, which were drawn from the research of the Stanford Child Phonology Project during the period 1970-80, showed that at very early stages there is a CV syllable pattern in which the final consonant is deleted (e.g. [pʰ] for "boat") and later replaced by [ʔ]. Similarly, Branigan (1976) argued for the universal theory by analyzing the syllable structure and phonemic inventory of one child at the beginning of word production. His data indicated the following patterns: (1) open syllable, (2) all bisyllabic utterances were reduplicated--CVCV, (3) final syllable reduction, (4) unstressed syllable reduction. The data presented seem to warrant Branigan's claim that the CV syllable is the primary syllable unit.

The CV structure as opposed to a VC or a CVC structure provides the most favorable environment for the acquisition of consonantal distinctions because segments in initial position can be executed without interference from previous articulatory positions and segments in initial position in an open monosyllable will be unaffected by backword assimilation. The constraint to an early CV structure allows for the application of certain "exploration" strategies which help to master a set of consonants in initial position. Once established in the environment, these consonants then become available for productive use in other positions, allowing syllabic structure to expand.(Branigan 1976:131-32)
In order to test Stampe's Universal hypothesis, Prater et al. (1982) studied the phonological processes of 60 English-speaking children ranging in age from 21 to 48 months. The study used Brown's (1973) Mean Length of Utterance (MLU) and chronological age for classifying the subjects and the Phonological Process Analysis (Weiner, 1979) to obtain measures. The results indicated that the syllable structure processes--those processes for simplifying the child's production to a CV or CVCV unit--were the ones most frequently used by the children. Deletion of the final consonant was an important simplification process evidenced between MLU level 1 and MLU level 3. The same was true with cluster reduction and weak syllable deletion.

In support of the universal theory, Moskowitz et al. (1980) reviewed several case studies in which CV/CVCV syllables were dominant in the children's early speech. For example, Hildegard's (Leopold, 1939-49) and Braine's (1971) sons produced words with final consonant deletion, consonant cluster deletion and reduplication. Moskowitz thus concluded that a typical syllable pattern is "for the child to produce syllables which have the internal phonetic pattern CV, and to produce words which consist of one syllable or of two identical syllables (75)."

There was an interesting study done by Stockman et al. (1982) on the speech of vernacular-Black-English-speaking children, which included a phonological analysis on the acquisition of final consonants. Samples of spoken English were collected longitudinally from 12 Black children. The data showed that the children favored the final CV/CVCV pattern.

Lahey et al. (1985) investigated the process of reduplication in children with specific language impairment (SLI) and found that in the single-word utterance period, there were few differences between the phonological simplification processes used by SLI children and nonlanguage-impaired children. The SLI children had an open syllable preference.

In their study, Leonard et al. (1978) examined the aspects of child phonology in imitative and spontaneous speech. Eight children, ranging in age from 1;3 to 2;0 were chosen to be the subjects. The experimenters first obtained the phonological characteristics from the children's spontaneous speech in the same situations and tasks designed for each of the eight children. Out of the spontaneous speech the phonological characteristics were drawn which focused on consonant and syllabic shape features. There was a CV and CVCV tendency in the syllabic shape. In order to test whether the children's imitative speech would reflect the phonological system demonstrated in spontaneous utterances, the experimenters constructed 24 nonsense words so that half of the words had their syllabic shapes representing the shapes that were evidenced in the child's phonological system and half of the words which were not. Then the experimenters designed tasks for each individual.
child to imitate the nonsense words. The results indicate that the children's imitative production of syllabic shape agreed with that of their spontaneous speech and both demonstrated a universal CV/CVCV preference.

There have been several studies on the syllable structure of bilinguals of English and other languages as well as the children whose native languages were other than English. Nettelbladt's (1982) research in normal and language disordered Swedish children indicated that both groups at the earliest speech stage demonstrated open syllable dominance. Likewise, Machen's (1977) subject Si, whose speech was basically Spanish, produced the syllable pattern of CV/CVCV. Similar results can be found in Khan's (1984) study on the phonological development of Urdu speaking children. "Children simplify syllable structure of adult speech. The direction is towards simple CV syllable against CCV or CVC syllables. Consonant cluster reduction is the most common process employed by children"(Khan, 282). Berman (1977) analyzed the syllable structure and phonological processes of a Hebrew-English bilingual girl, Shelli, at the one-word stage. The data yielded a preferred CV or CVCV syllable structure both for English and Hebrew words. The phonological processes included reduplication of syllables, reduction of consonant clusters, deletion of syllable-final consonant and weak syllable-deletion.

Besides the research on early speech production, the syllabic feature of babbling has also been studied. For instance, Oller et al.(1982), believing that babbled utterances is consistent with patterns of early meaningful speech, looked at the babbling of a group of children (aged 0;11 to 1;2) who were exposed bilingually to Spanish and English. He found that all the children used primarily CV syllables.

Donahue's (1984) diary recorded the phonetic shapes of a child's (Sean) early words at the one-word stage, and noted that they were characterized by the presence of only one consonant and took the syllabic patterns of CV, VCV or reduplicated syllables such as "mama" or "baby". Here are some examples: bird [bæ]; light [lai], dog [dɔ], ball [bau], etc.

The above case studies which have been presented are all manifestations of a universal CV/CVCV tendency. The following few paragraphs will be devoted to the counter- and partial counter-evidence which have appeared in literature.

Fee et al.(1982) studied samples from 36 children ranging in age from 1;1 to 2;8. They found that children who frequently reduplicated were poorer at final consonant production or closed syllable than children who reduplicated less. The nonreduplicators had a dominant use of monosyllables. The children showed different final consonant production: Some had dominant open syllables and some used closed syllables. The data showed a wide range of preference among the children to open
syllables and closed syllables. The paper did not discuss consonant cluster reduction.

Kiparsky and Menn (1977) disagreed with Jacobson's universal theory. They suggested that there are individual differences of syllable preference among children. They seemed to agree with the idea that there are "open syllable" children as well as "closed syllable" children. Stoel-Gammon et al. (1984) expressed the same idea by demonstrating the results of their study on the phonological development of three children from late babbling to 50-word stage. They found there were extensive variations on syllable forms of word productions between subjects. For the three subjects, the predominant patterns were: "...velar stops and closed syllables for Daniel, open syllables and phonetic accuracy for Sarah, and reduplicated syllables for Will" (270). Thus in their view the claim that "the CV syllable in the primary syllable unit" in the production of early words (Branigan, 1976) must be modified. They suggested that researchers must "exercise caution in making statement about what ALL children do or do not do as they acquire the phonology of their native language" (269).

Lund et al. (1983) explained their agreement with the idea of individualization: the first words stage "is different for different children. Children vary in their sound and syllable structure preferences; they vary in the degree to which they impose these preferences on adult forms; and they vary in whether they organize their phonological system by rules which work across words, or by memorizing individual lexical items" (94).

Vihman et al. (1986) also argued strongly for the individual differences in phonological development across children. Their argument was based on a study of 10 children (5 boys and 5 girls) acquiring English as their first language over a 7-month period. This study started from the period of no word to the 50 words stage. "Individual differences were found to prevail from the start in phonetic tendencies, consonant use in babbling and early words, and phonological word-selection pattern. (3)" Their data of early words indicated that there is a large amount of diversity in the production of final consonant, consonant clusters and reduplicated consonant sequences (CVC, VCV, VCV) in disyllable strings.

The study of Elbers et al. (1985) is somewhat different from the others. As they believed that babbling may "predispose the talking system towards selecting words of a certain form (i.e. towards developing 'phonological preferences')" (363), they examined the syllabic feature of the "word babbles" of a Dutch boy (from 1;3.18 to 1;4.29) who had entered the first words stage. The babbling consisted of both meaningful and meaningless forms. The child produced the following types of syllable patterns: VC(V), (V)CVC(V). There is no predominant CV preference in the data. However, the babbles have no consonant cluster, which reveals the characteristics of the syllabic shape at the first words period.
Ingram has done some influential research to prove the hypothesis of individual variation in phonological development (1976; 1981). He examined (1976) the speech of a language-disordered child at the 50-word stage and found that she first demonstrated a basic inventory of sounds and primary CV words in her speech. The phonological processes she used included deletion of final consonants and unstressed syllables, reduction of consonant clusters, and reduplication. However, in another study, Ingram (1981) reported variation in the use of syllabic patterns by 15 subjects. The measurement showed that children had a tremendous range in the proportion of closed syllables they used—-from no closed syllable to virtually all closed syllables.

An even more interesting study by Ingram (1981) was on the issue of whether bilinguals have one phonological system or two in the early 50-word stage of phonological development. He analyzed the speech of an Italian-English bilingual L aged 2;0, and found that L's segmental inventories were similar for both languages, but that the syllabic patterns were not. In Italian L used mainly multisyllabic open syllables, but her English was mostly monosyllabic with closed syllables. The results indicate that she was using separate systems in her phonological acquisition. (As we know, English is highly monosyllabic with many final consonants. In comparison with English, Italian tends to be more multisyllabic with open syllables.) At this point Ingram further addressed the issue of the role of individual strategies. He stated:

Recent studies have focused on individual variation, and either implicitly or explicitly assign such strategies to inherent preferences in the child. The data from L, however, raised questions about how independent these tendencies are from the input language. ...The results indicate that a preference a child shows may vary greatly depending on the language being learned. It appears that the phonological shape of the input language plays a greater role in early phonological development than has been proposed, and that one needs to be cautious about concluding inherent preferences or strategies of acquisition. (1981:14)

This bilingual research appears to be particularly significant for the present paper because this writer's study exactly matches Ingram's in that the subject used is a Chinese-English bilingual who also had separate phonological systems.

Up to now we have had a brief review of the studies done on the "universal" controversies. While the majority of the cases support the universal CV/CVCV tendency, there have been a notable number of exceptions cited and researched which challenged the "universal" claim. However, none of these cases demonstrated consonant cluster production at the early stage of phonological acquisition. The purpose of this research project is to examine
the syllabic patterns of one particular English-Chinese bilingual child's speech at the early stage of phonological development.

Method

Subject

A child from a New England upper class family was observed from the age of 1;1.2 to 1;5.3. The little girl, Denille, had had English exposure from her sister, who was three years older than her, and several different American caretakers before me. There was not very much exposure from her parents since the child spent most of her time with the caretaker. Soon after she was with me, she picked up Chinese. Although she understood and produced more Chinese than English, she had a certain amount of exposure of English from me, her older sister and her sister's friends. Thus the child can be labeled as English-Chinese bilingual. The child was at her early one-word stage of phonological development. The production was all in mono- or double-syllable forms. On the first day when I was with her, she could only produce two words: "Hi" and "daddy". According to her parents, she had no other production prior to these two words.

Sample collection

The speech of the child was collected in a diary form on a biweekly basis. International Phonetic Alphabet was used to record the sounds. The collection started from an almost-zero word production to 50-word production stage, all of which were mono- or double-syllable words.

Results and Discussion

Before we come to the data analysis, let us take a brief look at the syllabic shapes of Mandarin Chinese and English. The syllabic shape of English can be described as (C)(C)(C)V(C)(C), e.g., "a", "too", "eat", "spy", "book", "first", "spread", etc. The syllabic shape of Chinese is much less complicated than that of English. According to Cheng (1973) and Chao (1968) Chinese syllable pattern includes:

1. V, e.g., "a";
2. CV--the dominant shape, e.g., "bu", "keyi";
3. CV[n] or CV[ŋ], e.g., "Xiang Gang".

Both consonant cluster and final consonant appear in English syllable structure, whereas Chinese does not have consonant cluster and final consonant except [ŋ] and [ŋ]. Chinese is a predominantly open-syllable language.
In this study the subject's production of Chinese words is dominantly CV or V syllable shape, in accordance with the syllable feature of Chinese. For the words that end in [n] such as "xin"([cin]), she would say [ci] without the [n] sound because she was not able to produce the [n] sound at the very early stage. However, soon after she acquired [n] in the initial position as in "nai"([nai]), she used it in the final position. Her [ ] was never produced throughout the four months of my observation. The reasons for that, I believe, are that [ ] is comparatively a hard consonant to acquire, and that there is no syllable initial [ ] in Chinese, which would otherwise be a help for the child to acquire the sound earlier. We may predict that once the sound is acquired by the child, it would be produced syllable-finally as [n] was. It is, therefore, inadequate to simply say that she had a final consonant deletion tendency. This can be seen more clearly in her English final consonant production.

Table 1 shows the percentage of final consonant production in Denille's English words.

Table 1. Denille's final consonant production in English

<table>
<thead>
<tr>
<th>Total No. of English words</th>
<th>Total No. of final consonant words</th>
<th>Total No. of words with final consonant production failure</th>
<th>Percentage of final consonant production</th>
</tr>
</thead>
<tbody>
<tr>
<td>87</td>
<td>51</td>
<td>5</td>
<td>90.2%</td>
</tr>
</tbody>
</table>

Among the 87 English words of her production there were 51 words with final consonant. Out of the 51 final consonant words only 5 words had no final consonant production, and the final consonants of the remaining 46 words were pronounced. The final consonants of the 5 words which were not produced are [k], [n], [l], and [ŋ]. What is interesting is that Denille's failure in producing [k] and [n] happened only before the two sounds were acquired syllable-initially. Soon after the two sounds were acquired, she showed no deletion of them syllable-finally, which was the same case with her Chinese [n] production. The final [l] and [ŋ] indicated the same phenomenon with her Chinese [ŋ]. Her English [ŋ] was not acquired during my observation, which might be because of the nonoccurrence of the sound in syllable initial position in English as well as the complexity of the sound—the same case with Chinese. [l] was acquired syllable-initially by the end of the observation and thus predictably would appear...
syllable-finally, although I did not wait for its occurrence. This means that we cannot simply say that the child has a final consonant deletion preference.

As there is no consonant cluster in Chinese, the feature needs to concentrate on English. Table 2 describes the percentage of consonant cluster deletions in Denille's English words.

Table 2. Denille's consonant cluster production in English

<table>
<thead>
<tr>
<th>Total No. of English words</th>
<th>Total No. of words with consonant clusters</th>
<th>Total No. of words produced with consonant cluster deletion</th>
<th>Percentage of consonant cluster production</th>
</tr>
</thead>
<tbody>
<tr>
<td>87</td>
<td>22</td>
<td>22</td>
<td>0%</td>
</tr>
<tr>
<td>(out of the 87)</td>
<td>(out of the 22)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2 indicates that the 22 consonant cluster words out of Denille's 87 English words were all produced with consonant cluster deletion. Her production of consonant clusters was 0%. It is apparent that consonant cluster deletion process is dominant in Denille's early phonological acquisition, which agrees with all the research in the literature.

The child used dominant CVCV production in Chinese but only in open syllable word in English. It appeared that the CVCV shape only happened to open syllable words. As Chinese is a predominantly open-syllable language, the child's production of CVCV was used much more in Chinese than in English.

Conclusion

This paper has discussed the issue of CV/CVCV universal tendencies in first language phonological acquisition. The review of the literature demonstrated a majority of cases of CV/CVCV universal tendencies, there was also a notable number of cases revealing individual variations among children in L1 phonological acquisition. Consonant cluster deletion seems to be overall a universal tendency. My research on the Chinese-English bilingual child presented data which indicate a dominant consonant cluster deletion process, a universal tendency. However, there does not seem to be an open syllable preference in her closed syllable production in English. As Chinese is dominantly an open syllable language, the child's Chinese words
show a dominant CV features. This agrees with the results of Ingram's (1981) study which stated that bilingual children use two phonological systems from the early stage of first language acquisition. The findings of this research support the idea of universals in that there is consonant cluster deletion, but provide evidence for the claim of individual variations in L1 phonological acquisition. These results might have implications on the research of second language phonological acquisition.

References


Appendix A

Denille's English Word List from 1;1.2 to 1;5.3
(Recorded on biweekly basis)

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Word List</th>
</tr>
</thead>
<tbody>
<tr>
<td>1;1.2</td>
<td>Hi[ai]; daddy[də' di]</td>
</tr>
<tr>
<td>From 1;1.2 to 1;1.16</td>
<td>up[ap']; bird[bad]; this[diґ]; that/dat'; book[bu]</td>
</tr>
<tr>
<td>From 1;1.16 to 1;2.0</td>
<td>dirty[ðədi]; mummy[mami]; cheese[tʃi:ɡ]; bib[bib]; home[om]; apple[ˈæpu]; Birt[bət']; brush[bəɡ]</td>
</tr>
<tr>
<td>From 1;2.0 to 1;2.15</td>
<td>hot[hæt']; shoe[ɡu:]; toe[do]; fish[ɡɪc]; Alda[adɑ]; mouth[maʊ]; bubble[ˈbabu]; ball[bo]; cookie[gɪɡi]; book[bʊk']</td>
</tr>
<tr>
<td>From 1;2.15 to 1;3.1</td>
<td>papa[baba]; go[ɡo]; Estee[edi]; baby[ˈbebi]; bye[beɪ]; juice[tʃiɡ]; duck[dae]; please[piɡ]; hair[he]; movie[ˈuʃi]; spoon[ˈbu:]</td>
</tr>
<tr>
<td>From 1;3.1 to 1;3.16</td>
<td>cracker[gəɡə]; bed[bed]; dog[doɡ]; push[puʃ]; coat[ɡət']; Mindy[miɡi]; top[ˈdɒp']; arm[əm]; happy[ˈæbi]; down[daʊ]</td>
</tr>
<tr>
<td>From 1;3.16 to 1;4.0</td>
<td>Oscar[ˈoga]; hat[hɑ ˈt]; good girl[ɡɑɡə]; no[no]; see[siː]; star[stɑ]; nana[ˈnana]; Ernie[ˈæni]; bunny[ˈbani]; kiss[ɡiɡ]</td>
</tr>
<tr>
<td>From 1;4.0 to 1;4.14</td>
<td>yes[ieɪ]; monkey[ˈmæɡi]; down[daʊn]; cat[ɡætˈt]; eye[ai]; nose[nɔsi]; turkey[ˈtʌɡi]; car[ɡə]; two[duː]; three[diː]</td>
</tr>
<tr>
<td>From 1;4.14 to 1;4.29</td>
<td>head[hed]; milk[ˈmɪk]; cup[kæp]; big[biɡ]; me[miː]; sister[ˈsɪtær]; turtle[ˈtɑtə]; hand[hand]; heart[hæt]; school[ɡuː]; moo[ˈmuː]; green[ɡɪn]</td>
</tr>
<tr>
<td>From 1;4.29 to 1;5.10</td>
<td>walk[wɔk]; bread[bed]; comb[ɡəm]; sing[ɡɪɡ]; frog[doɡ]; friend[ˈfrend]; hello[ˈelo]; light[ˈlaɪt]; leg[leɡ]; my[mai]; tummy[ˈdʌmi]</td>
</tr>
</tbody>
</table>
Appendix B

Denille's Chinese Word List*
(Only the closed syllable words)

From 1;1.2 to 1;4.0
bing (pie) [bi]; yan (eye) [je];
tang (candy) [da]; dandan (egg) [dede];
daxiang (elephant) [daGa]; men (door) [me];
pinggo (apple) [pigo]; gaoxing (happy) [gaCi];
qingwa (frog) [tGiwa]; yang (sheep) [ya];
shan (mountain) [ga]; binggan (cookie) [biga];
qin (kiss) [ti:]

From 1;4.0 to 1;5.10
yan (eye) [jen]; fan (food) [fan];
binggan (cookie) [bigA n]; dandan (egg)[dadAn];
daxiang (elephant) [daGa]; qiang (wall) [tca];
qinqin (kiss) [tCi:in]

* Except for the few closed-syllable words listed here, Denille's Chinese words are all open-syllable.
THE POSTHUMOUS HOAX OF JAMES NORMAN HALL

David F. Meyer
Brigham Young University

Introduction

Some months before April, 1961, a document was sent to the editor of the anthropology magazine *Science of Man* from a B.R. Benson, of General Delivery, San Francisco. (Science of Man Apr 1961:104) It was stated to have been written by James Norman Hall (Ibid), a co-author of *Mutiny on the Bounty*, and resident of French Polynesia for more than thirty years. (Roulston:12,13) The document was dated November, 1948, and claimed to be a list of unusual words that Hall had written down on September 3, 1922 while on an island called Hopemea, in the Tuamotu Island chain. (SoM Apr 1961:104)

Hall purportedly had a habit of writing down words at the various islands he travelled to. (Ibid) All of his lists, however, he decided to throw away one day while house-cleaning, with the exception of the list from Hopemea. (Ibid) He saved it because many of its words were unlike any other Polynesian words he had ever encountered. (Ibid) Hall's list is as follows (See SoM Apr 1961:104):

<table>
<thead>
<tr>
<th>Hopemea</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. jacui</td>
<td>whistle</td>
</tr>
<tr>
<td>2. awhi</td>
<td>bad</td>
</tr>
<tr>
<td>3. amah</td>
<td>mother</td>
</tr>
<tr>
<td>4. pituha</td>
<td>medicine man</td>
</tr>
<tr>
<td>5. anghi</td>
<td>a spirit</td>
</tr>
<tr>
<td>6. temihu</td>
<td>taro dried</td>
</tr>
<tr>
<td>7. iret-ham</td>
<td>settlement</td>
</tr>
<tr>
<td>8. mamahe</td>
<td>spirit (guardian spirit?)</td>
</tr>
<tr>
<td>9. petimi</td>
<td>tobacco</td>
</tr>
<tr>
<td>10. menuhi</td>
<td>a yam</td>
</tr>
<tr>
<td>11. tata</td>
<td>fire</td>
</tr>
<tr>
<td>12. nadike, nadehke</td>
<td>pretty</td>
</tr>
</tbody>
</table>

Hall died in 1951 in Arue, Tahiti. (Roulston:13) Somehow the list reached the hands of Mr. Benson, who in around 1961 sent it to *Science of Man* and other publications and scholars for investigation. (SoM Apr 1961:104)

*Science of Man* printed the list in its April 1961 issue. (Ibid) A follow up article then appeared six months later in the August issue. (See SoM Aug 1961:173,174) In this article, Dr. Wallace
L. Chafe, linguist on staff of the Bureau of American Ethnology, showed that four of the words came from Tupi, an Amazonian Indian language. (Ibid:173) He found these words in P. Antonio Ruiz de Montoya's *Arte de la Lengua Guarani o mas bien Tupi* (Vienna, 1876). The four words are the following (See SoM Aug 1961:173):

<table>
<thead>
<tr>
<th>Tupi</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. pitu</td>
<td>to anoint</td>
</tr>
<tr>
<td>5. anga</td>
<td>spirit</td>
</tr>
<tr>
<td>9. pety, petyma, pitima</td>
<td>tobacco</td>
</tr>
<tr>
<td>11. tata</td>
<td>fire</td>
</tr>
</tbody>
</table>

which compare to the following words in Hall's list:

<table>
<thead>
<tr>
<th>Hopemea</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. pituha</td>
<td>medicine man</td>
</tr>
<tr>
<td>5. anghi</td>
<td>a spirit</td>
</tr>
<tr>
<td>9. petimi</td>
<td>tobacco</td>
</tr>
<tr>
<td>11. tata</td>
<td>fire</td>
</tr>
</tbody>
</table>

The editor of *Science of Man* himself found one of Chafe's words and five other of Hall's words in Kalervo Oberg's *Indian Tribes of Northern Mato Grosso, Brazil.* (Ibid) The language in Oberg's book was Camayura, a language of the Tupi family. (Oberg:4) The Oberg words as listed in the *Science of Man* article are as follows (See SoM Aug 1961:173):

<table>
<thead>
<tr>
<th>Tupi</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. jakui</td>
<td>flute</td>
</tr>
<tr>
<td>3. ama</td>
<td>mother</td>
</tr>
<tr>
<td>6. temiu</td>
<td>manioc</td>
</tr>
<tr>
<td>7. iretam</td>
<td>village</td>
</tr>
<tr>
<td>8. mame 'e</td>
<td>spirit</td>
</tr>
<tr>
<td>9. petimi</td>
<td>tobacco</td>
</tr>
</tbody>
</table>

The corresponding words in Hall's list were:

<table>
<thead>
<tr>
<th>Hopemea</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. jacui</td>
<td>whistle</td>
</tr>
<tr>
<td>3. amah</td>
<td>mother</td>
</tr>
<tr>
<td>6. temihu</td>
<td>taro dried</td>
</tr>
<tr>
<td>7. iret-ham</td>
<td>settlement</td>
</tr>
<tr>
<td>8. mamehe</td>
<td>spirit (guardian spirit?)</td>
</tr>
<tr>
<td>9. petimi</td>
<td>tobacco</td>
</tr>
</tbody>
</table>

B.R. Benson had requested of the *Science of Man* editor that the document be returned as soon as possible, in order to send it to the other scholars. (SoM Apr 1961:104) Unfortunately, the document was eventually lost in the mail. (SoM Aug 1961:174)

While at *Science of Man*, it was noted that the document showed
the effects of salt-air or salt-water aging, and that it had the mark of a rusty paper-clip on it. (Ibid) The Science of Man editor was a self-proclaimed professional criminal investigator and hand-writing expert of twenty years. (Ibid) With this background, and with a signature of Hall's already on file, he was able to assert that it was Hall's own signature on the document.

As further supporting evidence, the signature on file was from a letter giving Hall's response to the editor's asking his opinion about the Kon-Tiki theory. (Ibid) The Kon-tiki theory, proposed by Thor Heyerdahl, asserts that Polynesians came from America. (Ibid) Hall's response was that he disbelieved it absolutely. (Ibid)

In any event, however, Hall seems to have played a hoax. But this was not his first. According to his biographer, Robert Roulston, for years Hall succeeded in making the American public believe that his book long poem Oh Millersville! had been written by a little girl from Iowa. (Roulston:103)

Below is an analysis of the Hall list that will strongly argue that it, too, was a hoax.

Analysis

The Problem of Non-Polynesian Phonology:

Many words have been borrowed into the Eastern Polynesian languages from English, French, and other languages of Europe. However, in French Polynesia it is only recently that native speakers have been able to pronounce the non-Polynesian consonants or vowels. Those that succeed best at this are the bilinguals, and those that live in or near the capital city of Papeete.

Many older Polynesian speakers, and many living in the outer islands, are still only able to pronounce the five vowels and the seven or eight consonants of their particular language. In 1922, when Hall's list was supposedly compiled, virtually all small island Tuamotutians could be assumed to be capable of producing only their own phonemes.

The inability to produce sounds from other languages is not unique to Polynesians. If you were to ask an American to pronounce the French word "rue" (street), he would probably pronounce it / uu /, with an "American" /r/, and a rounded back diphthongized /u/. In French, however, it would be pronounced /Ry/, with a uvular /R/, and a non-diphthongized front rounded /Y/.

Polynesian languages are distinct, though, from most languages in that all of their syllables are made up of either a vowel (V), or
a consonant and a vowel (CV). From this, two consonants will always be separated by a vowel, and all words end with a vowel.

The following are examples of how European borrowings have been transformed into Polynesian phonology:

<table>
<thead>
<tr>
<th>English</th>
<th>Polynesian</th>
</tr>
</thead>
<tbody>
<tr>
<td>frying pan</td>
<td>faraipani (Tahitian)</td>
</tr>
<tr>
<td>Merry Christmas</td>
<td>melikalikimaka (Hawaiian)</td>
</tr>
<tr>
<td>Prussian (=German)</td>
<td>purutia (Tahitian)</td>
</tr>
<tr>
<td>rabbit</td>
<td>rapiti (Tahitian)</td>
</tr>
<tr>
<td>sabbath</td>
<td>tapati (Tahitian)</td>
</tr>
</tbody>
</table>

Notice how in the word for "sabbath," the /s/, /b/, and /th/ sounds in English are transformed to Tahitian consonants /t/, /p/, and /t/ respectively to create "tapati." As an example of change to CV syllable form, a vowel is inserted between the consonants /p/ and /r/ in "Prussian," changing the CCV "Pru-" into the Polynesian CVCV "puru-".

In the Hall list (See SoM Apr 1961:104), however, we find the words:

<table>
<thead>
<tr>
<th>Hopemea</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. jacui</td>
<td>whistle</td>
</tr>
<tr>
<td>2. awhi</td>
<td>bad</td>
</tr>
<tr>
<td>3. amah</td>
<td>mother</td>
</tr>
<tr>
<td>5. anghi</td>
<td>a spirit</td>
</tr>
<tr>
<td>7. iret-ham</td>
<td>settlement</td>
</tr>
<tr>
<td>12. nadike, nadehke</td>
<td>pretty</td>
</tr>
</tbody>
</table>

These not only in several cases do not follow the CV syllable form, but they also introduce the following non-Polynesian consonants:

- d
- gh
- j
- wh

Had these words truly been borrowed into a Tuamotutain dialect, they would most likely have become something like the following:

<table>
<thead>
<tr>
<th>Hopemea</th>
<th>Possible Tuamotutian Form(s)</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. jacui</td>
<td>iakui</td>
<td>whistle</td>
</tr>
<tr>
<td>2. awhi</td>
<td>aui, auahi</td>
<td>bad</td>
</tr>
<tr>
<td>3. amah</td>
<td>ama, amaha</td>
<td>mother</td>
</tr>
<tr>
<td>5. anghi</td>
<td>angi, aahi, anaki</td>
<td>a spirit</td>
</tr>
</tbody>
</table>
The Problem of Vocabulary Un-Reattested in Print:

The Tuamotu Islands extend northeast to southeast of Tahiti. At the southern end are the Gambier Islands, considered sometimes formerly to be part of the Tuamotus. (See Tregear:v) The language of the Gambiers, or Mangarevan, is distinct from Tuamotutian (also referred to as Paumotu). Any voyage claimed by Hall to have been made in the Tuamotus would most likely have occurred either in the Tuamotus themselves, or in the Gambiers.

The other two main languages of French Polynesia are Tahitian and Marquisian. Marquisian is a language spoken in the Marquesas Islands, which lie well over 500 miles to the north-east of the closest Tuamotutian atolls. (Hammond:89) Tahiti lies about 200 miles south-west and west of the closest Tuamotus to it. (Ibid) Both the Marquesas islands and the islands around Tahiti are almost exclusively "high" islands, having a mountain in the center. It is very unlikely that they would ever be confused for a Tuamotu island, all the Tuamotu islands being atolls.

The most comprehensive Tuamotutian-English dictionary is the Stimson and Marshall 600 page A Dictionary of Some Tuamotuan Dialects of the Polynesian Language, which Stimson began work on in 1928. (Stimson:8) The most thorough Tahitian dictionary is Jaussen's Grammaire et dictionnaire de la langue tahitienne, first published in 1861. (Jaussen:1) The best dictionary of Mangarevan is Tregear's A Dictionary of Mangareva (or Gambier Islands), published in 1899. Probably the oldest Marquisian dictionary is Boniface Mosblech's Vocabulaire oceanien-francais et francais-oceanien, published in 1843 (This dictionary deals with both Marquesian and Hawaiian).

All the material for these dictionaries was compiled around or before the time that Hall took his voyage to Hopemea. Only four words from these dictionaries even come close to any of the Hall words. The Marquisian "hokea," meaning whistle, could possibly be related to Hopemea's "jacui," also meaning "whistle." Tuamotutian, Tahitian, and Hawaiian all have a word "aui," similar in sound but not in meaning to the Hall word "awhi" meaning "bad". The Marquisian word "tata" means "near" or "to cut," which is quite different from the Hopemea word "tata," which is defined as "fire." The closest comparison in both sound and meaning is found between the Tuamotutian and Mangarevan "angi" meaning "light wind" or the Marquisian "ani" meaning "sky or air" and the Hopemea word "anghi," which Hall defined as "a spirit."

No correspondences are found for any of the other Hall words. It should also be remarked that only for the shortest words of the Hopemea list were there any possible matches, which further implies that chance was the most likely factor involved.
The Problem of Vocabulary Un-Reattested by Native Speakers:

Tuamotutians often travel from atoll to atoll, and are usually competent with the island-specific words used elsewhere in their island chain. A Tuamotutian (Tekehu Munanui, age 48, from Hao), and a Mangarevan (Mr. Puputauki, in his 70's, from Mangareva) were interviewed by telephone in November and December, 1987. In addition, several older Tuamotutians were interviewed in person by George Hilton, a Tuamotutian and Tahitian speaking American currently residing in Papeete, Tahiti. All of the consultants were asked if they had ever heard of any of the words in Hall's list.

Despite trying many different methods of articulation for each word, none of the consultants had ever heard of any of them in any context similar to that written by Hall.

The Problem of Hopemea's Existance:

None of the Polynesian consultants had ever heard of any island called Hopemea, or of any location anywhere in French Polynesia that had that name. It is also not listed in Jean Fages's Cartographic Handbook of French Polynesia (See Fages:32,33), or in Stimson and Marshall's dictionary. (See Stimson:front cover and 39,40)

The Problem of the Pattern of Borrowing:

The words English borrowed from French after the invasion of William the Conqueror fell into the categories of words used for government, law, the military, and the cultured pursuits of the upper class. The words Tahitian borrowed from the English of Captain Cook and the Protestant missionaries fell into the category, understandably, of words for items not yet found in Polynesia. Examples are butter (pata), flour (faraoa), and iron (auri). In general, when words are borrowed from one language to another, there seems to be a pattern.

The only thing that the words on Hall's list seem to have in common, however, is that ten out of the twelve appear in Kalervo Oberg's Indian Tribes of Northern Mato Grosso, Brazil. Oberg's study is not a dictionary of the language of the Camayura tribe he studied, nor does it even contain an organized word list. It is merely an anthropological study of their culture. He happened to include, however, a number of italicized Camayura words throughout, probably in order to spark reader interest. Five of Hall's words (jakui, temiu, iretam, mama'e, and petim) can be found right in the table of contents. (Oberg:iii) The odds for this to be coincidence would be astronomical.

It stands to reason that if Hall were blatant enough to pick five of his words from Oberg's table of contents, the rest of the ten discovered words should probably appear elsewhere in Oberg's book.
as well. Why force a researcher for *Science of Man* to look all the way to the dictionaries of people like de Montoya (*SoM* Aug 1961:173), who who died all the way back in the year 1652 (*Villalta:156*)? A closer examination of Oberg’s work than that performed by the *Science of Man* research revealed that in fact all of the de Montoya dictionary words were to be found somewhere in Oberg as well.

The two Hall words "awhi" (bad) and "nadike/nadehke" (pretty) (*See SoM* Apr 1961:104), however, remain unidentified. They are not found anywhere in Oberg or de Montoya, and are very possibly inventions designed to ward off the suspicion that a too perfect correspondence might arouse.

The following are all of the words found in Oberg that correspond to words from the Hall list:

<table>
<thead>
<tr>
<th>Hopemea</th>
<th>Camayura (Obg. #)</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. jacui</td>
<td>jakui (p.51)</td>
<td>whistle*(H)<em>, flute</em>(O)*</td>
</tr>
<tr>
<td>3. amah</td>
<td>ama (p.43)</td>
<td>mother</td>
</tr>
<tr>
<td>4. pituha</td>
<td>pituha (p.25)</td>
<td>medicine man*(H)<em>, shaman</em>(O)*</td>
</tr>
<tr>
<td>5. anghi</td>
<td>ang (p. 54)</td>
<td>a spirit*(H)<em>, ghost</em>(O)*</td>
</tr>
<tr>
<td>6. temihu</td>
<td>temiu (p. 18)</td>
<td>taro dried*(H)<em>, manioc</em>(O)*</td>
</tr>
<tr>
<td>7. iret-ham</td>
<td>iretam (p. 13)</td>
<td>settlement*(H)<em>, village</em>(O)*</td>
</tr>
<tr>
<td>8. mamahe</td>
<td>mama'e (p. 53)</td>
<td>spirit*(H)<em>, protective spirit</em>(O)*</td>
</tr>
<tr>
<td>9. petimi</td>
<td>petim (p. 24)</td>
<td>tobacco</td>
</tr>
<tr>
<td>10. menuhi</td>
<td>menyu (p. 19)</td>
<td>a yam*(H)<em>, manioc cake</em>(O)*</td>
</tr>
<tr>
<td>11. tata</td>
<td>tata (p. 38)</td>
<td>fire</td>
</tr>
</tbody>
</table>

And so we see that over 80% of Hall’s "Unusual Words" (*Ibid*) can be found among those Oberg happened to include in his anthropological study.

The Problem with Sea-faring Camayura:

Oberg did not do linguistic research on Camayura. However, it is evident that even though Camayura is a language of the Tupi family (*Oberg*:4), it must be different enough that only only four of Hall’s words could be found in de Montoya’s Tupi dictionary. (*SoM* Aug 1961:173) This suggests that not just any Tupi family speaker could have gone to French Polynesia. Rather, it would have had to have been either a speaker of Camayura, or of a language closely related to it.

It is unlikely that any Camayura speaker in post-Conquest times has undertaken such an ocean voyage. For one thing, their tribe is a long way from either the Pacific or the Atlantic Oceans. (*Oberg:viii*) They are also known to have remained very isolated over the years. (*Ibid:6*) And their population in 1953 was a mere 110. (*Ibid:4*) (The total number of Indians in the entire Mato Grosso region was less than 800, divided into four completely distinct language families. (*Ibid*))
The Problem with a Word for Tobacco:

The fact that there is a word in Hall's list for tobacco shows that if borrowing really did occur, it most likely happened in post-Conquest times, because tobacco in all its subspecies was only native to America, the West Indies and Australia. (New Encyclopaedia Britannica:812) It is also now grown in Turkey, the U.S.S.R., India, and some European countries (Ibid), but is still not found as a crop in French Polynesia.

As further evidence, names of Polynesian plants and animals from pre-Conquest times are primarily symbolic. Names of introduced species, however, are very often descriptive and iconic. This is similar to the creation of the French word "pomme-de-terre" (ground-apple = potato) at the introduction of the South American potato in Europe.

The following are names of some native Tahitian species of plants and animals:

<table>
<thead>
<tr>
<th>Tahitian</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ?aute</td>
<td>hibiscus flower</td>
</tr>
<tr>
<td>2. vi</td>
<td>mango</td>
</tr>
<tr>
<td>3. ?iore</td>
<td>rat</td>
</tr>
<tr>
<td>4. pua?a</td>
<td>pig</td>
</tr>
</tbody>
</table>

Notice how the above contrast with the following names for borrowed species:

<table>
<thead>
<tr>
<th>Tahitian</th>
<th>Transliteration</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ?anani-popa?a</td>
<td>white-man's-orange grapefruit</td>
<td></td>
</tr>
<tr>
<td>2. ?umara-putete</td>
<td>&quot;potato&quot;-sweet-potato potato</td>
<td></td>
</tr>
<tr>
<td>3. pua?a-niho</td>
<td>tooth-pig</td>
<td>goat</td>
</tr>
<tr>
<td>4. pua?a-horo-fenua</td>
<td>run-on-ground-pig</td>
<td>horse</td>
</tr>
</tbody>
</table>

The only Tahitian word for tobacco is "?ava?ava," (Jaussen:320) which is simply the adjective "bitter." The Mangarevan word is also "?ava?ava," borrowed from Tahitian. (Puputauki interview) The corresponding word in Tuamotutian is "kavahava" (Hilton:2), and in Marquesian is "kava." (Mosblech:302) The fact that there is no symbolic word for tobacco, therefore, also suggests that tobacco is a relatively recent introduction into the lexicon of French Polynesia.

Feasibility

For the word list to appear to have been made forty years previous, there would have to be some sign of age. A adequate appearance of aging, however, could probably have been produced during the ten years from Hall's death to when the document reached the Science of Man editor. B.R. Benson of General Delivery, San Francisco could have been an
unwitting perpetrator of Hall's hoax in 1961, or more likely performed according to Hall's instructions. After all, the letter did just happen to get "lost in the mail" after the Science of Man editor returned it. (SoM Aug 1961:174)

For Hall to have been able to have played the hoax, he would have had to have had access to Kalervo Oberg's work. Oberg's work was published in 1953 (See bibliography), but Hall died on July 6, 1951. (Roulston:13) The research, however, was carried out from 1947 to 1949. (Oberg:vii) Although Hall spent the last 30 years of his life in French Polynesia (Roulston:11-13), he did make one last trip to the United States in 1950 for a college class reunion. (Ibid:13)

Chronology, therefore, is not a prohibiting factor, although there is still the problem that any copy Hall would have come across would have had to have been an unpublished version. Kalervo Oberg was not a graduate of the college Hall had attended in Massachusetts (Dept. of State:382), and so would have had no apparent reason to have encountered him there. Along with that, there is no readily apparent indication that he was acquainted with Hall in any other capacity.

That Hall would have had to have had access to Oberg's unpublished manuscript seems to be the only troubling feature of this hoax hypothesis. Further research should probably be directed in trying to find a link between the two men. One avenue of inquity, of course, would be to locate General Delivery's Mr. B.R. Benson, if this is still possible.

Conclusion

Why would Hall do it? Perhaps he wanted to play a joke specifically on the Science of Man editor, or maybe on all those who believed in the Kon-tiki theory. The editor had no proof that Hall's list was ever received by any other publication or scholar. (SoM Aug 1961:174) He had, however, a month before Hall's death received his signature, which would later authenticate the hoax document as truly having been written by Hall. (Ibid) Since Hall sent his Kon-tiki letter (with signature) at the editor's request, that editor's initial communication may have been the stimulus for the hoax.

Another theory is that Hall may have wanted to play one last hoax before dying. He knew that he would not live long, because a doctor in Boston had diagnosed him as having a serious coronary ailment during that 1950 trip to the U.S. (Roulston:13) The chance acquisition of an unpublished manuscript might have given him the required inspiration.

Whatever actually occurred, however, thirty-six years after his death it is about time for the posthumous hoax of James Norman Hall to be finally laid to rest.
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Editor (Unknown)

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Oberg, Kalervo

Roulston, Robert

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THE POSTHUMOUS HOAX OF JAMES NORMAN HALL

David F. Meyer
Brigham Young University

Introduction

Some months before April, 1961, a document was sent to the editor of the anthropology magazine Science of Man from a B.R. Benson, of General Delivery, San Francisco. (Science of Man Apr 1961:104) It was stated to have been written by James Norman Hall (Ibid), a co-author of Mutiny on the Bounty, and resident of French Polynesia for more than thirty years. (Roulston:12,13) The document was dated November, 1948, and claimed to be a list of unusual words that Hall had written down on September 3, 1922 while on an island called Hopemea, in the Tuamotu Island chain. (SoM Apr 1961:104)

Hall purportedly had a habit of writing down words at the various islands he travelled to. (Ibid) All of his lists, however, he decided to throw away one day while house-cleaning, with the exception of the list from Hopemea. (Ibid) He saved it because many of its words were unlike any other Polynesian words he had ever encountered. (Ibid) Hall's list is as follows (See SoM Apr 1961:104):

<table>
<thead>
<tr>
<th>Hopemea</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. jacui</td>
<td>whistle</td>
</tr>
<tr>
<td>2. awhi</td>
<td>bad</td>
</tr>
<tr>
<td>3. amah</td>
<td>mother</td>
</tr>
<tr>
<td>4. pituha</td>
<td>medicine man</td>
</tr>
<tr>
<td>5. anghi</td>
<td>a spirit</td>
</tr>
<tr>
<td>6. temihu</td>
<td>taro dried</td>
</tr>
<tr>
<td>7. iret-ham</td>
<td>settlement</td>
</tr>
<tr>
<td>8. mamehe</td>
<td>spirit (guardian spirit?)</td>
</tr>
<tr>
<td>9. petimi</td>
<td>tobacco</td>
</tr>
<tr>
<td>10. menuhi</td>
<td>a yam</td>
</tr>
<tr>
<td>11. tata</td>
<td>fire</td>
</tr>
<tr>
<td>12. nadike, nadehke</td>
<td>pretty</td>
</tr>
</tbody>
</table>

Hall died in 1951 in Arue, Tahiti. (Roulston:13) Somehow the list reached the hands of Mr. Benson, who in around 1961 sent it to Science of Man and other publications and scholars for investigation. (SoM Apr 1961:104)

Science of Man printed the list in its April 1961 issue. (Ibid) A follow up article then appeared six months later in the August issue. (See SoM Aug 1961:173,174) In this article, Dr. Wallace
L. Chafe, linguist on staff of the Bureau of American Ethnology, showed that four of the words came from Tupi, an Amazonian Indian language. (Ibid:173) He found these words in P. Antonio Ruiz de Montoya's *Arte de la Lengua Guaraní o más bien Tupí* (Vienna, 1876). The four words are the following (See SoM Aug 1961:173):

<table>
<thead>
<tr>
<th>Tupi</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. pitu</td>
<td>to annoint</td>
</tr>
<tr>
<td>5. anga</td>
<td>spirit</td>
</tr>
<tr>
<td>9. pety, petyma, pitima</td>
<td>tobacco</td>
</tr>
<tr>
<td>11. tata</td>
<td>fire</td>
</tr>
</tbody>
</table>

which compare to the following words in Hall's list:

<table>
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<tr>
<th>Hopemea</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. pituha</td>
<td>medicine man</td>
</tr>
<tr>
<td>5. anghi</td>
<td>a spirit</td>
</tr>
<tr>
<td>9. petimi</td>
<td>tobacco</td>
</tr>
<tr>
<td>11. tata</td>
<td>fire</td>
</tr>
</tbody>
</table>

The editor of *Science of Man* himself found one of Chafe's words and five other of Hall's words in Kalervo Oberg's Indian Tribes of Northern Mato Grosso, Brazil. (Ibid) The language in Oberg's book was Camayura, a language of the Tupi family. (Oberg:4) The Oberg words as listed in the *Science of Man* article are as follows (See SoM Aug 1961:173):

<table>
<thead>
<tr>
<th>Tupi</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. jakui</td>
<td>flute</td>
</tr>
<tr>
<td>3. ama</td>
<td>mother</td>
</tr>
<tr>
<td>6. temiu</td>
<td>manioc</td>
</tr>
<tr>
<td>7. iretam</td>
<td>village</td>
</tr>
<tr>
<td>8. mama'Ve</td>
<td>spirit</td>
</tr>
<tr>
<td>9. petim</td>
<td>tobacco</td>
</tr>
</tbody>
</table>

The corresponding words in Hall's list were:

<table>
<thead>
<tr>
<th>Hopemea</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. jacui</td>
<td>whistle</td>
</tr>
<tr>
<td>3. amah</td>
<td>mother</td>
</tr>
<tr>
<td>6. temihu</td>
<td>taro dried</td>
</tr>
<tr>
<td>7. iret-ham</td>
<td>settlement</td>
</tr>
<tr>
<td>8. mamahe</td>
<td>spirit (guardian spirit?)</td>
</tr>
<tr>
<td>9. petimi</td>
<td>tobacco</td>
</tr>
</tbody>
</table>

B.R. Benson had requested of the *Science of Man* editor that the document be returned as soon as possible, in order to send it to the other scholars. (SoM Apr 1961:104) Unfortunately, the document was eventually lost in the mail. (SoM Aug 1961:174)

While at *Science of Man*, it was noted that the document showed
the effects of salt-air or salt-water aging, and that it had the mark of a rusty paper-clip on it. (Ibid) The Science of Man editor was a self-proclaimed professional criminal investigator and hand-writing expert of twenty years. (Ibid) With this background, and with a signature of Hall's already on file, he was able to assert that it was Hall's own signature on the document.

As further supporting evidence, the signature on file was from a letter giving Hall's response to the editor's asking his opinion about the Kon-Tiki theory. (Ibid) The Kon-tiki theory, proposed by Thor Heyerdahl, asserts that Polynesians came from America. (Ibid) Hall's response was that he disbelieved it absolutely. (Ibid)

In any event, however, Hall seems to have played a hoax. But this was not his first. According to his biographer, Robert Roulston, for years Hall succeeded in making the American public believe that his book long poem Oh Millersville! had been written by a little girl from Iowa. (Roulston:103)

Below is an analysis of the Hall list that will strongly argue that it, too, was a hoax.

Analysis

The Problem of Non-Polynesian Phonology:

Many words have been borrowed into the Eastern Polynesian languages from English, French, and other languages of Europe. However, in French Polynesia it is only recently that native speakers have been able to pronounce the non-Polynesian consonants or vowels. Those that succeed best at this are the bilinguals, and those that live in or near the capital city of Papeete.

Many older Polynesian speakers, and many living in the outer islands, are still only able to pronounce the five vowels and the seven or eight consonants of their particular language. In 1922, when Hall's list was supposedly compiled, virtually all small island Tuamotutians could be assumed to be capable of producing only their own phonemes.

The inability to produce sounds from other languages is not unique to Polynesians. If you were to ask an American to pronounce the French word "rue" (street), he would probably pronounce it / uu /, with an "American" /r/, and a rounded back diphthongized /u/. In French, however, it would be pronounced /Ry/, with a uvular /R/, and a non-diphthongized front rounded /y/.

Polynesian languages are distinct, though, from most languages in that all of their syllables are made up of either a vowel (V), or
A consonant and a vowel (CV). From this, two consonants will always be separated by a vowel, and all words end with a vowel.

The following are examples of how European borrowings have been transformed into Polynesian phonology:

<table>
<thead>
<tr>
<th>English</th>
<th>Polynesian</th>
</tr>
</thead>
<tbody>
<tr>
<td>frying pan</td>
<td>faraipani (Tahitian)</td>
</tr>
<tr>
<td>Merry Christmas</td>
<td>melikalikimaka (Hawaiian)</td>
</tr>
<tr>
<td>Prussian (=German)</td>
<td>purutia (Tahitian)</td>
</tr>
<tr>
<td>rabbit</td>
<td>rapiti (Tahitian)</td>
</tr>
<tr>
<td>sabbath</td>
<td>tapati (Tahitian)</td>
</tr>
</tbody>
</table>

Notice how in the word for "sabbath," the /s/, /b/, and /th/ sounds in English are transformed to Tahitian consonants /t/, /p/, and /t/ respectively to create "tapati." As an example of change to CV syllable form, a vowel is inserted between the consonants /p/ and /r/ in "Prussian," changing the CCV "Pru-" into the Polynesian CVCV "puru-." 

In the Hall list (See SoM Apr 1961:104), however, we find the words:

<table>
<thead>
<tr>
<th>Hopemea</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. jacui</td>
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<td>settlement</td>
</tr>
<tr>
<td>12. nadike, nadehke</td>
<td>pretty</td>
</tr>
</tbody>
</table>

These not only in several cases do not follow the CV syllable form, but they also introduce the following non-Polynesian consonants:

- d
- gh
- j
- wh

Had these words truly been borrowed into a Tuamotutain dialect, they would most likely have become something like the following:

<table>
<thead>
<tr>
<th>Hopemea</th>
<th>Possible Tuamotutian Form(s)</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. jacui</td>
<td>iakui</td>
<td>whistle</td>
</tr>
<tr>
<td>2. awhi</td>
<td>aui, auahi</td>
<td>bad</td>
</tr>
<tr>
<td>3. amah</td>
<td>ama, amaha</td>
<td>mother</td>
</tr>
<tr>
<td>5. anghi</td>
<td>angi, a ahi, anaki</td>
<td>a spirit</td>
</tr>
</tbody>
</table>
The Problem of Vocabulary Un-Reattested in Print:

The Tuamotu Islands extend northeast to southeast of Tahiti. At the southern end are the Gambier Islands, considered sometimes formerly to be part of the Tuamotus. (See Tregear:iv) The language of the Gambiers, or Mangarevan, is distinct from Tuamotutian (also referred to as Paumotu). Any voyage claimed by Hall to have been made in the Tuamotus would most likely have occurred either in the Tuamotus themselves, or in the Gambiers.

The other two main languages of French Polynesia are Tahitian and Marquisian. Marquisian is a language spoken in the Marquesas Islands, which lie well over 500 miles to the north-east of the closest Tuamotutian atolls. (Hammond:89) Tahiti lies about 200 miles south-west and west of the closest Tuamotus to it. (Ibid) Both the Marquesas islands and the islands around Tahiti are almost exclusively "high" islands, having a mountain in the center. It is very unlikely that they would ever be confused for a Tuamotu island, all the Tuamotu islands being atolls.

The most comprehensive Tuamotutian-English dictionary is the Stimson and Marshall 600 page A Dictionary of Some Tuamotuan Dialects of the Polynesian Language, which Stimson began work on in 1928. (Stimson:8) The most thorough Tahitian dictionary is Jaussen's Grammaire et dictionnaire de la langue tahitienne, first published in 1861. (Jaussen:1) The best dictionary of Mangarevan is Tregear's A Dictionary of Mangareva (or Gambier Islands), published in 1899. Probably the oldest Marquisian dictionary is Boniface Mosblech's Vocabulaire oceanien-francais et francais-oceanien, published in 1843 (This dictionary deals with both Marquesian and Hawaiian).

All the material for these dictionaries was compiled around or before the time that Hall took his voyage to Hopemea. Only four words from these dictionaries even come close to any of the Hall words. The Marquisian "hokea," meaning whistle, could possibly be related to Hopemea's "jacui," also meaning "whistle." Tuamotutian, Tahitian, and Hawaiian all have a word "aui," similar in sound but not in meaning to the Hall word "awhi" meaning "bad". The Marquisian word "tata" means "near" or "to cut," which is quite different from the Hopemea word "tata," which is defined as "fire." The closest comparison in both sound and meaning is found between the Tuamotutian and Mangarevan "angi" meaning "light wind" or the Marquisian "ani" meaning "sky or air" and the Hopemea word "anghi," which Hall defined as "a spirit."

No correspondences are found for any of the other Hall words. It should also be remarked that only for the shortest words of the Hopemea list were there any possible matches, which further implies that chance was the most likely factor involved.
The Problem of Vocabulary Un-Reattested by Native Speakers:

Tuamotutians often travel from atoll to atoll, and are usually competent with the island-specific words used elsewhere in the their island chain. A Tuamotutian (Tekehu Munanui, age 48, from Hao), and a Mangarevan (Mr. Puputauki, in his 70's, from Mangareva) were interviewed by telephone in November and December, 1987. In addition, several older Tuamotutians were interviewed in person by George Hilton, a Tuamotutian and Tahitian speaking American currently residing in Papeete, Tahiti. All of the consultants were asked if they had ever heard of any of the words in Hall's list.

Despite trying many different methods of articulation for each word, none of the consultants had ever heard of any of them in any context similar to that written by Hall.

The Problem of Hopemea's Existance:

None of the Polynesian consultants had ever heard of any island called Hopemea, or of any location anywhere in French Polynesia that had that name. It is also not listed in Jean Fages's Cartographic Handbook of French Polynesia (See Pages:32,33), or in Stimson and Marshall's dictionary. (See Stimson:front cover and 39,40)

The Problem of the Pattern of Borrowing:

The words English borrowed from French after the invasion of William the Conqueror fell into the categories of words used for government, law, the military, and the cultured pursuits of the upper class. The words Tahitian borrowed from the English of Captain Cook and the Protestant missionaries fell into the category, understandably, of words for items not yet found in Polynesia. Examples are butter (pata), flour (faraoa), and iron (auri). In general, when words are borrowed from one language to another, there seems to be a pattern.

The only thing that the words on Hall's list seem to have in common, however, is that ten out of the twelve appear in Kalervo Oberg's Indian Tribes of Northern Mato Grosso, Brazil. Oberg's study is not a dictionary of the language of the Camayura tribe he studied, nor does it even contain an organized word list. It is merely an anthropological study of their culture. He happened to include, however, a number of italicized Camayura words throughout, probably in order to spark reader interest. Five of Hall's words (jakui, temiu, iretam, mama'e, and petim) can be found right in the table of contents. (Oberg:iii) The odds for this to be coincidence would be astronomical.

It stands to reason that if Hall were blatant enough to pick five of his words from Oberg's table of contents, the rest of the ten discovered words should probably appear elsewhere in Oberg's book.
as well. Why force a researcher for Science of Man to look all the way to the dictionaries of people like de Montoya (SoM Aug 1961:173), who who died all the way back in the year 1652 (Villalta:156)? A closer examination of Oberg's work than that performed by the Science of Man research revealed that in fact all of the de Montoya dictionary words were to be found somewhere in Oberg as well.

The two Hall words "awhi" (bad) and "nadike/nadehke" (pretty) (See SoM Apr 1961:104), however, remain unidentified. They are not found anywhere in Oberg or de Montoya, and are very possibly inventions designed to ward off the suspicion that a too perfect correspondance might arouse.

The following are all of the words found in Oberg that correspond to words from the Hall list:

<table>
<thead>
<tr>
<th>Hopemera</th>
<th>Camayura (Obg. #)</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. jacui</td>
<td>jakui (p.51)</td>
<td>whistle(H), flute(O)</td>
</tr>
<tr>
<td>3. amah</td>
<td>ama (p.43)</td>
<td>mother</td>
</tr>
<tr>
<td>4. pituha</td>
<td>pituha (p.25)</td>
<td>medicine man(H), shaman(O)</td>
</tr>
<tr>
<td>5. anghi</td>
<td>ang (p. 54)</td>
<td>a spirit(H), ghost(O)</td>
</tr>
<tr>
<td>6. temihu</td>
<td>temiu (p. 18)</td>
<td>taro dried(H), manioc(O)</td>
</tr>
<tr>
<td>7. iret-ham</td>
<td>iretam (p. 13)</td>
<td>settlement(H), village(O)</td>
</tr>
<tr>
<td>8. mamahe</td>
<td>mama'e (p. 53)</td>
<td>spirit(H), protective spirit(O)</td>
</tr>
<tr>
<td>9. petimi</td>
<td>petim (p. 24)</td>
<td>tobacco</td>
</tr>
<tr>
<td>10. menuhi</td>
<td>menyu (p. 19)</td>
<td>a yam(H), manioc cake(O)</td>
</tr>
<tr>
<td>11. tata</td>
<td>tata (p. 38)</td>
<td>fire</td>
</tr>
</tbody>
</table>

And so we see that over 80% of Hall's "Unusual Words" (Ibid) can be found among those Oberg happened to include in his anthropological study.

The Problem with Sea-faring Camayura:

Oberg did not do linguistic research on Camayura. However, it is evident that even though Camayura is a language of the Tupi family (Oberg:4), it must be different enough that only only four of Hall's words could be found in de Montoya's Tupi dictionary. (SoM Aug 1961:173) This suggests that not just any Tupi family speaker could have gone to French Polynesia. Rather, it would have had to have been either a speaker of Camayura, or of a language closely related to it.

It is unlikely that any Camayura speaker in post-Conquest times has undertaken such an ocean voyage. For one thing, their tribe is a long way from either the Pacific or the Atlantic Oceans. (Oberg:viii) They are also known to have remained very isolated over the years. (Ibid:6) And their population in 1953 was a mere 110. (Ibid:4) (The total number of Indians in the entire Mato Grosso region was less than 800, divided into four completely distinct language families. (Ibid))
The Problem with a Word for Tobacco:

The fact that there is a word in Hall's list for tobacco shows that if borrowing really did occur, it most likely happened in post-Conquest times, because tobacco in all its subspecies was only native to America, the West Indies and Australia. (New Encyclopaedia Britannica:812) It is also now grown in Turkey, the U.S.S.R., India, and some European countries (Ibid), but is still not found as a crop in French Polynesia.

As further evidence, names of Polynesian plants and animals from pre-Conquest times are primarily symbolic. Names of introduced species, however, are very often descriptive and iconic. This is similar to the creation of the French word "pomme-de-terre" (ground-apple = potato) at the introduction of the South American potato in Europe.

The following are names of some native Tahitian species of plants and animals:

<table>
<thead>
<tr>
<th>Tahitian</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>?aute</td>
<td>hibiscus flower</td>
</tr>
<tr>
<td>vi</td>
<td>mango</td>
</tr>
<tr>
<td>?ioere</td>
<td>rat</td>
</tr>
<tr>
<td>pua?a</td>
<td>pig</td>
</tr>
</tbody>
</table>

Notice how the above contrast with the following names for borrowed species:

<table>
<thead>
<tr>
<th>Tahitian</th>
<th>Transliteration</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>?anani-popap?a</td>
<td>white-man's-orange</td>
<td>grapefruit</td>
</tr>
<tr>
<td>?umara-putete</td>
<td>&quot;potato&quot;-sweet-potato</td>
<td>potato</td>
</tr>
<tr>
<td>pua?a-niho</td>
<td>tooth-pig</td>
<td>goat</td>
</tr>
<tr>
<td>pua?a-horo-fenua</td>
<td>run-on-ground-pig</td>
<td>horse</td>
</tr>
</tbody>
</table>

The only Tahitian word for tobacco is "?ava?ava," (Jaussen:320) which is simply the adjective "bitter." The Mangarevan word is also "?ava?ava," borrowed from Tahitian. (Puputauki interview) The corresponding word in Tuamotutian is "kavahava" (Hilton:2), and in Marquesian is "kava." (Mosblech:302) The fact that there is no symbolic word for tobacco, therefore, also suggests that tobacco is a relatively recent introduction into the lexicon of French Polynesia.

Feasibility

For the word list to appear to have been made forty years previous, there would have to be some sign of age. A adequate appearance of aging, however, could probably have been produced during the ten years from Hall's death to when the document reached the Science of Man editor.

B.R. Benson of General Delivery, San Francisco could have been an
unwitting perpetrator of Hall's hoax in 1961, or more likely performed according to Hall's instructions. After all, the letter did just happen to get "lost in the mail" after the *Science of Man* editor returned it. (SoM Aug 1961:174)

For Hall to have been able to have played the hoax, he would have had to have had access to Kalervo Oberg's work. Oberg's work was published in 1953 (See bibliography), but Hall died on July 6, 1951. (Roulston:13) The research, however, was carried out from 1947 to 1949. (Oberg:vii) Although Hall spent the last 30 years of his life in French Polynesia (Roulston:11-13), he did make one last trip to the United States in 1950 for a college class reunion. (Ibid:13)

Chronology, therefore, is not a prohibiting factor, although there is still the problem that any copy Hall would have come across would have had to have been an unpublished version. Kalervo Oberg was not a graduate of the college Hall had attended in Massachusetts (Dept. of State:382), and so would have had no apparent reason to have encountered him there. Along with that, there is no readily apparent indication that he was acquainted with Hall in any other capacity.

That Hall would have had to have had access to Oberg's unpublished manuscript seems to be the only troubling feature of this hoax hypothesis. Further research should probably be directed in trying to find a link between the two men. One avenue of inquity, of course, would be to locate General Delivery's Mr. B.R. Benson, if this is still possible.

Conclusion

Why would Hall do it? Perhaps he wanted to play a joke specifically on the *Science of Man* editor, or maybe on all those who believed in the Kon-tiki theory. The editor had no proof that Hall's list was ever received by any other publication or scholar. (SoM Aug 1961:174) He had, however, a month before Hall's death received his signature, which would later authenticate the hoax document as truly having been written by Hall. (Ibid) Since Hall sent his Kon-tiki letter (with signature) at the editor's request, that editor's initial communication may have been the stimulus for the hoax.

Another theory is that Hall may have wanted to play one last hoax before dying. He knew that he would not live long, because a doctor in Boston had diagnosed him as having a serious coronary ailment during that 1950 trip to the U.S. (Roulston:13) The chance acquisition of an unpublished manuscript might have given him the required inspiration.

Whatever actually occurred, however, thirty-six years after his death it is about time for the posthumous hoax of James Norman Hall to be finally laid to rest.
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Mosblech, Boniface

Oberg, Kalervo

Roulston, Robert

Stimson, J.F. and Donald S. Marshall
Tregear, Edward

Villalta, Blanco
Open any of Beckett's texts, and the first thing you realize is his erudite, failing clowns have been thrown into an existence they neither asked for nor understand: Murphy tied naked to a wooden rocker, Watt cast off the evening tram looking more like a roll of carpet than a man, Molloy lying in Mother's bed wondering how he got there, or perhaps best known, Vladimir and Estragon, waiting for Godot. In Heideggerian terms, Beckett's characters are thrown into the inauthentic existence of the they-self. As such, they wait for a disclosing of authenticity, but when anxiety produces the opening, Beckett's characters lack the courage to enter into authenticity. Failing to become authentic, they wait in stasis, always on the brink of choosing individual action, yet always incapable of doing so. Valdimir, for example, admits both the futility and the comfort of inauthentic existence when he ponders whether or not he should assist Pozzo: "Let us not waste our time in idle discourse," he rants in hauntingly Heideggerian language, "Let us do something, while we have the chance! It is not every day that we are needed" (WFG 51). But just before committing himself to action, he falls back on his plea: "Not that we personally are needed. Others would meet the case equally well, if not better. To all mankind they were addressed, those cries for help still ringing in our ears! But at this moment, at this moment of time, all mankind is us, whether we like it or not" (WFG 51). Here the others Vladimir turns his back on are the 'they' of inauthentic existence.

To become authentic, Beckett's characters, like Heidegger's Dasein, must learn to enact their own individual voice against the collective voice of the 'they.' In Being and Time Heidegger states:

If Dasein is to be able to get brought back from this lostness of failing to hear itself, and if this is to be done through itself, then it must first be able to find itself—to find itself as something which has failed to hear itself, and which fails to hear in that it listens away to the 'they.' (315-16)

Learning to listen away from the collective voice "has the character of appeal to Dasein by calling it to its ownmost potentiality-for-Being-its-self" (BT 314). But Being-in-its-self offers Beckett's characters a freedom they haven't the courage to accept. They're too busy analyzing the various possibilities to ever choose one of them. And like Vladimir, they fear choosing one action will forever deny the choice of other actions. Thus the Beckett clown-tramp waits, a la Hamm, always on the verge of enacting the "last million last moments" (Endgame 83). "I can't go on, I'll go on," concludes the Unnamable, taking Charlie Brown wishy-washiness to its extreme, and after 120 pages of trying to decide what to do, he sinks back into the inauthentic existence of waiting.

So what's to be done? Why can't Beckett's characters rise from the they-self to the I-self? One answer is found by realizing that, on one level of mis-reading, Beckett and Heidegger are exploring parallel parables of Being.
Both Beckett's characters and Heidegger's Dasein are fundamentally Beings-in-the-world. As such, they are subject to anxiety, a basic state-of-mind capable of opening possibilities of authentic action. But Beckett's characters fail to grasp onto this offered freedom, thus they remain waiting in a death-in-life, inauthentic existence.

As mentioned, both Beckett's characters and Dasein exist fundamentally as Beings-thrown-into-the-world. In Being and Time Heidegger clearly argues that Being-in is "the formal existential expression for the Being of Dasein, which has Being-in-the-world as its essential state" (BT 80). By definition, Dasein exists, stands-out-from, other Beings and entities in the world. Note how the opening lines of any number of Beckett's texts confirm awareness of location and Being-in-the-world. Molloy: "I am in my mother's room. It is I who live there now" (TN 1). Molone Dies: "I shall soon be quite dead at last in spite of it all. Perhaps next month" (TN 179). The Unnamable: "Where now? Who now? When now? Unquestioning. I, say I" (TN 291). Endgame likewise begins with Clov situating the there-ness of his Being: "I can't be punished any more. I'll go now to my kitchen, ten feet, by ten feet, by ten feet, and wait for him to whistle me" (1-2). This acute awareness of presence continues into Beckett's latest dramatic pieces such as "What Where." Here five grey cloaked characters chant variations of

We are the last five.
In the present as were we still.
It is spring.
Time passes.
First without words.
I switch on. (Collected Shorter Plays 310)

This is not merely an exhibition of ego. Like Dasein, Beckett's characters exist in a non-Cartesian world, and lacking the subject-object schizophrenia, both desire knowledge of how they relate alongside other Beings and objects in the world. According to Heidegger,

When Dasein directs itself towards something and grasps it, it does not somehow first get out of an inner sphere in which it has been proximally encapsulated, but its primary kind of Being is such that it is always 'outside' alongside entities which it encounters and which belong to a world already discovered. (BT 89)

And he goes on to argue that "even in this 'Being-outside' alongside the object, Dasein is still 'inside'" (BT 89).

The setting of Endgame is a dramatic rendering of Dasein existing outside-alongside, yet inside, the world. Even a dense reader would, with a little thought, recognize the stage setting as the interior of a skull—presumably Hamm's:

Bare interior.
Grey light.
Left and right back, high up, two small windows, curtains drawn.
Front right, a door. (1)

Within this space sits "Front left, touching each other, covered with an old sheet, two ashbins" (1). These ashbins house Hamm's parents, Nagg and Nell, who exist and pass out of existence alongside each other. Prior to his opening speech, Clov stiffly staggers from window to window—eye to eye. He too exists alongside, yet inside, the world of Hamm's perception. Clov is a res cogito, a project of Hamm's imagining, but simultaneously a res extensio, a Being-with-location. In Clov, the Cartesian split dissolves, for Clov exists
as does Dasein. His location is painfully represented by his inability to sit down and become, as Hamm prophesies, "a speck in the void, in the dark, for ever, like me... a little bit of grit in the middle of the steppe" (36).

The things within and without the setting of Endgame function as equipment in the Heideggerian sense of the term. Heidegger translates "things" from the Greek term meaning "that which one has to do with in one's concernful dealings" (BT 96). Such equipment is encountered through "assignment or reference of something to something" (BT 97). Further, "equipment—in accordance with its equipmentality—always is in terms of its belonging to other equipment" (BT 97). For Heidegger, equipment exists in two forms: the present-at-hand and the ready-to-hand. Because Dasein encounters the world through concernful dealings with—care, ready-to-hand is its primary way of encountering equipment. When Dasein encounters equipment, the world discloses meaning, and for Heidegger, this announcement, opening, unconcealment, is truth.

Beckett's characters sadly, have some difficulty distinguishing between the ready-to-hand and the present-at-hand. Thus they rarely open into a true-ing space wherein authenticity can be enacted. Because Clov is never able to grasp onto external equipment, the world around him is unable to open into meaning, and he remains stuck between authenticity and inauthenticity. When Clov first peers through the telescope at the equipment alongside him, he feels "a multitude... in transports... of joy" (29). But "after reflection," that is, after analysis that robs readiness from presence, "(He gets up on the ladder, turns the telescope on the without) Let's see. (He looks, moving the telescope.) Zero... (he looks)... Zero... (he looks)... and Zero" (29). Here he does what one does—looks and sees, but not what the individual does—looks and grasps. Then, still looking and still analyzing, Clov sees only present-at-hand entities, equipment incapable of having a world: "All gone"—gulls, waves, sun (30-31).

Because the present-at-hand does not disclose individual meanings, the inauthentic world Clov observes fails to mean: "Mean something! You and I, mean something!" (He briefly laughs.) Ah, that's a good one!" (33).

Regarding Being-in-the-world, Heidegger notes that "the ready-to-hand is always understood in terms of a totality of involvements" (BT 191). But the present-at-hand breaks from this involvement in much the same way the world breaks down for Clov in the passage cited above: "When we merely stare at something, our just-having-it-before-us lies before us as a failure to understand it" (BT 190). In a conversation with Georges Duthuit, Beckett comments on the present-at-hand world Clov observes:

All have turned wisely tail, before the ultimate penury, back to the more wisely where destitute virtuous mothers steal bread for their starving brats. There is more than a difference of degree between being short, short of the world, short of self, and being without these esteemable commodities. (Proust 122)

Beckett's talk of "being short of the world," as it refers to his characters' loosing grip on the equipment of the world, parallels Heidegger's talk of anxiety. Heidegger introduces this concept into Being and Time by recalling that Being-in-the-world is a basic state of Dasein. That in the face of...
which one has anxiety is Being-in-the-world as such" (230). In anxiety, equipment flees out of reach. This is part of what Clov experiences when he views his world with the telescope, for in this state-of-mind, Dasein flees into the inauthentic existence of the 'they'.

What is the difference phenomenally between that in the face of which anxiety is anxious and that in the face of which fear is afraid? That in the face of which one has anxiety is not an entity within-the-world. Thus it is essentially incapable of having an involvement. (BT 231)

Here Heidegger's philosophy is tangential to Beckett's fiction. And who writes of one's lack of involvement with the world more convincingly than Beckett, whose characters are in a perpetual state of fleeing from Nothing?

Malone Dies is perhaps Beckett's most sustained portrait of anxiety. Here Beckett presents two parallel views of Dasein in anxiety, Dasein forever falling into inauthentic existence. In the novel, Malone tells the story of Sapo-Macmann, an autobiographical story which disintegrates as Malone himself disintegrates from anxiety.

Malone initially sees himself as free, as a Being-with-possibility: "This time I know where I am going, it is no longer the ancient night, the recent night. Now it is a game, I am going to play. I never knew how to play, till now" (TN 180). This accords with anxiety which makes manifest in Dasein its Being towards its ownmost potentiality-for-Being—that is, its Being-free for the freedom of choosing itself and taking hold of itself. Anxiety brings Dasein face to face with its Being-free for (propensio in . . .) the authenticity of its Being, and for this authenticity as a possibility which it always is. (BT 232)

Yet Malone is unable to bare such freedom—acting is too risky—he might decide he should have done something else in the future: "But it was not long before I found myself alone in the dark. That is why I gave up trying to play and took myself for ever shapelessness and speechlessness, incurious wondering, darkness, long stumbling with outstretched arms, hiding" (TN 180). Sapo-Macmann is born from this paradoxical fleeing into inauthenticity to ward off the freedom of authenticity. Malone looses himself in the identity of Sapo, his created doppelganger through whom he views the authenticity existence discloses.

The young Sapo is thus capable of experiencing the world as ready-to-hand: But he loved the flight of the hawk and could distinguish it from all others. He would stand rapt, gazing at the long pernings, the quivering poise, the wings lifted for the plummet drop, the wild reascent, fascinated by such extremes of need, of pride, of patience and solitude. (TN 191).

The needs of the hawk mirror Sapo's own needs, and provide the courage to rise out of inauthenticity. Malone's editorial comment is hence a vain attempt to justify the inauthenticity to which he has resigned himself:

And a little less well endowed with strength and courage he too would have abandoned and despaired of ever knowing what manner of being he was, and how he was going to live, and lived vanquished, blindly, in a mad world, in the midst of strangers. (TN 193)

By telling Sapo's story, Malone hopes to rise out of his own inaction and to find his individual voice. Sapo's story thus becomes a story of anxiety,
"for anxiety individualizes... and ... brings Dasein back from its falling, and makes manifest to it that authenticity and inauthenticity are possibilities of its Being" (BT 235). As he writes Sapo's story, Malone feels a change, a reawakening: "It is because it is no longer I, I must have said so long ago, but another whose life is just beginning" (TN 207-08). This life just beginning is the authentic existence Malone is waking to. A feeling characteristic of anxiety, a fleeing "in the face of. It does not flee in the face of entities within the world; these are precisely what it flees towards--as entities alongside which our concern, lost in the 'they,' can dwell in tranquillized familiarity" (BT 234).

The familiarity which mitigates the uncanniness of anxiety is realized by Sapo's stay with the Lamberts. The Lamberts are as close as Beckett comes to depicting home life. And while Sapo dwells with them, he is treated to all the homey comforts of rural living--a lazy mule, lentil soup, rabbit killing, and at night, incest. Until the No-thing returns and Sapo becomes terrified and flees. And the family dissolves into an uncanny chaos: Yes, an old foetus, that's what I am now, hoar and impotent, mother is done for, I've rotted her, she'll drop me with the help of gangrene, perhaps papa is at the party too, I'll land headforemost mewling in the charnel-house, not that I'll mewl, not worth it. (TN 225)

In History of the Concept of Time Heidegger describes the uncanniness Sapo experiences while at the Lambert's home:

One no longer feels at home in his most familiar environment, the one closest to him; but this does not come about in such a way that a definite region in the hitherto known and familiar world breaks down in its orientation, nor such that one is not at home in the surroundings in which one now finds himself, but instead in other surroundings. On the contrary, in dread, being-in-the-world is totally transformed into a 'not at home' purely and simply. (289)

In this state of anxiety, the words and the things begin to flee from Malone. He drops his pencil, and he can't rise from his bed to retrieve it. His stick falls away from him, and his chamber-pot-cum-breakfast-bowl disappears. Heidegger observes that "the leveling and the disappearance of Dasein in the Anyone is a falling apart of Dasein which is covered up by the public and everyday character of the Anyone" (HT 282). Malone's falling apart is so complete that he begins to fall out of Being-in-the-world. That is, he begins to loose all ready-to-hand entities: "Strange, I don't feel my feet any more, my feet feel nothing any more, and a mercy it is" (TN 234). Ultimately language, which for Heidegger is "the House of Being," begins to flee from Malone's grasp (Basic Writings 122):

But my fingers too write in other latitudes and the air that breathes, through my pages and turns them without my knowing, when I doze off, so that the subject falls far from the verb and the object lands somewhere in the void, is not the air of this second-last abode, and a mercy it is. (TN 234)

Heidegger explicates this progression into deep anxiety as a dread of death: This experience can, though it does not have too--just as all possibilities of being come under a 'can'--assume a distinctive sense in death or, more precisely, in dying. We then speak of the dread of death, which must be kept altogether distinct from the fear of death, for it is not fear in the face of death but dread as a disposition to the naked being-in-the-world, to pure Dasein. (HT 291)

Thus Malone dies.
In the dread of death, Malone falls from his vision of authentic existence as opened by anxiety, and sinks into inauthenticity. Thus Sapo disappears into the 'they', and looses his individuality. When he returns, he returns in the guise of an-other, Macmann. In anxiety Sapo surrenders so deeply into the herd that he becomes hidden from his true self and from his creator, Malone, whose own individuality dissolves into the story he tells:

But suddenly all begins to rage and roar again, you are lost in forests of high threshing ferns or whirled far out on the face of wind-swept wastes, till you begin to wonder if you have not died without knowing and gone to hell or been born again into an even worse place than before. (227)

As Malone-Macmann die, they relinquish themselves to complete inauthenticity: "I speak of morning and afternoon and of such and such an hour, if you simply must speak of people you simply must put yourself in their place, it is not difficult" (TN 270). Their fall is all the more poignant because both have experienced the anxiety capable of disclosing authenticity. For Heidegger, anxiety liberates "from possibilities which 'count for nothing' [ "nichtigen" ], and lets him become free for those which are authentic" (BT 395). Having denied the freedom anxiety offers, Malone-Macmann can only wait, inauthentically, and ponder the vision of authenticity.

Beckett's characters ultimately choose this death-in-life waiting by default, since they lack the courage to act. Hence the refrain in Waiting for Godot:

Estragon: Let's go.
Vladimir: We can't.
Estragon: Why not.
Vladimir: We're waiting for Godot. (10)

In Being and Time, Heidegger makes clear that "the inauthentic future has the character of awaiting" (386). In a footnote, Macquarrie and Robinson point out the subtleties of the German term for awaiting, des Gewartigens: "While the verb 'await' has many advantages as an approximation to 'gewartigen', it is a bit too colourless and fails to bring out the important idea of being prepared to reckon with that which one awaits" (BT 386 n.4). This "being prepared to reckon with" is precisely what Beckett's characters lack. Like Vladimir and Estragon, they are too caught up in futile analysis and self-introspection to commit themselves to the future by acting. Thus they wait, forever poised between the thought and the act. For Heidegger waiting is how we comport ourselves toward the possibility of action, an action authenticity can take up. But this is what Beckett's characters fail to do. For them, waiting never ends, and they remain sunk within a plethora of possible decisions, but impossible choices. Beckett's characters no longer hope for authenticity, but wait, with no intent to act.

The Unnamable, more than any other of Beckett's failed characters, waits in vain for the actualization of action:

And there is nothing for it but to wait for the end, nothing but for the end to come, and at the end all will be the same, at the end at last perhaps all the same as before, as all that livelong time when there was nothing for it but to get to the end, or fly from it, or wait for it, trembling or not, resigned or not, the nuisance of doing over, and of being, same thing, for one who could never do, never be. (TN 370)
The Unnamable can never actualize possibility, can never end. He has resigned himself to inauthenticity and fails to accept the possibility-for-freedom disclosed in anxiety. In the third paragraph of his soliloquy he equates his Being with the they-self by becoming other characters in Beckett's fiction: "To tell the truth I believe they are all here, at least from Murph on, I believe we are all here, but so far I have only seen Malone" (TN 293). And recall that the only place the Unnamable is, is in his own thought. Thus he next asks: "Is this not rather the place where one finishes vanishing?" (TN 293). The Heideggerian 'one' takes on great significance here. The Unnamable vanishes into inauthenticity as one does, when one lacks the courage to act. For this reason, he no longer has contact with ready-to-hand equipment. Heidegger sums up the Unnamable's plight accordingly:

The awaiting of the 'towards-which' is neither a considering of the 'goal' nor an expectation of the impendent finishing of the work to be produced. It has by no means the character of getting something thematically into one's grasp. Neither does the retaining of that in which we let something be involved, than they do to what is involved itself. (BT 405)

Read literally, the Unnamable is a mucilage egg shaped head suspended in a cage between a Parisian cafe and a butcher shop. But read in light of Heidegger's discussion of authenticity/inauthenticity, he becomes a man sitting at an outdoor cafe who realizes he has fallen so far away from his individuality that he has lost the very location—the Da—of his body. This is further evidenced by the Unnamable's lack of a name. To name is to individualize, to provide distinct location for. The nameless Unnamable is a post-modern Everyman-yet-no man. His search for name-location is a design woven throughout his soliloquy: Mahood, Worm, Jones—all rejected names as the Unnamable falls ever deeper into the 'they' where he becomes Murph, Watt, Molloy, Malone, Mercier-Camier.

Nor is the Unnamable alone in his inability to become authentically involved in the world. The voice of Beckett's seventh Text for Nothing concludes with a hope to re-begin a search for authentic identity:

And to search for me elsewhere, where life persists, and me there, whence all life has withdrawn, except mine, if I'm alive, no, it would be a loss of time. And personally, I hear it said, personally I have no more time to lose, and that that will be all for this enemy, that night is at hand and the time come for me too to begin. (Stories and Texts for Nothing 110)

How it is concludes with a similar, though more bitter lament:

so things may change no answer end to answer I may choke no answer the dark no answer trouble the peace no more no answer the silence no answer die no answer DIE screams I MAY DIE screams I SHALL DIE screams good (147).

Here too the anxiety which opens possibility is leveled to an unheeded dread of death, and the character becomes self-doomed to wait for an authentic existence he realizes, in moments of self-honesty, will never be choosen. The Unnamable says it best:

you must say words, as long as there are any, until they find me, until they say me, strange pain, strange sin, you must go on, perhaps it's done already, perhaps they have said me already, perhaps they have carried me to the threshold of my story, before the door that opens on my story, that would surprise me, if it opens, it will be I, it will be the silence, where I am, I don't know, I'll never know, in the silence
you don't know, you must go on, I can't go on, I'll go on. (TN 414)

The Unnamable remains on the threshold of authenticity and, representative of Beckett's characters, would rather tell stories, sink into a never ending self-analysis, or simply wait by a tree than leap into the possibility of authenticity. Malone: "And there comes the hour when nothing more can happen and nobody can come and all is ended but the waiting that knows itself in vain" (TN 241). Lacking the courage to launch into authentic existence, all that remains is this waiting, as one waits, alone with everyone in the dark. Anxiously analyzing, and failing to open into authenticity, possibility, Being.


AN ELECTRONIC BOOK:
HYPERCARD AND THE USES OF COMPUTERS IN LITERATURE

KURT A. HILLS
BRIGHAM YOUNG UNIVERSITY

INTRODUCTION

HyperCard is a powerful new application for the Macintosh computer. It has been heralded as the biggest break-through in personal computers since the Macintosh itself. While HyperCard has both graphics and text manipulation capabilities, and can use digitized sound, it’s most salient contribution to Linguistics and other branches of the Humanities is its ability to link parts of a document to each other. This is done by way of the flexible and easy-to-learn HyperTalk programming language, which makes it possible to program the HyperCard information containers, called “stacks,” “backgrounds,” “cards,” and “fields,” and the information manipulators, which are called “buttons.”

HyperCard is an outgrowth of the hypertext theory of information management and text retrieval. Hypertext, which Ted Nelson proposed in the late sixties, maintains that all parts of a document should be accessible through other parts of the same document or other related documents. Nelson’s dream is of a computer system “that will provide computer users with instantaneous access to the world’s books, magazines, movies, music, and all published documents.” HyperCard’s contribution to this dream is increased public accessibility through the growing use of microcomputers, as well as its graphics and sound capabilities, which add new dimension to the current forms of information management.

I chose to subtitle my paper “the uses of computers in literature” because I think this phrase describes a broad spectrum of the possible uses of HyperCard. It is an excellent interactive environment. It is such a “user friendly” programming environment that it would make an ideal “first language” for the computer novice. The teacher who had never touched a computer before could use the simple graphics and English-like HyperTalk to design and create lessons for her students, custom-made, as it were, for the particular needs of her classes. An example of this type of programming would be a stack that taught the constellations in various seasons, or the Indo-European language tree, or Arabic. These ideas, widely varied though they may be, are not only possible, but one is in use now at this University and one other has been developed.

John Sculley, the Chairman of Apple Computers, describes HyperCard and the Hypermedia concept in this way: “In broad terms, hypermedia is the delivery of information in forms that go beyond traditional list and database report methods. More specifically, it means you don’t have to follow a predetermined organizational scheme.

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when searching for information. Instead, you branch instantly to related facts. The information is eternally cross-referenced, with fact linked to fact, linked to fact.”

Of course, this is the opinion of a person describing a product he is eager to sell. “Eternally cross-referenced” is a loaded term, and it needs clarification. There is no inherent “eternal” nature to HyperCard; a HyperCard stack and indeed the whole hypertext concept can only be as cross-referenced as the author makes it. As with any computer system the programmer is always in control of the output, try as he might to convince himself otherwise.

DESCRIPTION OF FEATURES

This is a sample card from the book stack. The Book Stack consists of a field with the book’s text in it, as well as buttons that allow you to “drive” through the various cards and stacks. (See Figure 1) The basic structure of HyperCard is as follows: each document, or “stack” is made up of “cards.” (HyperCard Stacks are analogous to conventional stacks of 3 x 5 index cards.) The “background” of a card is an consistent design feature shared by similar cards in a stack. Several cards can look exactly the same, since they are all based on the same background. This is the method used in the Jude stack. While it appears that only the text window is changing when we click on certain buttons, we are actually changing cards each time we click* the button. Each card has the same background, but the text window is different. After creating the initial background card, the author need merely fill in the fields.

Linking the cards in a HyperCard stack, and indeed other stacks to one another, is partially accomplished by way of “buttons.” A button’s program is called a script; buttons can have scripts of nearly limitless variety. Internal functions of HyperCard make impressive graphics displays such as zoom simple, and changes from card to card may be quite dramatic. Also, buttons can command the graphics functions of HyperCard as well as do text manipulation, calculations, import/export of outside documents, etc. In Figure 1, the three scripts of the Atlas, Index and Glossary buttons are given. Although each button does essentially the same task, that is, get a selection and match it with a corresponding referent in another stack, each button has to go about this a little differently.

The Atlas button gets the selection and places it in a global variable. A global variable is one that will keep the same value until something changes it. It will also maintain its existence even after the program in which it is found stops. HyperCard then switches stacks, going from the Book Stack to the Map Stack (here “Goodmap 1.1.”) It then searches for a button with a name that matches the value of “target,” the global variable. If “target” is empty (value = 0 or “”) then it asks the user to “Please choose a town.” The Index button is very similar to the Atlas button. It too gets a selection and places it in

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* Click in this case means one push of the mouse button, not the normal “double click” of the Macintosh interface. HyperCard scripts are often triggered by an “on mouseUp” command. HyperCard waits, or “idles,” until some type of user action occurs. (This could be a touched key, mouse movement, or “mouseUp.”) HyperCard then responds to the action by either performing a script that the author has previously created or by doing nothing.
practicability of the suggested shelter, and the boy and the schoolmaster were left standing alone.

'Sorry I am going, Jude?' asked the latter kindly.

Tears rose into the boy's eyes, for he was not among the regular day scholars, who came unromantically close to the schoolmaster's life, but one who had attended the night school only during the present teacher's term of office. The regular scholars, if the truth must be told, stood at the present moment afar off, like certain historic disciples, indisposed to any enthusiastic volunteering of aid.

The boy awkwardly opened the book he held in his hand, which Mr Phillotson had bestowed on him as a parting gift, and admitted that he was sorry.

'So am I,' said Mr Phillotson.

'Why do you go, sir?' asked the boy.

'Ah - that would be a long story. You

Figure 1. A sample card, including some buttons and their scripts.
“FindWord,” a local variable. FindWord works like “target” does—it finds the first match of its contents. If there is no match, the default is the title card of the Index stack.

The Glossary button works in the described fashion, with one exception. If a word not in the Glossary is selected and the Glossary button is clicked, then the user is informed, “There is no such term in the Glossary.”

These are, of course, merely examples of HyperCard buttons. This paper is meant as an introduction to HyperCard, and as an attempt to generate more interest in it, especially from people in language-related fields. This is most easily and effectively done through examples.

Text in HyperCard is stored in “fields.” A field can have a script like a button’s. It can be smaller than one word or as large as the Macintosh screen, or larger if a scrolling field is used, and it can be use any type or size font contained in the system folder. However, this is a good place to point out one of HyperCard’s shortcomings—in its present version it only allows one font and style per field. In other words, you can’t use Plain Text and Underline in the same field, or Geneva and Times, or any other combination. This is extremely vexing, and has led to many different “kludge” approaches, such as overlays, where the plain text of one field is duplicated and underlined in another, and then placed over the original text. It is hoped that in future versions this problem will be dealt with.

Each text field has a scroll bar that allows more actual data to packed into each page, and each page of the stack corresponds roughly to the same page in the paper book.

![Browse Button Field](image)

**Figure 2. The HyperCard “tear-away” Tool Box**

While the purpose of this paper is to highlight the linguistic possibilities of HyperCard, there is no reason to skip over graphics; indeed, for teaching in an interactive environment graphics are very useful, since they can help focus the attention of the student and make the...
subject exciting. HyperCard's graphics were designed by the application's creator, Bill Atkinson. Atkinson also created MacPaint, and took the opportunity provided by HyperCard to update and revitalize the nearly outdated MacPaint graphics system in his new creation. HyperCard's graphics are easily accessible from the "tear-away" Tool Box. (Figure 2) The graphics tools are very useful in creating cards, since it eliminates many time-consuming trips to SuperPaint or Cricket Draw some other graphics application and the subsequent importing of the outside documents. The book cover and the majority of the backgrounds in Jude were created within HyperCard; some of the more detailed work was copied with a scanner and imported.

The normal procedure in using one of the Jude buttons is: 1. select a word from the text, and 2. click the appropriate button. Since this paper does not include a computer, we will have to pretend. (See Figure 3a-d) We select a place name in the text by positioning the cursor over the word we intend to use and double clicking the mouse button. We then move the cursor to the Atlas button and single click there. This takes us to the Map Stack, where first we see a demonstration of the graphics abilities of HyperCard when teamed with a scanning digitizer.

After we see the confirmation of our selected placename, we then change cards to a map of a portion of Hardy's Wessex and the position on that map of the town we have selected. Since Wessex is based on the real English countryside, a click on the "Show England" button changes our view to the corresponding view of real England. (You should be imagining the names of the Wessex towns dissolving and being replaced by the names of the English towns. You can go back now, if you want.*) Clicking on the town name sends the user to an information card that contains the page numbers of the text on which our placename is found. Clicking the return button sends us back to the text.

The Index works similarly. (See figure 4) We select a word from the text and click on the Index button. We see a graphic display that tells us we have arrived, and then the word is found with the typical HyperCard "find box" outlining it. If we choose to find another word in the text we can select it and click on the text button; we could see another reference of the same word by getting the page number and clicking the text button, or we can just click the text button and return to our page.

The Glossary button takes us to a stack of cards containing words with different than normal or rare usages. Each card contains two fields that are immediately apparent, a "head word" field and a "text" field, which together give the general appearance of a 3 x 5 card.

* If you would like to see the real thing, please send a stamped, self-addressed envelope and a blank Macintosh disk to:

JUDE STACKS
Humanities Research Center
3060 JKHB
Brigham Young University
Provo, Utah 84602

(But don’t wait too long.)
Step 1. Select a placename from the text and click on the Atlas button.

Step 2. See the Atlas IndexCard and confirm chosen town

Step 3. See town flash on map. If desired, click on town name for InfoCard.

Step 4. InfoCard

When the Example button is clicked, an example of the word in context is shown. Clicking the button again hides the example.

The Glossary stack also contains another dimension of information, sound. The "Hear it!" button allows the user to experience the terms of certain cards aurally. The button is made
by sampling sound with a digitizer, and then inserting the sound into the stack with "SoundCapToRes," a HyperCard utility. A music generator standard in HyperCard also allows the author to compose music in at least the three mid-range octaves.

None of the Jude buttons require a selection to be made in order to work. If you click on the Index button without selecting text, you are free to browse through the Index Stack, picking references as you go. If you click on the Atlas button without a selection, you are prompted to choose a town. If you click on the Glossary button, you arrive at the first page of the glossary, where you are prompted to make a new card. The Glossary is user expandable, and it is always possible to write notes on existing cards.

CONCLUSION

In conclusion, please allow a brief editorial comment. Most people take programmers for granted. We rarely realize that someone somewhere lost hair over the creation of the word processing program we so merrily type away at. When we paint a poster we don't feel it important to remember that inside the computer there are bits and bytes whizzing around at a dizzying speed.
Halliwell gives the meaning as "industrious, notable," in Berkshire usage. But "Don't look so deedy" seems rather to mean "Don't look so put out"—looking no doubt as if you were going to make trouble.

Fortunately, HyperCard exploits this attitude shamelessly. The joy of creating HyperCard stacks is that the majority of the behind-the-scenes "computing" is taken care of by the application itself, allowing us to be as imaginative as possible.

Also, since the program is free, it is probable that there will be many new resources and advances in stack design in the future.

My experience with *Jude* and HyperCard in general has shown me that with a little study and some creative effort an effective information management system can be created. As HyperCard becomes more familiar to us, we will expect to see it everywhere: in libraries, in the classroom, in the officeplace, in the home, *ad infinitum*. HyperCard is a powerful new force in the computer world.

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L2 LEXICON LOSS

Donald J. Kinghorn
Brigham Young University

This study addressed the problem of loss or impairment of second language lexicon. In particular, the loss of receptive vocabulary (recognition) was compared with the loss of productive vocabulary (recall). Previous studies had shown vocabulary loss to be a major difficulty encountered by persons returning to their native countries after a lengthy stay in L2 environments. Leyen's 1984 study of Spanish speaking immigrants indicated that even though recall of Spanish words was difficult for those who had lived in the United States for several years, their recognition of correct Spanish words was hardly impaired. Several studies have documented L2 lexical loss of individual children. As far as I know, this was the first group study attempting to assess the attrition rate of L2 vocabulary after a return to the L1 environment.

REVIEW OF PERTINENT LITERATURE

Memory

Researchers have considered short and long-term memory to be different processes, but experiments by Kandel (1978) indicate that short and long-term memory may be due to similar chemical and physiological changes within the brain. Mishkin (1987), Gillinsky (1984), and others postulated that emotion related to the learning experience enhances storage of the event into long-term memory. Research has shown certain areas of the brain (hippocampus, and amygdala) to be important in the transfer of information from short-term to long-term memory. Gillinsky indicated that repetition of an experience enhances implantation in long-term memory. Jenkins and Dallenbach (1924) showed that a period of sleep after a learning experience enhances long-term retention. This study was concerned only with secondary, or long-term memory, and future references to memory may be assumed to mean this type of long-term storage.

Memory is a three step process; acquisition or learning, retention, and retrieval. Three types of behavior are indicative of memory; recognition, recall, and relearning. Recognition appears to be a less difficult task than recall. Kolb and Wishaw (1985) described two types of long-term memory. Procedural memory is the "modification of behavior that takes place when a skill or an operation is mastered." Declarative memory is the ability to recount when and how the procedure was acquired. The case of an epileptic patient known as H.M. who had bilateral surgery removing the hippocampus region of both temporal lobes of the brain is well known. Thirty years of research showed that H.M. retained procedural and declarative memory of all events prior to the surgery. He was, however, unable to make new associations, or to recall new experiences. He was able to develop procedural memory and learned to solve complex puzzles with few errors, however, he treated each effort as a novel experience, had no recollection of working on the puzzles previously, and assumed that his success at solving the puzzles was due to random guesses. The studies with H.M. showed that the hippocampus and amygdala facilitate the storage or the processing of new information into long-term memory.

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Dimond (1980) noted that modern theories support two explanations for memory; storage at the biochemical level, and changes in the microanatomy of the brain. Work by Kandel (1978, 1983) and Alkon has shown that memory may be a function of both biochemical activity and long-term change in the neurons at or near the synapses. Their recent studies with two types of marine snails have demonstrated complex electrochemical reactions and subsequent long-term changes in neurons after conditioned response learning activities. Kandel (1978) stated that "Certain types of learning (memory) result from changes in the activity of specific cells, and from changes in the connections between cells.....The data provide direct evidence that a specific instance of long-term memory can be explained by a long-term change in synaptic effectiveness." Gillinsky (1984) also stated:

"Memory depends primarily upon the strength and stability of cognons (basic neural units participating in perception)......and secondarily upon the connections established by the coincident activity of two or more participant cognons. The effectiveness of these cognons and their connections (the degree of retention) depends upon the extent of synchronous arousal of the participant units at the time of learning."

Mishkin (1987) suggested that emotion plays an important role in retention. Gillinsky also noted five factors which determine the number of cognons (neural receptors) activated by a stimulus, and the consequent retention of the experience:

1. Repetition of the stimulus pattern
2. The strength of the facilitative arousal accompanying the stimulus presentation
3. The age of the subject
4. Whether the subject is in a critical period of development.
5. The existence of competitive interaction by other stimulation events.

Long-term memory appears to be resistant to total loss. Information stored in long-term memory may be difficult to retrieve, yet given the proper cues, humans can remember details that have been stored and not used for many years.

Theories of Memory Loss

There are four major theories of memory loss; decay, extinction, interference, and retrieval failure.

Decay theory states that memory atrophies from disuse. Studies have shown retention of learned material for as many as fifty years of disuse. (Bahrick, 1984) Leyen (1984), noted that Spanish-speaking natives who had moved to the United States had little or no difficulty recognizing Spanish words that they had not used for as many as twenty years. Gillinsky (1984) stated "there is no evidence that memory traces simply decay from disuse."

Extinction is the repression of old memories due to new experiences. This behaviorist theory seems to be a factor in language behavior of children who are exposed to a L2 setting.
Kenyeres (1938), Leopold (1954), and Burling (1959) all noted stages of extinction-like behavior among young children who moved to new language environments. Embarrassment concerning the child's I1 and refusal to respond in the I1 to parents are behaviors which seem related to the extinction theory. Extinction does not postulate the total loss of memory, only its extinction or repression due to new experiences.

Interference theory assumes that forgetting is a result of interference from an earlier (proactive) or more recent activity (retroactive). It is often associated with inability to transfer information from short-term memory to long-term memory. Researchers have studied the related phenomenon of I1 interference or transfer in I2 acquisition, with Krashen, Dylay, and Burt (1982) and others arguing against, and Fries (1945), and Iado (1983) arguing in favor of interference in I2 acquisition.

The theory of retrieval difficulty proposes that memory is not truly forgotten, but only difficult to retrieve. Gillinsky (1984) stated that "fully established associations are never completely forgotten." Anderson (1983) indicated that only very young children can completely forget a language. Leyen (1984) noted that although persons who had not used the Spanish language for a number of years might have difficulty in recalling or producing a word in conversation, they experienced little or no difficulty in recognizing the word in a multiple-choice test, even when the distracting items in the test were very similar to the word being tested. Retrieval difficulty seems to be a plausible explanation for some types of memory loss.

**Linguistic Evidence of Language Loss**

Leyen (1984) summarized individual case studies of children who had changed language environments. A pattern of I2 development was evident among the children who included initial indifference to the new language, followed by acceptance and rapid development of the I2. In most cases, the I2 became the child's language of choice within six months. A tendency to respond in the I2 to parents who spoke in the I1 was a common feature of development. Some children became openly critical of their I1. In all cases, the children experienced impairment of their I1, primarily in the area of vocabulary. Studies of children who returned to their I1 environment after learning a I2 have shown that children demonstrate the same behaviors in relearning their I1 as they did in learning the I2, however the time frame for all phases of development appears to be shortened considerably. These studies support the theories of extinction and retrieval difficulty. Apparently the children repress their previous language due to new social and linguistic experiences, and upon returning to their native countries are able to relearn their I1 more quickly, indicating that the I1 has been stored and then become extinct or during new experiences with their I2.

Karttunen (1977), in a study of Finnish immigrants to North America stated that morphology, phonology, and syntax remained intact among first generation speakers, but that lexical loss was substantial. In her study of ninety-eight Spanish speakers who had moved to the U.S.A. Leyen (1984) found that nearly two thirds reported recall of I1 lexicon as their major problem when speaking Spanish. She also found that those who had left their I1 settings at a younger age experienced the greatest degree of language loss, were less cognizant of their I1 errors, and less capable of correcting them. Similar observations
were noted by Anderson (1983).

**METHODOLOGY**

Eighty-one persons who had learned English as their first language, and had served eighteen to twenty-four month missions to Spanish-speaking countries for the L.D.S. Church were selected as subjects for this study. The missionary experience of the subjects included a two month intensive Spanish course at Brigham Young University prior to their overseas experience, and all had returned to the United States during the past five years (1982-1986). The subjects were divided more-or-less evenly into five groups according to the year of return from their missions, with approximately sixteen subjects comprising each group.

The assessment instrument included a personal inventory questionnaire in which the participants answered questions about their usage patterns of Spanish since their missions and rated their ability to perform various tasks in Spanish. Two vocabulary tests, one designed to determine recognition of Spanish words (receptive lexicon), and another designed to test recall, or the ability to orally produce Spanish (productive lexicon) were also administered to each subject during January, February, or March, 1987. The purpose of the study was to determine the amount and rate of loss of second language vocabulary, the influence of English on Spanish vocabulary retention or loss, and to discover specific strategies used by the subjects to recognize or produce Spanish words.

It was hypothesized that there would be a significant loss of the ability to recall words over a five year period of time, and that the loss in ability to recognize words would be less, recognition being a simpler task than recall. It was also expected that more general terms would be used in producing vocabulary among those who had been home for a longer period of time, and that the transfer of English to Spanish in the form of direct translation or the use of "false cognates" would be more evident among this group.

**Self-Survey and Questionnaire**

Participants in the study completed a questionnaire which included demographic data, an assessment of their ability to perform certain Spanish language tasks, and an estimation of the amount of time they spent speaking, reading, or listening to Spanish on the TV or radio. Demographic tables which included the following variables: 1) age 2) sex of the participants, 3) study of Spanish previous to the missionary experience, 4) study of Spanish after the mission, 5-7) speaking, reading, and listening patterns in Spanish, 8) whether Spanish was expected to be used in a career, 9) marriage to a Spanish-speaking spouse, and 10) whether the language was used as a child were prepared. These variables were then correlated with results of the vocabulary experiments using the Pearson Product Moment Correlation test.

**Receptive Vocabulary Experiment**

The receptive vocabulary test consisted of 149 picture plates with 4 pictures on each plate. The subject had to indicate which of the 4 pictures most correctly matched a word spoken in Spanish. Each item was spoken only one time. The vocabulary words included 17 modifiers, 107 nouns, 25 verbs, and 85 English cognates, which were grouped and scored as sub-tests. T-tests were
used to analyze total scores and sub-test scores between groups, and Pearson R was used to determine correlation between test scores and the variables from the self-survey.

**Productive Vocabulary Experiment**

The productive vocabulary test consisted of 100 written items. Each item included a sentence written in English with one word underlined, and a partially completed sentence in Spanish. To complete each item, the participant had to supply the missing word, which was the Spanish equivalent of the underlined English word, and speak it into a tape recorder.

After transcription, responses were tallied and judged by two native Spanish speakers and one fluent Spanish speaker whose native language is English, and were grouped according to the following criteria: 1) Words that were acceptable and correct, both grammatically, and semantically. 2) Words that were either grammatically or phonologically similar to the correct word. 3) Spanish words of a more general nature than the correct word. For example: "building" instead of "skyscraper". 4) Spanish words, or words sounding like Spanish that did not meet the above criteria; incorrect either grammatically, phonologically, or semantically. 5) Words that appeared to be English words translated into Spanish. 6) No response. The number of each type of response was counted for each subject. Group totals were calculated and compared.

Because all the data had not been transcribed at the time this paper was delivered, only data from the 1982 and 1986 groups was evaluated. The group scores were analyzed by t-tests for independent groups.

**RESULTS**

The total group was comprised of 81 subjects. All subjects participated in the completion of the self-survey of Spanish language usage patterns. All 81 subjects also participated in the receptive and productive vocabulary experiments, however, at the time this paper was written, all data for the productive vocabulary experiment was not available, therefore only data from the 1982 group and the 1986 group was analyzed.

**Demographic Data from the Self-Survey**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>AGE</th>
<th>MALE</th>
<th>FEMALE</th>
<th>PREV.</th>
<th>POST</th>
<th>CAREER</th>
<th>SPOUSE</th>
<th>CHILD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1982</td>
<td>26</td>
<td>17</td>
<td>0</td>
<td>13</td>
<td>15</td>
<td>8</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>1983</td>
<td>25</td>
<td>12</td>
<td>3</td>
<td>9</td>
<td>13</td>
<td>6</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>1984</td>
<td>24</td>
<td>15</td>
<td>1</td>
<td>9</td>
<td>16</td>
<td>8</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>1985</td>
<td>23</td>
<td>11</td>
<td>6</td>
<td>12</td>
<td>15</td>
<td>11</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>1986</td>
<td>23</td>
<td>14</td>
<td>2</td>
<td>13</td>
<td>14</td>
<td>10</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

The average age of the participants was 24 years. Only about 15% of the participants were female. Almost 70% had studied Spanish before their missions. 90% had studied Spanish since their missions. 53% indicated a desire to use Spanish in their careers. 27% were married to spouses who spoke at least some Spanish, and 11% indicated that they had used Spanish to some extent.
as children.

Participants were asked to indicate how often they had spoken, read, or listened to Spanish TV or radio since their missions. They responded on a scale from 1-7 with 1 indicating almost never, and 7 indicating constantly. Most noted that they had spoken Spanish to some extent since their missions with only 13% indicating that had almost never used Spanish. Almost 26% of the participants indicated that they had almost never read Spanish since their missions. Most of them indicated that they were accustomed to reading at least some Spanish. 49% of the participants noted that they almost never listened to Spanish radio or TV. Although there were some differences in Spanish usage patterns between the groups, the differences were not extreme. The 1982 group reported reading and listening to Spanish less than the other groups, and the 1984 group reported listening to Spanish less than the other groups.

RESULTS OF THE RECEPTIVE VOCABULARY STUDY

Scores from the receptive vocabulary test were remarkably similar. There was little variance among the groups in mean scores for the total test, or percentage scores for the sub-tests. Ranges for scores were also similar. Differences between group scores were not statistically significant. Table 2 shows the mean total score, standard deviation, and range for each group, as well as the sub-test percentage scores for modifiers, nouns, verbs, and cognates.

<table>
<thead>
<tr>
<th>GROUP</th>
<th>MEAN</th>
<th>STD. D.</th>
<th>RANGE</th>
<th>MOD.</th>
<th>NOUN</th>
<th>VERB</th>
<th>CCG.</th>
</tr>
</thead>
<tbody>
<tr>
<td>82-86</td>
<td>121.11</td>
<td>8.93</td>
<td>96-138</td>
<td>64</td>
<td>85</td>
<td>78</td>
<td>84</td>
</tr>
<tr>
<td>1982</td>
<td>119.59</td>
<td>7.0</td>
<td>107-131</td>
<td>63</td>
<td>84</td>
<td>75</td>
<td>84</td>
</tr>
<tr>
<td>1983</td>
<td>120.33</td>
<td>10.74</td>
<td>103-137</td>
<td>61</td>
<td>85</td>
<td>77</td>
<td>84</td>
</tr>
<tr>
<td>1984</td>
<td>123.00</td>
<td>7.83</td>
<td>105-136</td>
<td>64</td>
<td>86</td>
<td>81</td>
<td>85</td>
</tr>
<tr>
<td>1985</td>
<td>119.82</td>
<td>8.73</td>
<td>102-138</td>
<td>64</td>
<td>84</td>
<td>78</td>
<td>83</td>
</tr>
<tr>
<td>1986</td>
<td>122.94</td>
<td>10.50</td>
<td>96-138</td>
<td>65</td>
<td>86</td>
<td>80</td>
<td>85</td>
</tr>
</tbody>
</table>

There was no difference in loss or impairment of receptive vocabulary (recognition) among the five groups.

Although vocabulary recognition scores were similar for all groups, there were some differences in errors made. Those who had been home from their missions for a longer period of time tended to leave more items untried than those who had returned more recently. 29% of those who returned in 1982 left 5 or more blank responses on the test, as compared with 13%, 12.5%, 12%, and 6% for the 1983, 84, 85, and 86 groups respectively. This indicates that those who have recently returned from their missions are more likely to attempt a response than those who have been home for longer periods of time.

Correlation of Test Scores with Self-Survey Variables

The age of all participants was nearly the same for each group, therefore correlation between age and test scores was not appropriate within each group. When age was compared with scores for the entire group (1982-86) there was no
significant correlation. Also, there was no significant correlation between the number of years since the missionary experience and test scores, although those who were younger, or who had been home for a shorter period of time did slightly better on the verb sub-test.

Although 55 of the subjects had studied Spanish before their missions, this did not have a highly significant bearing on test scores. There was a significant correlation between previous Spanish study and scores on the modifier sub-test for the 1982 group, and a high correlation for the verb sub-test for the entire group. The number of years spent in pre-mission study was not a significant predictor of test scores.

Post-mission Spanish study was the most reliable predictor of scores on the total test and the sub-tests. There was significant correlation within the 1982 and 1983 groups, and for the total group (1982-86). The number of semesters of post-mission Spanish study correlated moderately with test scores.

One of the self-survey variables, "amount of Spanish spoken" was shown to correlate significantly with test scores for the 1983 and 1986 groups. A possible explanation is that the 1983 group was involved in Spanish classes to a high degree, and the 1986 group had just returned from their missions and may have been using Spanish more than those who had been home longer.

Reading was significant with the noun sub-test for the 1983 group, and for the total test, the noun, and cognate sub-tests for the total group (1982-86).

Listening to Spanish TV and radio had no apparent correlation with test scores, nor did intention of using Spanish in a future career. Having a Spanish-speaking spouse was not highly correlated with the test scores. The use of Spanish as a child did not predict high scores on the test.

Males performed better on the tests than did females. The top ten scores were by males, while the bottom 10 scores were evenly distributed among males and females. There are two possible explanations for this; first, the number of females in the study was very small, and second, females serve 18 month missions while males serve 24 month missions. In his thesis on attrition patterns of Chinese tones among returned missionaries, Zhang Jie (1987) noted a significant difference between male missionaries who had served 18 and 24 month missions when LDS church policy allowed 18 month mission for males. Table 3 shows the correlation of variables with the total scores for the receptive vocabulary test.
TABLE 3
CORRELATION OF VARIABLES WITH RECEPTIVE VOCABULARY SCORES

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>AGE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEX</td>
<td>1</td>
<td>HC</td>
<td>X</td>
<td>X</td>
<td>.01</td>
<td>.05</td>
</tr>
<tr>
<td>PREVIOUS SPAN. STUDY</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>YEARS STUDIED</td>
<td>X</td>
<td>X</td>
<td>.1</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>POST-MISSION SPAN.</td>
<td>.05</td>
<td>.1</td>
<td>HC</td>
<td>HC</td>
<td>X</td>
<td>.01</td>
</tr>
<tr>
<td>SEMESTERS STUDIED</td>
<td>X</td>
<td></td>
<td>.1</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>AMOUNT SPOKEN</td>
<td>X</td>
<td></td>
<td>.05</td>
<td>X</td>
<td>X</td>
<td>.05</td>
</tr>
<tr>
<td>AMOUNT READ</td>
<td>X</td>
<td></td>
<td>HC</td>
<td>X</td>
<td>X</td>
<td>.1</td>
</tr>
<tr>
<td>TV AND RADIO</td>
<td>.1</td>
<td></td>
<td>-HC</td>
<td>-.05</td>
<td>X</td>
<td>-.1</td>
</tr>
<tr>
<td>USE IN CAREER</td>
<td>X</td>
<td></td>
<td></td>
<td>1</td>
<td>.01</td>
<td>-.1</td>
</tr>
<tr>
<td>SPAN. SPK. SPOUSE</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>SPAN. USE AS CHILD</td>
<td>X</td>
<td></td>
<td>X</td>
<td>-1</td>
<td>X</td>
<td>-1</td>
</tr>
</tbody>
</table>

X = not significant
HC = high correlation, but not statistically significant
- before an entry indicates negative correlation

Summary of Receptive Vocabulary Study

In general, post-mission Spanish study was the strongest predictor of success on the tests. The number of semesters taken also demonstrated a positive correlation. Reading in Spanish and speaking Spanish also correlated highly with test scores. Males tended to perform better than females on the tests although this may be explained by the very small number of female participants, and by the fact that females serve missions that are 6 months shorter than males. Correlations of sub-test scores with variables did not differ appreciably from those of the total score. There was no significant difference in performance on the total test or any of the sub-tests among the five groups of subjects.

RESULTS OF THE VOCABULARY PRODUCTION EXPERIMENT

The vocabulary production test was designed to determine recall of Spanish words. Because all data was not available at the time this paper was presented, only data from the 1982 and the 1986 groups was analyzed.

Responses of participants were judged according to the following categories: 1) correct, 2) nearly correct (either phonologically or grammatically), 3) a more general term, 4) an incorrect Spanish or Spanish-sounding word, 5) a word sounding like an English word translated into Spanish, and 6) no response.

There were significant differences in the recall of vocabulary between the two groups. Of 100 possible responses, the 1982 group average for correct scores (category 1) was 61.8, while the average for the 1986 score was 76.2. This difference is significant at the .01 level of confidence. There was no significance in the difference in scores for categories 2, 3, 4, or 5, but there was a high, nearly significant correlation for category 3 (more general term). The 1982 group tended to use more general terms than the 1986 group.
The 1982 group also left more than 3 times as many responses blank as the 1986 group. The difference in scores for category 6 (no response) is significant at the .01 level of confidence. Table 4 displays the data for the production test scores. The average number of responses for each category is indicated.

<table>
<thead>
<tr>
<th>CATEGORY OF RESPONSE</th>
<th>1982</th>
<th>1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.  CORRECT WORD</td>
<td>61.8*</td>
<td>76.2*</td>
</tr>
<tr>
<td>2.  NEARLY CORRECT WORD</td>
<td>5.5</td>
<td>4.4</td>
</tr>
<tr>
<td>3.  MORE GENERAL TERM</td>
<td>5.9 HC</td>
<td>3.0 HC</td>
</tr>
<tr>
<td>4.  INCORRECT WORD</td>
<td>3.9</td>
<td>4.5</td>
</tr>
<tr>
<td>5.  SOUNDS LIKE ENGLISH TRANSLATION</td>
<td>4.1</td>
<td>4.0</td>
</tr>
<tr>
<td>6.  NO RESPONSE</td>
<td>18.8*</td>
<td>5.8*</td>
</tr>
</tbody>
</table>

* = significant at .01 level
HC = high correlation but not significant

Correlation of Production Test Scores with Self-Study Variables

The production test scores were correlated with the variables from the self-study and tested for significance. Speaking, reading, and listening to Spanish showed high correlation with correct responses on the test for the 1982 group, while for the 1986 group the number of years of pre-mission Spanish study was the most important factor.

The next four categories of responses (nearly correct words, more general terms, incorrect words, and words that sound like English translations) account for only a small portion of the total responses. In no case did the average number of responses for any of these categories exceed 6 for either the 1982 or 1986 group. As a result, any correlations are based upon data that is nearly homogenous, and statistical judgments may be questionable.

Post-mission study correlated highly with nearly correct responses for the 1982 group, while intended use of Spanish in a career, and the use of Spanish as a child correlated negatively. Previous study of Spanish was an accurate predictor of this response for the 1986 group. The career variable correlated negatively for the 1986 group.

In the 1982 group, those who read more used less general terms on the production test, indicating that reading may be helpful in recalling correct words. For the 1986 group, the females tended to use more general terms than the males.

There was no significant correlation between the use of incorrect words and any of the variables for either group. Those who had studied Spanish after their mission used more incorrect words, but they also left fewer blank responses.

Pre-mission Spanish study correlated highly with responses that were judged to be translations of English words for both groups. For the 1982 group, reading showed a high positive correlation, while the intention to use Spanish in a career showed a high negative correlation.
Reading correlated negatively with category 6 (no response) for the 1982 group, indicating that those who read were more apt to make a response than to leave an item blank. Pre-mission study showed a high negative correlation for the 1986 group, indicating that study of the language may encourage attempted responses. Although speaking correlated highly with this category, nearly everyone in the 1986 group indicated a high level of Spanish speech, and there were very few blanks left on the test, with the average being just over 5.

Summary of Production Test Results

There were significant differences between the 1982 and 1986 groups. The 1986 group answered almost 25% more correct responses than the 1982 group, while the 1982 group left more than three times as many items blank as the 1986 group. The 1982 group tended to use more general terms, however this was not statistically significant. No clear pattern emerged from the correlation tests, however pre or post-mission study, increased speech, reading, and listening to Spanish did appear to enhance recall.

Conclusions and Recommendations

The purpose of this study was to determine the loss of lexicicon among Spanish speaking missionaries who had returned from their missions during the past five years. Previous studies had indicated that lexical loss is often more pronounced than syntactic, morphological, or phonological loss, and that recall of vocabulary words, especially in a conversational setting, is a more difficult task than recognition of words. Retrieval failure, interference, and extinction have been shown to explain memory impairment or difficulty, with recent neurobiological research indicating that long-term memory may be permanently stored in the brain.

Results of the receptive vocabulary test demonstrated very little difference in the recognition of Spanish words among subjects who had been home for five years and those who had just returned. This finding correlates with Leyen's study (1984), and supports neuropsychological theories of the permanence of long term memory, and retrieval failure as a basis for memory loss. The fact that recently returned missionaries tended to make more attempts at items than those who had been home for a longer period of time indicates different communicative strategies used. It appears that those with recent, extensive experience in a language are more willing to attempt to communicate, while those who have not used the language for a period of time are more likely to avoid making errors. This finding was also born out by the results of the vocabulary production test. The similarity of responses in regard to English-Spanish cognates across all groups indicates that there was little, if any transfer or borrowing from the L1 as a communicative strategy. The results of the receptive vocabulary test indicate that in relation to grammatical categories the subjects performed best on the noun sub-test, then on the verb sub-test, and worst on the modifier sub-test. This seems to follow the L1 vocabulary acquisition theory of Clark (1974), and Barrett (1986), and also supports Anderson (1983) who indicated that those things learned last may be forgotten first.

Results of the vocabulary production test indicated a significant difference
between those who had recently returned and those who had been home five years. Those who had been home longer tended to use more general terms, and left more items unanswered, indicating a strategy of error avoidance. These results support Leyen's 1984 study demonstrating the difficulty of recalling lexicon as compared to recognizing words.

Study of Spanish after the missionary experience was the single most important variable in predicting success on the tests. Pre-mission Spanish study, and increased speech, reading, and listening to Spanish also correlated highly with success on the tests. Other variables did not seem to be accurate predictors of success.

The results indicate that a strong foundation in a language forms the basis for long-term retention of vocabulary. Continued study, as well as use of the language for communication benefit the recall of vocabulary words.
REFERENCES


Language and Human Being

Chauncey C. Riddle
Brigham Young University

Introduction

The human being considered in this paper is the dynamic becoming of Aristotle, the concern with what happens as one acts as a human being rather than the static essence of being projected in a Platonic fashion. This paper is thus the attempt to answer the questions, What happens to human beings as they use language? What is the unique contribution to being a human being which the use of language affords?

An initial attempt was made to cast the answers to these questions in naturalistic terms. It was soon perceived that such an approach, in addition to being a deliberate falsification of the context, yielded but a very impoverished account of the human situation. There are two pieces of knowledge which we have that bear powerfully on the questions at hand: all men are the literal children of the gods, and those parent-gods have given to men the language which they enjoy. This second point is not meant to deny the historic development of individual languages, which may be considered naturalistically. It is simply to note that there was an initial endowment of language, a superior language, which was given to men no more than two hundred human generations ago. The effect of that endowment is the subject of this paper.

Theses

Normal acquisition of any "natural" human language accomplishes four things:

1. Language enables each human being to attain to a fullness of agency and to accountability, which are the measures of being a fully functioning human being. The power of language unto choosing good or evil is so great and so important that every one who enters mortality must acquire language before his or her mortal probation is complete.

2. Language enables each human being to understand the message of salvation from God, to enter into a covenant with God to receive that salvation, and to abide that covenant unto the receiving of salvation.

3. How we communicate is a large part of our salvation; using language correctly is the key to that perfect communication.

4. The choices one makes between good and evil using language thrust one beyond being a human being into becoming either a devil or a servant of Jesus Christ.

1. Agency and accountability.

Definition of agency: There are three necessary and sufficient conditions for agency: There must be 1) an intelligent (goal oriented) being, who has 2) knowledge of alternatives among which to choose to solve his problems (fulfill his goals or desires), and who has 3) power to carry out the choices he makes to fulfill his desires. There is a rudimentary agency which higher animals may be
said to have, for instance, as they select a preference as to where to rest or what to eat as they fulfill desire by doing as they choose. Human beings without language (e.g., wolf children) have this rudimentary agency after the animal fashion.

But a fullness of human agency comes only with linguistic development. Language and the rich communication it makes possible greatly expand the range of desire (expands the horizon of possibilities) for each individual. Language and the resulting communication furnish vastly increased knowledge, including the possibility of tapping the corporate memory of human kind (the writings and memories of other persons), thus to increase the range of means available for choice unto the satisfaction of desire. Language and communication bring to men vastly increased technical and other ability to implement the means chosen for the fulfillment of desire. The end result of this increased agency is what we call civilization, a plethora of choices, understandings and power which enables human beings seek successfully and revel in a marvelous panoply of satisfactions. Language enables a human being to desire things both real and imaginary, to reach for the stars or to plumb the depths.

Accountability, unlike agency, is made possible only through language acquisition. Accountability is the ability of a person to give a linguistic account of what, how and why he or she has acted. Accountability presupposes normal human agency: that the person accounting acted out of choice as to what, how and why he or she acted. While agency is relative (one person has vastly different powers of choice, knowledge and action than another), accountability only demands that the person acted by choosing and can give an account of that choosing. This accountability is what enables human beings to act rationally, according to a principle or rule, for if one can give account of the past, one can also bind oneself to act in a certain manner in the future. This ability is the basis of most cooperation, of contracts and legal arrangements, of law and order in civilization. Two great barriers to civilization are thus inability to communicate through language and mendacity when communication is possible. Clearly it is the communication of good things in a truthful manner which advances civilization.

Choice always involves values as well as mere physical alternatives, thus necessitating a consideration of good and evil. One construal of the value dichotomy is to see good as that which one has learned by induction fulfills his desires, or is sufficiently like what has fulfilled his desires that it is reasonable to believe by induction that the desire will be fulfilled again by the look-alike. Evil is the value attached to things which are undesirable, which past experience has shown to bring pain or dissatisfaction, and this value is extended by induction to things which appear to be like the bearers of dissatisfaction in the past. This definition of good and evil explains the actions of human beings and of many species of animals, all of whom have a measure of agency and can learn from experience.

The Restored Gospel perspective tells us that the definition of good and evil given above is not sufficient, that there is another good and evil which may be considered the real thing, with the former being but a preliminary. In the Restored Gospel, Good is the will of God and only the will of God. The will of man in choosing either the good or the evil under the first definition of them constitute what is Evil in the Restored Gospel. Thus in the Restored Gospel, the emphasis shifts from the anticipated utility or non-utility of making a choice to a recognition of whose will it is that is determining the choice. Motive or reason
for choosing becomes more important than what is being chosen. Thus the new standard is that only God is good, and men to become good-doers must relinquish doing their own will to doing the will of God if they desire to escape from the doing of evil.

Thus men may and do choose between good and evil pre-linguistically, even as do animals. But to be able to choose between Good and Evil one must have normal human linguistic development so that the understanding of Good and Evil may be made manifest to an individual. Good and Evil are abstractions which have no physical exemplifications, whereas good and evil are based on physical experience. Thus Good and Evil are seen only through the eye of faith, which is believing in the revelations of an actual non-human being who speaks to men, to each person in his own natural language and concepts, to explain to each the new understanding of Good and Evil. One then learns that he has known Good all along, for it is the light of Christ which is given to all men.

It is what one has done with the knowledge of the Good, given by revelation, that each man must account before his Father and his Maker. This agency to know the Good and the Evil, and to be able to account for what one has done with that agency is so important that no human being is ever judged by God until he or she has received full linguistic development to enjoy that agency.

2. Language and Salvation.

Salvation in the Restored Gospel is to be placed beyond the power of our enemies. It is essentially a passive matter, though it requires all we can do. What we can do is never sufficient, but does enable us to receive the gifts of salvation from Jesus Christ.

Jesus Christ saves men from four things. He saves them from the grave (from the power of Satan to prevent a reuniting of body and spirit in the resurrection). He can save them from the eternal consequences of having committed sins. He can save them from the littleness of knowledge and power and righteousness which so characterizes human beings. And he can save them from the evil in their own hearts which makes them unable to love God and keep his commandments. Resurrection, the salvation of the body, is given as a free gift to all mankind. But the other forms of salvation, which are sanctification, justification and purification, come only by covenant, by contract. One has to enter into an agreement with God to act in a certain manner (to choose and do only the Good). It is not possible to understand either the offerer of that covenant or the covenant except through language. There must be an understanding of things which are not seen, and an agreement to live by influences which are not seen; these things can only be accomplished by way of language, building on what is seen. Thus language is an indispensable element in the salvation offered to men through Jesus Christ from anything but the grave.

3. The covenant of salvation involves how we communicate and how we use language.

Communication is any affect which one being has upon another. The following is a taxonomy of communication:

1. Sensory communication:
   a. Visual: Seeing or appearing (to be seen).
   a. Auditory: Making noise or hearing.
c. Tactile: Touching or being touched (e.g., shaking hands).
d. Olfactory: To emit or to detect an odor.
e. Gustatory: To taste or be tasted.

2. Impact communication: To apply sufficient force or energy to another person to move or change some part of their body; or to receive the same.

3. Substance communication: To give or take from another person's possession something material.

4. Chemical communication: To introduce a substance into the body of another person which changes their body chemistry; or to receive the same.

5. Indirect communication: To affect something another person owns or holds dear by any of the means of communication; or to be affected in this manner.

6. Privative: To deny another person any of the above communication modes when that person desires and expects the same; or, to suffer this same treatment from another person.

We honor other persons in the Restored Gospel manner only by communicating to preserve their agency. When we use language to communicate with them to gain their full cooperation and agreement as to other possible means of communicating with them, we honor their agency, their choice. Thus we will not communicate with others except visually, and through language (which may involve auditory or tactile language forms), until we have their full permission to do so. Thus a doctor would not operate on someone who has agency until he has explained the proposed procedure and has gained the patient's cooperation (unless the patient is unconscious or not accountable for some other reason).

We can and do honor God in the Restored Gospel only by communicating with anything or anyone just as he instructs us. Thus God instructs his servants as to how to pray, how to speak, how to govern, how to teach, how to administer, how to preach; in all things we are to do his will.

We cannot abide the covenants of the Restored Gospel except we communicate as he, God, directs: to honor and love him and our fellow human beings. Thus our keeping the covenants and obtaining salvation involves using language, the increase in agency which he gives us, in a very special manner.

One of the special manners of communication which God makes available to his faithful servants is the power of the priesthood. The priesthood is the power of God, which faithful servants may use as he directs. To use the priesthood is to speak in the name of God, to command or to instruct using the power of God to bring to pass his eternal purposes. As men increase in righteousness, their priesthood power increases and the necessity of communicating to control or to subdue evil by physical communication is lessened, as when Enoch set at defiance the armies of the enemies of Zion by using his priesthood power. By speaking, the gods created the heavens and the earth. By speaking, the mind and will of God are brought to pass by one who has learned to abide the mind and will of God by obedience to every word that proceeded forth from his mouth.

4. Language, the tool which makes us fully human, is so powerful that the experience of using it thrust us beyond being a human being to become a devil or an eternal servant of Jesus Christ.

It is language which makes us fully conscious of good and evil and which enables us to understand clearly Good and Evil. Thus men have become as the gods, knowing good and evil. Knowing good and evil, men must choose between good
and evil in all things. That choosing has eternal consequences, one of which is
the fact that human choices are either for Good or for Evil in all we do. Thus in
all things man gives allegiance to God, or to Satan (who is the author and
proprietor of Evil).

As a man chooses the way of Good and of God, he becomes godly and a candidate
for glory. Eventually everyone except the sons of perdition will choose the Good
and God, and will inherit glory. Some will make that choice late, and will be
inheritors of a celestial glory. Others will choose earlier, and will inherit a
terrestrial glory. Some choose Good and God when they first have the
opportunity, and thus qualify for the celestial glory, the presence of the Father
and the Son. But all who choose Good are servants of Jesus Christ, doing his will
and furthering the cause of Good in the universe, of their own free will and
choice, to all eternity.

Those who first know the way of Good and God, accept it, try it, taste of the
powers it brings --and then renounce Good and God, are the sons of perdition.
Through language they come to understand the spirit and manner of God in
pursuit of Good, then they use language to lie, to deceive, to curse, to fight
against the Good. Thus if they go down to their deaths in such a condition, they
are past the possibility of repentance and thus must remain in the state they
have chosen to all eternity, servants to Satan, whom they have chosen over God.

Thus language is the power which makes us fully human, but is so powerful that
we cannot remain in this human condition. The power of language is so great in
giving us knowledge and opportunity and in enabling us to act for Good or for
Evil, that we are thrust beyond being human beings to become immortal beings,
persons who espouse and promote Good or Evil, according to their own choice,
for all eternity.

Conclusion

Thus language is the greatest power and instrumentality which human beings
possess. It is the power which opens the whole expanse of eternity to each
person, then closes one's own choices upon one alternative for that eternity. It is
difficult to overestimate the importance and place of language in the human
scheme. We are judged by what we do. But only through language can we do the
greatest Good or the greatest Evil.
Some Unique Features of Mormon Scriptural German
An Error in 'Judgment'

Marvin H. Folsom
Brigham Young University

The vocabulary of the indexed text of the New Testament of four recent bible translations (Revidierte Elberfelder Bibel, 1985; Die Bibel nach der Übersetzung Martin Luthers mit Apokryphen, 1985; Die Bibel, Altes und Neues Testament, Einheitsübersetzung 1980; Die Bibel im heutigen Deutsch, zweite, durchgesehene Auflage, 1980) was sorted according to frequency and text in order to find which words were unique to each individual work. Of particular interest was the comparison of the German translation of the Book of Mormon with that of the four New Testaments. Some of the information on frequency and distribution provided by Wordcrumacher (Text Indexing and Retrieval Software) has been supplemented by data gathered by hand and then described and interpreted.

It comes as no suprise to us that many of high frequency items that occur only in the German Book of Mormon are proper names: Lamaniten 713, Nephi 475, Nephitien 381, Alma 262, Moroni 215, Ammon 173, etc. In fact, personal, place and tribal names make up about 1.5% of all the words in the BM. Some of the other high frequency words occurring only in the Book of Mormon may not be so obvious. Here is a sample. The number in the first column indicates frequency. The word itself is followed by notations from lexicographical works on the level of language. The right hand column lists some alternate translations (either from other German bibles or other translations of the Book of Mormon) and, finally, the English source word.

103 allerart ('veraltend')
52 derjenige
37 ungeachtet ('gehoben')
4 mitsammen ('landsch., österr. ')

54 immerwährend
30 greuelreich
6 feingezwirnt* allerlei, aller Art 'all manner of'

allerlei, aller Art 'all manner of'
wer; alle, die 'he, who; those, who'
trotz 'notwithstanding'
miteinander, zusammen 'together'

ewig 'everlasting'
abscheulich 'abominable'
gezwirnte, feine Leinw. 'fine-twined'

Heiden, Nichtjuden 'gentiles'
Sünde, Bosheit 'iniquity'
Weinberg 'vineyard'
Nachkomme 'descendant'
Gericht, Recht 'judgment'
Liebe 'charity'
Glückseligkeit 'happiness'
Krummschwert 'cimeter'
Brustpanzer 'breastplate'
Pfaflentrug 'priestcraft(s)'
Dornen (gestrüpp) 'briers'
Zucht 'nurture'

175x695]Some Unique Features of Mormon Scriptural German
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Krummschwert 'cimeter'
Brustpanzer 'breastplate'
Pfaflentrug 'priestcraft(s)'
Dornen (gestrüpp) 'briers'
Zucht 'nurture'

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Some of the words do not occur in current dictionaries (indicated by *). Each of these words is a paper in itself, but for today I would like to focus on just one of these words: Richterspruch. Wordcruncher allows one to gather statistics on the distribution of any word or combinations of words. Here are the statistics for Richterspruch and related words as they occur in 4NT (four New Testaments) and the German Book of Mormon.

<table>
<thead>
<tr>
<th>Word</th>
<th>Rev Elb Tokens</th>
<th>Luther 84 Tokens</th>
<th>Einheits Tokens</th>
<th>Bibel ihD Tokens</th>
<th>Buch Mormon Tokens</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
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<td>1 -16</td>
<td>2 -13</td>
<td>12</td>
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<td>27</td>
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<tr>
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<td>51</td>
<td>71</td>
<td>81</td>
<td>49</td>
<td>320</td>
</tr>
<tr>
<td>urteile</td>
<td>12</td>
<td>24</td>
<td>19</td>
<td>34</td>
<td>0</td>
<td>89</td>
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<td>0 -18</td>
<td>0 -18</td>
<td>0 -20</td>
<td>0 -20</td>
<td>11</td>
</tr>
<tr>
<td>richterspruch</td>
<td>0 -18</td>
<td>0 -18</td>
<td>0 -18</td>
<td>0 -20</td>
<td>0 -20</td>
<td>12</td>
</tr>
<tr>
<td>rechtsprechung</td>
<td>0 -18</td>
<td>0 -18</td>
<td>0 -18</td>
<td>0 -20</td>
<td>0 -20</td>
<td>11</td>
</tr>
</tbody>
</table>

The New Testament texts are arranged from left to right approximately in order of most archaic to least archaic. We can see that Strafgericht becomes more frequent from left to right, that is, in the more modern, less archaic translations, except in the case of the Book of Mormon, where it is overrepresented by 38%. (The language of the German Book of Mormon is in many respects more archaic than the bible translations on the left, even though it was translated rather recently.) The word Urteil is used with little variation in frequency except in the Book of Mormon, where it is underrepresented (-23%). It is used twice in phrases with the verb 'to judge' and once in the phrase 'mighty in judgement.' There seems to be some reluctance to use the word Urteil, even though it is in general use in scriptural German. The most frequent word (Gericht) is slightly underrepresented in the Book of Mormon. Urteilsspruch is used only once (L84 Apg 13:27) and Richterspruch is used only in the Book of Mormon.

If we check the translation of the words 'judgments' and 'judgment' in the German Book of Mormon, we find the following distribution:

<table>
<thead>
<tr>
<th>'judgments'</th>
<th>'judgment'</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>Gericht</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Richterspruch</td>
<td>22</td>
<td>4</td>
</tr>
<tr>
<td>Rechtsprechung</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

I believe the single instance of Rechtsprechung is an oversight. It regularly represents English 'justice.' We see in these translations in the German Book of Mormon three semantic distinctions within the field of English 'judgment': 1) Place/Action of trying a person (das Gericht), 2) divine sentence of calamity sent by God (das Strafgericht), 3) formal sentence pronounced by the court/judge (der Richterspruch).
Let us look next at some biblical passages containing the word 'judgment' that are quoted directly in the Book of Mormon, for example: "But the Lord of hosts shall be exalted in judgment (Isaiah 5:16). The words listed are all translations of the Hebrew word mishpat (Wigram 4941). Seven editions of the Book of Mormon and seven OT (Bruns, Riessler-Storr, Jerusalem, Menge, Schlachter, Neue-Welt-Übersetzung, Zürich and Buber, a hebrewizing version of the Old Testament by Buber and Rosenzweig) plus the four NT in the Wordcruncher file (Rev Elb, Lu84, EÚ, BihD) are included in the statistics. The numbers in parentheses represent the various editions of the German Book of Mormon.

<table>
<thead>
<tr>
<th>Verse</th>
<th>Isaiah 5:7</th>
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<th>Isaiah 9:7</th>
<th>Isaiah 49:4</th>
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<td>(2 Ne 15)</td>
<td>(2 Ne 19)</td>
<td>(1 Ne 21)</td>
<td>(2 Ne 8)</td>
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</tr>
<tr>
<td>Recht</td>
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<td>1 (4)</td>
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<td>Rechtspflege</td>
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<tr>
<td>Gericht</td>
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<td>11 (2)</td>
<td>(6)</td>
<td>6 (3)</td>
<td>18</td>
<td>(11)</td>
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</tr>
<tr>
<td>Urteil</td>
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<td>(r.) Entscheidungen</td>
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<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weisungen</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guttat</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Richterspruch</td>
<td>(1)</td>
<td>(1)</td>
<td>(1)</td>
<td>(1)</td>
<td>(4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rechtsprechung</td>
<td>(1)</td>
<td></td>
<td></td>
<td></td>
<td>(1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sache</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(3)</td>
<td>(3)</td>
<td></td>
</tr>
</tbody>
</table>

The use of the word Sache in its older meaning Rechtssache 'case, legal matter,' Rechtsstreit vor Gericht 'court case, litigation' is explained by the fact that older translations of the Book of Mormon in German followed older translations of Luther. The Luther editions of 1534 and 1883 have meine Sache in this verse.

Recht and Gericht are the most frequent choices of the translators of the book of Isaiah and of the translators of the Isaiah passages in the Book of Mormon,
who for the most part followed Luther rather closely (see below). The most conspicuous exception is the word Richterspruch which occurs only in the 1980 version of these passages.

This next table shows the pair 'statutes and judgements' in a passage in Malachi quoted in the Book of Mormon (3 Nephi 25:4).

<table>
<thead>
<tr>
<th>Hebrew word</th>
<th>Mal 3:22a 'statutes'</th>
<th>Mal 3:22b 'judgements'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rev Elb</td>
<td>2706 hq</td>
<td>4941 mishpaht</td>
</tr>
<tr>
<td>Luther</td>
<td>Ordnungen</td>
<td>Rechtsbestimmungen</td>
</tr>
<tr>
<td>Einheitsübersetzung</td>
<td>Satzung</td>
<td>Recht</td>
</tr>
<tr>
<td>Bibel 1hDeutsch</td>
<td>Gebote</td>
<td>Gebote Ordnungen</td>
</tr>
<tr>
<td>Buber</td>
<td>Gesetze</td>
<td>Rechtsgeheiße</td>
</tr>
<tr>
<td>Jerusalem</td>
<td>Gebote</td>
<td>Satzungen</td>
</tr>
<tr>
<td>Bruns</td>
<td>Satzungen</td>
<td>Weisungen</td>
</tr>
<tr>
<td>Riessler-Storr</td>
<td>Gebote</td>
<td>Satzungen</td>
</tr>
<tr>
<td>Menge</td>
<td>Satzungen</td>
<td>Verordnungen</td>
</tr>
<tr>
<td>Schlachter</td>
<td>Pflichten</td>
<td>Rechte</td>
</tr>
<tr>
<td>Neue-Welt</td>
<td>Bestimmungen</td>
<td>Richterliche Entscheidungen</td>
</tr>
<tr>
<td>Zürich</td>
<td>Satzungen</td>
<td>Rechte</td>
</tr>
<tr>
<td>BM 1893</td>
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<td>Rechte</td>
</tr>
<tr>
<td>BM 1902</td>
<td>Gebote</td>
<td>Rechte</td>
</tr>
<tr>
<td>BM 1924</td>
<td>Gebote</td>
<td>Rechte</td>
</tr>
<tr>
<td>BM 1950</td>
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<td>Rechte</td>
</tr>
<tr>
<td>BM 18th (n.d.)</td>
<td>Gebote</td>
<td>Rechte</td>
</tr>
<tr>
<td>BM RLDS</td>
<td>Gebote</td>
<td>Rechte</td>
</tr>
<tr>
<td>BM 1980</td>
<td>Satzungen</td>
<td>Richtersprüche</td>
</tr>
</tbody>
</table>

Here we can clearly see that earlier editions of the Book of Mormon (except the latest) follow Luther and that Richterspruch is an innovation in translations of the Book of Mormon.

Some Old Testament ideas and phrasings occur in the New Testament and the Book of Mormon. Not all of these passages are repeated word for word, but all are similar in construction and contain the word 'judgment(s)' in the King James text of the Bible, for example: "For true and righteous are his judgments" in Rev 19:2 and "Holy, holy are thy judgments" in 2 Nephi 9:46 are very similar to "the judgments of the Lord are true and righteous altogether" in Psalm 19:9.
In the verses in the Psalms there is a great deal of variety. In the NT passages, there is general agreement on the choice of (Gerichte). The word Richtersprüche is one of several alternatives that only occur once.

Permit me to turn now to what I call the "triple combination" in this semantic domain, the series 'commandments, statutes, judgments'. It occurs seven times in the Book of Mormon. I have compared them with the same trilogy in five passages in Deuteronomy in the OT of the four translations in the combined
file along with seven others including Buber. In this environment, the translator is forced to use three very closely related elements. If he has felt comfortable up to now using just two terms, he must now face reality and choose a third term. (Only Bruns, Deut 8:11, failed to use three terms.)

**Choice of Vocabulary in Deuteronomy**

<table>
<thead>
<tr>
<th>Hebrew word</th>
<th>commandments</th>
<th>statutes</th>
<th>judgments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mitsvah</td>
<td>hol</td>
<td>mishpat</td>
</tr>
<tr>
<td>Rev Elb</td>
<td>Deut 6:1</td>
<td>Gebot</td>
<td>Ordnungen</td>
</tr>
<tr>
<td></td>
<td>Deut 7:11</td>
<td>Gebot</td>
<td>Ordnungen</td>
</tr>
<tr>
<td></td>
<td>Deut 8:11</td>
<td>Gebote</td>
<td>Ordnungen c</td>
</tr>
<tr>
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<td>Deut 11:1</td>
<td>Gebote c</td>
<td>Ordnungen a</td>
</tr>
<tr>
<td></td>
<td>Deut 30:16</td>
<td>Gebot</td>
<td>Ordnungen</td>
</tr>
<tr>
<td>Luther 84</td>
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<td>Gebote</td>
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<tr>
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<td>Deut 7:11</td>
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<td>Gesetze</td>
</tr>
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<td>Deut 8:11</td>
<td>Gebote</td>
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<td>Deut 11:1</td>
<td>Gebote c</td>
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<td>Gesetze</td>
<td>Gebote</td>
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<td></td>
<td>Deut 7:11</td>
<td>Befehl</td>
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<td>Weisungen</td>
<td>Gebote</td>
</tr>
<tr>
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<td>Gebote</td>
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<td>Satzungen</td>
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<td>Satzungen a</td>
<td>Rechte b</td>
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<td>Satzungen richterl Entscheidungen</td>
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Only Buber and Neue-Welt (both expressly concordant) maintain the distinction in Hebrew (2706 in the first two and 2708 in the last three verses listed). Allowing for a slight discrepancy in order, all (with the exception of Bruns) translate concordantly for the last member of the trilogy 'judgments.' The word Richterspruch does not appear in any of these translations.

I would now like to present the data from previous translations of the Book of Mormon. I have mapped them in this condensed, abstract fashion for a particular purpose. I want you to see the number of different terms used in German for the same word in the original English. Direct your attention to the numbers in the column on the far right. They represent the number of different terms used for the English word in the left hand column. A key is given at the bottom for the curious.
### Vocabulary Selection in Translations of the Book of Mormon

<table>
<thead>
<tr>
<th>Edition/Verse</th>
<th>N 1 7 2 N 2 N 5 M 0 6 A L 8 A 5 8 H E 3 H 1 5 N 5</th>
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<td><strong>commandments</strong></td>
<td>G B G G G G 2</td>
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<td><strong>statutes</strong></td>
<td>C B D C B D E C G G 6</td>
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<td><strong>judgments</strong></td>
<td>B G C F C F D F R 6</td>
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<td>C H G G G G G 3</td>
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<td></td>
<td><strong>statutes</strong></td>
<td>O B C C B H B H G G 4</td>
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<tr>
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<td><strong>judgments</strong></td>
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<td>G G B I R C F C R 7</td>
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<td>G B G G G G G 2</td>
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<td></td>
<td><strong>statutes</strong></td>
<td>C B G C B B B G G G 3</td>
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<td><strong>judgments</strong></td>
<td>B G C F C F F F R 5</td>
</tr>
<tr>
<td>BM 1980</td>
<td><strong>commandments</strong></td>
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<td><strong>judgments</strong></td>
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**A-richterliche Entscheidungen**  | **J-Richtersprüche**
**B-Gesetze**                      | **K-Ordnungen**
**C-Verordnungen**                 | **L-Rechtsbestimmungen**
**D-Statuten**                     | **M-Rechtsgeheisse**
**E-Gerechtsame**                   | **N-Pflichten**
**F-Gerichte**                     | **O-Bestimmungen**
**G-Gebote**                       | **P-Satzungen**
**H-Vorschriften**                 | **Q-Weisungen**
**I-Ratschlüsse**                  | **R-Rechte**

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None of the translators of the earlier editions of the Book of Mormon was consistent in his choice of words in this trilogy. The latest edition is strictly concordant as were all but one of the translations of Deuteronomy in the OT. It is obvious that translations of the Book of Mormon prior to 1980 were too casual in translating the word judgment(s). This becomes even more important if one is intent on translating consistently and has concordances and other tools with which to implement a concordant philosophy. The necessity becomes compelling when one is faced with selecting words for the series 'commandments, statutes and judgments.'

We have looked at words in the semantic field of 'judgment' and found that Richterspruch is not found in any of the four modern translations of the New Testament and that Strafgericht is used with some frequency only in Bibel im heutigen Deutsch. We have also seen that the 1980 German Book of Mormon uses the three words Gericht, Strafgericht and Richterspruch for three portions of the semantic domain of English 'judgment' with about the same frequency. The Isaiah passages and their quoted counterparts in the Book of Mormon indicated that Recht and Gericht are the most frequently used choices and that Richterspruch occurred only in the 1980 Book of Mormon. The examination of the pair 'statutes and judgments' quoted from Malachi in the Book of Mormon produced several alternatives but Richterspruch was not one of them. Similarly structured phrases from the Psalms and Revelation showed a preponderance of Gericht(e) or Urteil(e) with the only example of Richterspruch in the 1980 German Book of Mormon. The examination of the series 'commandments, statutes and judgments' in Deuteronomy and in earlier translations of the Book of Mormon showed that Richterspruch occurred only in the 1980 Book of Mormon.

I believe the translator of BM 1980 wanted a third term for 'formal sentence given by the court/judge' within the semantic field 'judgment'. There seems to have been some reluctance to use the word Urteil which is otherwise well founded in German biblical tradition. The terms already in use in German biblical tradition (Urteil, richterliche Entscheidungen, Rechtsbestimmungen, Rechtsgesetze, Rechtsvorschriften, Rechtsspruch, etc.) somehow were not acceptable. I am guessing that like me he stumbled across Richterspruch in Daniel 9:26 in the Einheitsübersetzung or in the Züricher Bibel 1931. It focused on the person rendering the judgment and fit well with the phrase for 'render judgment' in German: Recht sprechen. He then employed it consistently in this meaning even though it was not the choice of other translators in the trilogy 'commandments, statutes, judgments.'

The introduction of the ever more popular Strafgericht mentioned at the outset is straightforward and can be justified as the term for 'divine calamity.' However, the fact that many good translations were able to get along without this separate meaning demonstrates that its introduction was not necessary. In my opinion, the introduction of the unique, obsolescent and unscriptural Richterspruch was clearly an "error in judgment."
TOWARDS A CRITICAL TEXT
OF THE BOOK OF MORMON

Royal Skousen

Over the past several years the Foundation for Ancient
Research and Mormon Studies (FARMS) has published a critical text
of the Book of Mormon. The text was published in three volumes:
I (1 Nephi - Words of Mormon) [1984], II (Mosiah - Alma) [1986],
and III (Helaman - Moroni) [1987]. During 1986-87 a second
three-volume (corrected) edition of the critical text was
published.

The purpose of this paper is not only to review the FARMS
critical text, but also to discuss some of the general problems
that arise when trying to establish a critical text of the Book
of Mormon. In this review article I will (1) discuss the need
for a critical text of the Book of Mormon, (2) consider the issue
of Joseph Smith's "bad grammar," (3) review the FARMS critical
text, and (4) propose an alternative critical text for the Book
of Mormon.

Before considering these issues, I will first address the
question of exactly what a critical edition is. Simply put, a
critical edition is composed of two main parts, (i) the critical
text itself and (ii) an apparatus (consisting of notes at the
bottom of the page, below the critical text). Usually the
critical text attempts to represent the original form of the
text, while the apparatus shows the textual variants and their
sources. The editors of the critical edition decide which
variant of the text best represents the original and put that in
the critical text. The apparatus shows all the (significant)
variants of the text and the sources for those variants
 manuscripts, published texts, and conjectures). The apparatus
thus allows the reader to evaluate the decisions of the editors.

This kind of critical text is said to be eclectic, because
the text itself is derived from a number of different sources.
The critical text for the Nestle-Aland Greek New Testament is of
this eclectic type. Another possibility is to have the critical
text represent a single textual source, even though that source
may contain textual errors. In this case the apparatus will note
other readings, some of which may be preferred over the reading
in the text. The Stuttgart Hebrew Bible is an example of this
second type of critical text; its text is based on a single
Hebrew manuscript, the Leningrad manuscript, dating from about
1009 AD.

In establishing the text of the Book of Mormon, we have two
manuscripts as well as a number of important printed editions.
Joseph Smith dictated the Book of Mormon to several scribes,
chiefly Oliver Cowdery, and the resulting manuscript is usually
referred to as the original manuscript (O). Oliver Cowdery then
made a copy of the original manuscript. This second manuscript is usually referred to as the printer's manuscript (P) since this copy was used by the printing firm of E. B. Grandin to set the type for the 1830 edition of the Book of Mormon. Unfortunately, only about a fourth of the original manuscript exists, but the printer's manuscript is essentially extant. Since the printer's manuscript is not a replica of the original manuscript, a critical edition of the Book of Mormon will undoubtedly have an eclectic text.

There are several reasons for creating a critical text of the Book of Mormon.

(1) A good deal of statistical work has been done in trying to identify the characteristic style of various authors in the Book of Mormon. The goal of such work has been to demonstrate that the Book of Mormon truly represents the work of multiple authors. The validity of such statistical analyses may well depend on the text that the analyses are based on. For example, a good many occurrences of the phrase "it came to pass that" have been eliminated from later editions of the Book of Mormon. This deletion distorts the original frequency of occurrence for this phrase, thus making it a less unreliable indicator of stylistic differences than if one uses a critical text as a basis for statistical analyses.

(2) Numerous studies have been made on the question of Hebraisms in the Book of Mormon. Yet it turns out that the original text actually contained a number of potential Hebraisms that have been removed by later editing. Consider, for instance, the use of and after a conditional clause and before the main clause, as in Moroni 10:4 (according to the printer's manuscript and the 1830 edition):

... and if ye shall ask with a sincere heart, with real intent, having faith in Christ, and he will manifest the truth of it unto you ...

(In quotations, italics are added to help identify the words in question.) In the 1837 and all later editions, this and has been deleted. Yet this use of and is possibly a Hebraism, as in Judges 4:20:

\[
\text{'im} \quad \text{'iš} \quad 
\text{yūbō} \quad \text{ûšē'ēlēk} \quad \text{wē'āmar} \\
\text{if} \quad \text{anyone comes and asks and says} \\
\text{hāyēš} \quad \text{pōh} \quad \text{'iš} \\
\text{is there there anyone} \\
\text{wē'āmart} \quad \text{āyin} \\
\text{and you will say there isn't}
\]

In other words, "If anyone comes and says, 'Is anyone there?', you will say, 'No, there isn't.'"
Another possible example of a removed Hebraism occurs in 1 Nephi 3:17, where the original and printer's manuscripts (as well as most early printings of the Book of Mormon) have the phrase "for he knowing that Jerusalem must be destroyed." The use of the present participle knowing rather than knows can be interpreted as a Hebraism. Consider a similar expression in Genesis 3:5:

\[ kî \ yôdēa' \ 'elôhîm \ kî \ ... \]

The present participle form \( yôdēa' \) is tenseless and can be literally translated as either "is knowing" (that is, "knows") or "was knowing" (that is, "knew"). Given the context of Genesis 3, this expression should be translated into standard English as "for God knows that ... ."

Similarly in 1 Nephi 3:17, the context implies that if knowing is to be rendered in standard English, it should be knows rather than knew. Yet later editing of the Book of Mormon has replaced the original knowing by the past tense knew rather than the present tense knows:

And all this he hath done because of the commandments of the Lord. For he knew that Jerusalem must be destroyed, because of the wickedness of the people. For behold, they have rejected the words of the prophets. (1 Nephi 3:16-18, 1981 edition)

This emendation leads to a strange shift of tenses, from the present perfect ("hath done") to the simple past ("knew"), then back to the present perfect ("have rejected"). Moreover, Nephi is speaking here to his brothers long before Jerusalem was ever destroyed. By replacing the original knowing with knows, the passage (as determined by the original manuscript) reads exactly right:

And all this he hath done because of the commandment of the Lord, for he knows that Jerusalem must be destroyed because of the wickedness of the people. For behold, they have rejected the words of the prophets.

knows conjecture] knowing O P 1830 1837 1841 1849 1852, knew 1840 1879&

(In the above apparatus, I first give the form as it appears in the proposed emended text — that is, knows — followed by its evidence. The right bracket ] is used to separate the text form from other variants. In this example there are two variants. The first one, knowing, is found in the original manuscript O, the printer's manuscript P, and in most of the earlier printings. The second variant, knew, is first found in the 1840 printing, then later in the 1879 printing and in all subsequent printings, which is represented by 1879 followed by an ampersand &.)
(3) When we compare the Biblical quotes in the Book of Mormon with the King James Version (KJV) as well as ancient Biblical texts, our conclusions are affected by which Book of Mormon text is chosen. For example, in a number of cases later editors of the Book of Mormon have made changes in the Isaiah passages in order to attain better agreement with the KJV text of Isaiah. Some examples:

<table>
<thead>
<tr>
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</thead>
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<td></td>
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<td>1837</td>
</tr>
<tr>
<td>16:8</td>
<td></td>
<td>+ am</td>
<td>1837</td>
</tr>
<tr>
<td>17:1</td>
<td></td>
<td>and &gt; that</td>
<td>1837</td>
</tr>
<tr>
<td>19:5</td>
<td></td>
<td>+ is</td>
<td>1920</td>
</tr>
<tr>
<td>19:9</td>
<td></td>
<td>the &gt; Ø</td>
<td>1837</td>
</tr>
</tbody>
</table>

(Here the plus + refers to an addition, > refers to a replacement, and Ø stands for the null symbol — that is, the sequence "> Ø" refers to a deletion.)

Or the opposite has occurred: later editors have made changes in the Book of Mormon text that make the current text differ from the KJV:

<table>
<thead>
<tr>
<th>2 Nephi</th>
<th>Verse</th>
<th>Change</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>16:6</td>
<td></td>
<td>seraphims &gt; seraphim</td>
<td>1920</td>
</tr>
<tr>
<td>16:9</td>
<td></td>
<td>understand &gt; understood</td>
<td>1837</td>
</tr>
<tr>
<td>16:10</td>
<td></td>
<td>convert &gt; be converted</td>
<td>1837</td>
</tr>
<tr>
<td>16:13</td>
<td></td>
<td>in it &gt; Ø</td>
<td>1837</td>
</tr>
</tbody>
</table>

(4) There are still textual errors that have thus far escaped correction. For example, consider an error that occurred in producing the printer’s manuscript from the original manuscript. In 1 Nephi 8:31 the original manuscript reads PRSSING (that is, pressing), but this was mistakingly copied as feeling in the printer's manuscript:

And he also saw other multitudes pressing their way towards that great and spacious building.

pressing O <pressing> ] feeling P 1830&

In all other passages in this chapter the text has press or pressing and not feel or feeling, as in verse 30: "he saw other multitudes pressing forward ... and they did press their way forward continually." Similar uses of press and pressing occur in verses 21 and 24. This use of press parallels New Testament usage, as in Philippians 3:14 (KJV): "I press toward the mark for the prize of the high calling of God in Christ Jesus." As in Lehi's dream, numerous New Testament passages also use the word press to describe individuals trying to work their way through crowds (e.g. Mark 2:4; Luke 8:19, 19:3). In fact, except for this textual error in 1 Nephi 8:31, there is no scriptural use of the phrase "to feel one's way."

(5) There has been considerable editing of the Book of Mormon throughout its many printings, and sometimes this editing
has introduced errors into the text. In addition to the example of interpreting knowing as knew in 1 Nephi 3:17, consider the following emendation in Mormon 8:28 (1981 edition):

Yea, it shall come in a day when the power of God shall be denied, and churches become defiled and be lifted up in the pride of their hearts; yea, even in a day when leaders of churches and teachers shall rise in the pride of their hearts, even to the envying of them who belong to their churches.

Earlier this passage read as follows (based on the printer's manuscript):

... yea, it shall come in a day when the power of God shall be denied, and churches become defiled and shall be lifted up in the pride of their hearts; yea, even in a day when leaders of churches and teachers in the pride of their hearts, even to the envying of them who belong to their church ...

(The insertion symbol ^ refers the reader to the place in the text where a variant has been later inserted.) In order to eliminate the sentence fragment, the phrase "shall rise" was added in the 1911 edition. Yet a more appropriate emendation would be to insert the parallel "shall be lifted up," which occurs in the previous sentence: "and churches become defiled and shall be lifted up in the pride of their hearts."

The editing of the Book of Mormon has been fairly extensive. A critical edition allows the reader to note not only the grammatical and other changes that have been made in the text but also when they were first introduced. Many of the changes have eliminated archaic language that is typical of the KJV:

**shew** > **show**:

which the Lord had shewn unto him (1 Nephi 1:15) > shown [1911]

cf. which thou hast shewed unto me (Genesis 19:19)

**which** > **who(m)** [when the referent is human]:

and my elder brethren, which were Laman, Lemuel, and Sam (1 Nephi 2:5) > who [1837]

cf. and Lot also, which went with Abram, had flocks (Genesis 13:5)

**exceeding** > **exceedingly** [adverb in pre-adjective position]:

it was exceeding great (1 Nephi 3:25) > exceedingly [1981]
cf. thy exceeding great reward (Genesis 15:1)

do > Ø [non-emphatic modal in positive declarative sentences]:
    they did do as he commanded them (1 Nephi 2:14) > did [1837]
    cf. and did wipe them (Luke 7:38)

a > Ø [pre-verbal prepositional a]:
    the armies of the Lamanites are a marching towards the city
    of Cumenei (Alma 57:31) > Ø [1837]
    cf. I go a fishing (John 21:3)

that > Ø [preceded by a subordinate conjunction]:
    because that he was a visionary man (1 Nephi 2:11) > Ø [1837]
    cf. because that in it he had rested (Genesis 2:3)
    after that I have abridged the record of my father
    (1 Nephi 1:17) > Ø [1837]
    cf. then his lord, after that he had called him, said
    unto him (Matthew 18:32)

how > what [pre-adjectival relative pronoun]:
    how is it that ye have forgotten how great things the Lord
    hath done for us (1 Nephi 7:11) > what [1837]
    cf. tell them how great things the Lord hath done for
    thee (Mark 5:19)

sayeth, saith > said [historical present occurring in the Greek
New Testament and the KJV]:
    the Lord spake unto my father ... and sayeth unto him
    (1 Nephi 2:1) > said [1837]
    cf. immediately his leprosy was cleansed and Jesus
    saith unto him (Matthew 8:3-4)

change in preposition:
    let us be faithful in him (1 Nephi 7:12) > to [1837]
    cf. for this cause have I sent unto you Timotheus, who
    is my beloved son and faithful in the Lord
    (1 Corinthians 4:17, KJV)
removing mixup of sit and set

upon which I never had before sat my foot (1 Nephi 11:1) >
sat [1849]

set [1849]

cf. when he was set down on the judgment seat
(Matthew 27:19, KJV)

the king sat him down to eat meat (1 Samuel 20:24, KJV)

for > Ø [preceding the infinitive marker]:

after their many struggles for to destroy them (Alma 27:1) >
to [1837]

cf. all their works they do for to be seen of men
(Matthew 23:5)

Of course, some (but not all) of these expressions can be
found in Joseph Smith's colloquial language. For instance, in
his 1832 statement on how he translated the Book of Mormon he
wrote: "but the Lord had prepared spectacles for to read the
Book."15

The Book of Mormon also contains numerous switches between
the traditionally singular thou and thee and the traditionally
plural ye and you, as in Alma 37:37:

Counsel the Lord in all thy doings, and he will direct thee
for good; yea, when thou liest down at night, lie down unto
the Lord, that he may watch over you in your sleep; and when
thou risest in the morning, let thy heart be full of thanks
unto God; and if ye always do these things, ye shall be
lifted up at the last day.16

But this mixing of the second person pronouns should not be
interpreted as ungrammatical. Rather, pronominal variation is a
characteristic of many writers from Middle English through Early
Modern English. Lyle Fletcher has emphasized this point. In
chapters 3 and 4 of his thesis,17 he identifies many examples of
variation:

Sir Gawain and the Green Knight [c. 1370-1390]

Bot ge schal be in yowre bed, burne, at thyn ese!
(line 1071)

Chaucer, Canterbury Tales ("Wife of Bath's Prologue") [c. 1390]

Com neer, my spouse, lat me ba thy chekel
Ye sholde been al pacient and meke ...
(lines 433-34)
Shakespeare also has examples of pronominal mixing:

*Julius Caesar* (act 2, scene 3) [1599]

Artemidorus: If thou beest not immortal, look about you.

In fact, the Bible itself contains many examples of switching between the singular and plural forms, even in the original Hebrew and Greek texts. This variation is reflected, for example, in the King James translation of the following two passages:

When thou shalt beget children, and children's children, and ye shall have remained long in the land, and shall corrupt yourselves, and make a graven image, or the likeness of any thing, and shall do evil in the sight of the Lord thy God, to provoke him to anger ... (Deuteronomy 4:25)

O Jerusalem, Jerusalem, thou that killest the prophets, and stonest them which are sent unto thee, how often would I have gathered thy children together, even as a hen gathereth her chickens under her wings, and ye would not! (Matthew 23:37)

Moreover, the original King James Version itself had "errors" in the use of the second person pronouns; these "errors" were removed in later printings of the KJV (in the 1760's), long after thou, thee, and ye had dropped out of standard English.

Despite the prevalence of pronominal variation in the Bible and English literature, editors of the Book of Mormon have altered some of these pronouns, as in the following examples from 1 Nephi:

3:29 thou shalt go up to Jerusalem again and the Lord will deliver Laban into your hands > ye shall [1837]

7:8 thou art mine elder brethren > ye are [1840]

An analysis of the grammar changes that various editors have introduced into the Book of Mormon text shows that most of the changes eliminate language characteristic of the King James Version of the Bible. Yet few would criticize the "bad grammar" of the KJV or suggest that the KJV should be "cleaned up" in the same way. One suspects that later editors have unknowingly removed King James expressions from the Book of Mormon under the mistaken idea that they were simply correcting grammatical errors.

Of course, some of these "errors" are not found in the King James Bible, but these "errors" are representative of Joseph Smith's language. And of course editors have worked to eliminate these "errors" as well. Consider, for instance, the many
attempts to make the archaic pronouns and verbal endings conform to their original historical usage:

because of the most plain and precious parts of the gospel of the lamb which hath been kept back (1 Nephi 13:34) > has [1837] > have [1841]

Nephi's brethren rebelleth against him (1 Nephi introductory summary) > rebel [1920]

Other types of grammatical "errors" have also been removed from the Book of Mormon text:

changes in the use of the irregular be verb:

thy power and goodness and mercy is over all the inhabitants of the earth (1 Nephi 1:14) > are [1837]

they was yet wroth (1 Nephi 4:4) > were [1830]

simple past tense forms replaced by past participle forms:

I had smote (1 Nephi 4:19) > smitten [1830]

I had slew (1 Nephi 4:26) > slain [1830]

my father had read and saw (1 Nephi 1:14) > seen [1920]

the Lord hath protected my sons and delivered them out of the hands of Laban and gave them power (1 Nephi 5:8) > given [1920]

them > those [in modifying position]:

the tender mercies of the Lord is over all them whom he hath chosen (1 Nephi 1:20) > those [1837]

this shall be your language in them days (Helaman 13:37) > those [1837]

number agreement:

we had obtained the record which the Lord had commanded us and searched them (1 Nephi 5:21) > records [1852]

word change:

it was desirous above all other fruit (1 Nephi 8:12) > desirable [1837]

Oxford English Dictionary21 (OED)

desirous (definition 5) = 'desirable'
sample OED citation (from John Gay, *The Beggar's Opera*, first performed in 1728): "Wine inspires us, And fires us ... Women and Wine should Life employ. Is there ought else on Earth desirous?" (act 2, scene 1)

Of course, this process of "cleaning up" the text is a never-ending one, since there are differences over what is acceptable usage. For the overly prescriptive, there are still grammatical "errors" in the Book of Mormon:

sentence ends in a preposition:

God is mindful of every people in whatsoever land they may be in (Alma 26:37) > Ø [1840]

(The 1840 deletion of the first in eliminates the original repeated preposition, but still allows the sentence to end in a preposition.)

split infinitive (not yet removed):

it is that same being who put it into the heart of Gadianton to still carry on the work of darkness (Helaman 6:29)

Besides grammatical editing, there has been a good deal of stylistic editing:

attempt to remove potential ambiguity:

he pitched his tent in a valley beside a river of water (1 Nephi 2:6) > by the side of [1837]

agreement of modals:

that we might preserve unto our children the language of our fathers and also that we may preserve unto them the words which have been spoken (1 Nephi 3:19) > may [1837]

count nouns changed to mass nouns:

and also of the seeds of fruits of every kind (1 Nephi 8:1) > fruit [1840]

avoiding a (potential) multiple negative:

and I have not written but a small part of the things which I saw (1 Nephi 14:28) > Ø [1920]

avoiding the subjunctive were when referring to future time:

he spake unto them concerning the Jews how that after they were destroyed (1 Nephi 10:2-3) > should be [1837]
Finally, there are examples of direct addition to the text:

avoiding potential misunderstandings:

me thought I saw a dark and dreary wilderness
(1 Nephi 8:4) > in my dream [1837]

clarifying doctrinal issues:

the virgin which thou seest is the mother of God
(1 Nephi 11:18) > the Son of [1837]

editorial comments:

and are come forth out of the waters of Judah
(1 Nephi 20:1) > (or out of the waters of baptism)
[1840]

This supposed problem of grammatical "errors" leads directly to the question of whether the Book of Mormon text represents the Lord's actual language to Joseph Smith or simply Joseph Smith's own language. In other words, does the Book of Mormon represent a direct and exact revelation from the Lord, or did the ideas come into Joseph's mind and then he put them into his own words? If the revelation was specific and exact, then there would definitely be some value in having a text that would directly represent the original language. Of course, from a linguistic point of view, a reader might adopt the second position — that the specific language of the Book of Mormon is not directly from the Lord — but still wish to have the text in Joseph Smith's own "impure" and "ungrammatical" language.

It might be worthwhile to consider in more detail the question of loose versus tight control over the translation. There is evidence both for and against the idea of tight control.

evidence for tight control

(1) statements on how the translation proceeded: Unfortunately, neither Joseph Smith nor Oliver Cowdery have told us much on how the translation took place. But four first-hand statements by observers and participants22 show remarkable agreement:

Joseph Knight: Now the way he translated was he put the urim and thummim into his hat and Darkned his Eyes then he would take a sentence and it would appar in Brite Roman Letters. Then he would tell the writer and he would write it. Then that would go away the next sentence would Come and so on. But if it was not Spelt rite it would not go away till it was rite, so we see it was marvelous. Thus was the hol translated.23
Emma Smith: In writing for your father I frequently wrote day after day, often sitting at the table close by him, he sitting with his face buried in his hat, with the stone in it, and dictating hour after hour with nothing between us.

Q. Had he not a book or manuscript from which he read, or dictated to you? A. He had neither manuscript nor book to read from. Q. Could he not have had, and you not know it? A. If he had anything of the kind he could not have concealed it from me. Q. Are you sure that he had the plates at the time you were writing for him? A. The plates often lay on the table without any attempt at concealment, wrapped in a small linen table cloth, which I had given him to fold them in. I once felt of the plates, as they thus lay on the table, tracing their outline and shape. They seemed to be pliable like thick paper, and would rustle with a metallic sound when the edges were moved by the thumb, as one does sometimes thumb the edges of a book. Q. Where did father and Oliver Cowdery write? A. Oliver Cowdery and your father wrote in the room where I was at work.

Q. Could not father have dictated the Book of Mormon to you, Oliver Cowdery and the others who wrote for him, after having first written it, or having first read it out of some book? A. Joseph Smith could neither write nor dictate a coherent and well-worded letter; let alone dictating a book like the Book of Mormon. And, though I was an active participant in the scenes that transpired, it is marvelous to me, "a marvel and a wonder," as much so as to any one else.

David Whitmer: Joseph Smith would put the seer stone into a hat, and put his face in the hat, drawing it closely around his face to exclude the light; and in the darkness the spiritual light would shine. A piece of something resembling parchment would appear, and on that appeared the writing. One character at a time would appear, and under it was the interpretation in English. Brother Joseph would read off the English to Oliver Cowdery, who was his principal scribe, and when it was written down and repeated to Brother Joseph to see if it was correct, then it would disappear, and another character with the interpretation would appear.

Elizabeth Anne Whitmer Cowdery Johnson (David Whitmer's sister, Oliver Cowdery's wife): I cheerfully certify that I was familiar with the manner of Joseph Smith's translating the book of Mormon. He translated the most of it at my Father's house. And I often sat by and saw and heard them translate and write for hours together. Joseph never had a curtain drawn between him and his scribe while he was translating. He would place the director in his hat, and then place his face in his hat, so as to exclude the light, and then ...
All four mention an instrument of translation in a hat. All refer to Joseph Smith's ability to dictate extensively without using the gold plates or any other physical text.²⁸

(2) **spelling of names:** David Whitmer and Joseph Knight both refer to control over the spelling, but this seems to be only true for the spelling of names in the Book of Mormon. In another interview, Whitmer said that Joseph Smith's spelling out words was restricted to names, that Joseph "was utterly unable to pronounce many of the names which the magic power of the Urim and Thummim revealed and therefore spelled them out in syllables, and the more erudite scribe put them together."²⁹ Actually, Joseph Smith probably spelled out names letter by letter rather than syllable by syllable (although it is quite possible that David Whitmer used the term "syllable" to mean "letter," the smallest unit of writing).³⁰

This spelling out of names is also supported by Emma Smith in an 1856 interview:

> When my husband was translating the Book of Mormon, I wrote a part of it, as he dictated each sentence, word for word, and when he came to proper names he could not pronounce, or long words, he spelled them out, and while I was writing them, if I made a mistake in spelling, he would stop me and correct my spelling, although it was impossible for him to see how I was writing them down at the time. Even the word Sarah he could not pronounce at first, but had to spell it, and I would pronounce it for him.³²

This spelling out of names would explain, for example, why Nephi is spelled with ph and not f – or why so many names in the Book of Mormon end in the letter i, a rather rare spelling in English for a final vowel in multi-syllabic words.

Nonetheless, it also appears that Joseph Smith did not continue to spell frequently occurring names, with the result that spelling variation of hard-to-spell names (like Amalickiah) does occur in the manuscripts. But for most names in the Book of Mormon there is little or no variation. In numerous places, especially when a genealogy is given (Ether 1:6-32) or a list of generals (Mormon 6:13-14) or apostles (3 Nephi 19:4), there is virtually no manuscript variation at all. (In the above lists, the only name that varies in spelling in the manuscripts is Isaiah, a Biblical name.) It is obvious from the manuscripts that spelling variation of common words was allowed. But there does seem to be spelling control over at least the first occurrence of Book of Mormon names.

(3) **Semitic textual evidence:** In a number of his books, Hugh Nibley has provided many examples of Semitic and other Near-Eastern names and phrases in the Book of Mormon.³³ The phrases give evidence for control at the word level, while once more the names provide evidence for spelling control. (As an example,
Nibley argues that the ph spelling of the name Nephi shows an Egyptian influence.\textsuperscript{34} We also have the work of John W. Welch on chiasmus in the Book of Mormon.\textsuperscript{35} His examples demonstrate a tight control on the order of specific words and phrases.

In addition, there are some very interesting textual relationships between Book of Mormon passages and corresponding Biblical passages. Consider, for instance, the case of the missing the in 2 Nephi 13:18-23:

In that day the Lord will take away the bravery of tinkling ornaments, and cauls, and round tires like the moon; the chains, and the bracelets, and the mufflers; the bonnets, and the ornaments of the legs, and the headbands, and the tablets, and the earrings; the rings, and nose jewels; the changeable suits of apparel, and the mantles, and the wimples, and the crisping pins; the glasses, and the fine linen, and hoods, and the veils.

(Here the text is based on the printer's manuscript and the 1830 edition.) When we compare this passage with the corresponding verses in Isaiah 3 (KJV), we note that the occurrences and non-occurrences of the little word the are identical, except that the Book of Mormon has the missing before hoods at the end of verse 23. Of course, this missing the does appear in the Masoretic text (the traditional Hebrew Bible), but interestingly it is missing in a number of textual sources: in the Vatican version of the Septuagint\textsuperscript{36} and (according to the apparatus in the FARMS critical text) in some of the catena quotations from the Septuagint, in the Syriac text, and in the Aramaic Targums. Of all the the's that could have been "accidently" deleted in this long list, Joseph Smith comes up with the one that is missing in part of the Biblical textual tradition.

evidence for loose control

Usually the most common argument against tight control is that Joseph Smith's grammar is bad:

B. H. Roberts: If the Book of Mormon is a real translation instead of a word-for-word bringing over from one language into another, and it is insisted that the divine instrument, Urim and Thummim, did all, and the prophet nothing — at least nothing more than to read off the translation made by Urim and Thummim — then the divine instrument is responsible for such errors in grammar and diction as occur. But this is to assign responsibility for errors in language to a divine instrumentality, which amounts to assigning such errors to God. But that is unthinkable, not to say blasphemous. Also, if it be contended that the language of the Book of Mormon, word for word, and letter for letter, was given to the prophet by direct inspiration of God, acting upon his mind, then again God is made responsible for
the language errors in the Book of Mormon - a thing unthinkable.\textsuperscript{37}

Richard Anderson: But many anti-Mormons have seized on the implications of going further: that is, if Joseph Smith only dictated divinely given English from his viewing instrument, then God is the author of some bad grammar in the original.\textsuperscript{38}

These arguments assume that the Lord speaks only "proper" English, not Joseph Smith's own language. But which variety of "proper" English does God speak? The King's English, Received Pronunciation, Network English, the English of some contemporary grammar guru - or according to the usage of Orson Pratt, James E. Talmage, or Bruce R. McConkie? There is no evidence that God himself prefers one variety of English over another (or, for that matter, one language over another.) In fact, there is evidence that the Lord would have spoken to Joseph Smith in Joseph's own language:

{\textit{Behold, I am God and have spoken it; these commandments are of me, and were given unto my servants in their weakness, after the manner of their language, that they might come to understanding.} (D\&C 1:24)}

This same view was expressed by George A. Smith, first counselor to Brigham Young:

{\textit{The Book of Mormon was denounced as ungrammatical. An argument was raised that if it had been translated by the gift and power of God it would have been strictly grammatical. ... When the Lord reveals anything to men He reveals it in language that accords with their own. If any of you were to converse with an angel, and you used strictly grammatical language he would do the same. But if you used two negatives in a sentence the heavenly messenger would use language to correspond with your understanding, and this very objection to the Book of Mormon is an evidence in its favor.}}\textsuperscript{39}

A number of writers\textsuperscript{40} have referred to D\&C 9:8 in support of loose control:

You must study it out in your mind; then you must ask me if it be right, and if it is right I will cause that your bosom shall burn within you; therefore, you shall feel that it is right.

But the phrases "study it out in your mind" and "you shall feel that it is right" do not necessarily imply a loose control over the text. Joseph Smith had to "study it out in his mind" till he got it right!
Related to this interpretation is the belief that Joseph Smith used his King James Bible to help him translate Biblical passages. Yet there is no direct evidence for this proposal; in fact, it is contradicted by Emma Smith's statement that Joseph "had neither manuscript nor book to read from." Given the statements of those who observed the translation, it seems more reasonable that it was the Lord himself who chose to quote from the King James Version when it agreed with the Book of Mormon.

Finally, we must recognize that Joseph Smith permitted editing of the Book of Mormon. In fact, he is probably directly responsible for many of the editorial changes that are found in the second and third editions of the Book of Mormon. The title page of the 1837 edition states that this edition was "corrected by Joseph Smith and Oliver Cowdery." In addition, Parley P. Pratt and John Goodson, in the preface to this edition, explain:

[The whole has been carefully re-examined and compared with the original manuscripts, by elder Joseph Smith, Jr. the translator of the book of Mormon, assisted by the present printer, brother O. Cowdery, who formerly wrote the greatest portion of the same, as dictated by brother Smith.]

And in the 1840 edition of the Book of Mormon the title page indicates that the text has been "carefully revised by the translator."

But there is another way to interpret the grammatical editing of the Book of Mormon—namely, Joseph Smith allowed the Book of Mormon to be "translated" from its original language into standard English. In other words, Joseph Smith was perfectly willing to let the Book of Mormon appear in another variety of English (that is, standard English), just as the church today is willing to translate the scriptures into pidgins and creoles so that "every man shall hear the fulness of the gospel in his own tongue and in his own language" (D&C 90:11).

The FARMS critical edition of the Book of Mormon

The FARMS critical text is an important accomplishment. It represents a tremendous amount of work, and we are indebted to FARMS and especially Robert F. Smith (the compiler and editor of the FARMS text) for preparing this critical edition. Anyone who is interested in the original text of the Book of Mormon or in its editorial history can profit from the FARMS text. Most important, this critical edition marks the first time in the history of the Book of Mormon text that the general reader can find evidence for how the text has changed over time and evaluate alternative readings of the text.

The FARMS edition brings together a wealth of information important to any textual study of the Book of Mormon. Consider
the following sample from the FARMS critical text (page 4 of the second edition):

I NEPHI


1 01:02 a NEPHI:N1ST YEA I MAKE A RECORD IN THE LANGUAGE OF MY FATHER WHICH CONSISTS OF THE LEARNING OF THE JEWS AND THE LANGUAGE OF THE EGYPTIANS

1 01:03 a NEPHI:N1ST AND I KNOW THAT THE RECORD WHICH I MAKE TO BE TRUE AND I MAKE IT WITH MINE OWN HAND AND I MAKE IT ACCORDING TO MY KNOWLEDGE FOR IT CAME TO PASS IN THE COMMENCEMENT OF THE [FIRST YEAR OF THE] REIGN OF ZEDEKIAH KING OF JUDAH MY FATHER LEHI HAVING DWELT AT JERUSALEM

1 01:04 a NEPHI:N1ST IN ALL HIS DAYS

1 01:04 b NEPHI:N1ST IN ALL HIS DAYS

1 01:04 c NEPHI:N1ST IN ALL HIS DAYS

27. cf Ps 16:6, Jer 3:19, "goodly heritage" (KJ marg rdg: "an heritage of glory," "...beauty").
28. cf Enos 1, Mosiah 9:1, Alma 5:3.
29. || Lk 1:28, "highly favoured, the Lord is with thee"; favored P 1830 1837 1840 1841 1920 1981, RLDS 1908; favoured 1852 1879.
30. the P 1830 1837 1840 1852 1879 1920 1981, RLDS 1908; deleted 1911TCC typo.
32. cf Acts 7:22, "Moses was learned in all the wisdom of the Egyptians."
33. to be P 1830; is P 1837 1840 1852 1879 1920 1981, RLDS 1874 1908.
34. || III Ne 5:18; cf Jn 8:14, "my record is true"; 19:35, 21:24; III Jn 12, "and ye know that our record is true."
36. it came to pass (1398 times in BofM/ 388 in OT/ 65 in NT); cf 14:1.
37. first year of the P 1830 thru 1981, RLDS 1874 1908; not in P; cf II Ki 24:17-8.

*accession 10 Nisan (22 April) 597 B.C.
The FARMS critical edition can be characterized as follows:

1. The text is completely capitalized;
2. Each line of the text contains a single phrase (as in the Washburn Bible), which implies some kind of punctuation;
3. No regular punctuation marks (or even apostrophes) occur in the text, which makes sense since the original and printer's manuscripts originally had virtually no punctuation;
4. The pagination and chapter headings from the 1830 edition are included in square brackets in the text; the symbol represents the original 1830 paragraphing;
5. The left margin refers to the standard chapter and verse numbers; the speaker is also identified;
6. The text contains raised footnote numbers that refer the reader to the apparatus;
7. The text contains special symbols (*, @, #, ...) that refer the reader to suggested dates listed at the bottom of the page;
8. The apparatus contains different kinds of notes (textual variants, scriptural cross-references, and commentary), sometimes combined in the same footnote;
9. Textual variants from all major editions are referred by means of a lemma system (that is, a reference system that repeats "the text in full in the apparatus before indicating the variant forms, each one in full").

The FARMS text is an important beginning; by making various kinds of decisions, it permits us to consider alternative ways of representing the critical text. But as in all critical editions of important documents, the first edition is in many respects preliminary. With this idea in mind, let us consider some aspects of the critical text which might be improved.

Problems with the FARMS text

The text is sometimes difficult to read. The use of total capitalization looks too much like old-fashioned computer printout. (In fact, the text was constructed from an early computer-based text of the 1830 edition; FARMS decided that it was too difficult to convert the text into normal lower and upper case.)

Sometimes the lack of standard punctuation, especially the missing apostrophes, causes difficulty in reading the text. Consider the following example from Alma 46:24:
The modern reader readily interprets this as the plural *sons*, yet the context shows that Jacob is speaking of his son Joseph. So the correct form should be *son's*. (In fact, *sons* appears in both O and P, with the consequence that in printed editions before 1849, *sons* rather than *son's* occurred.)

Quoted passages are full of symbols that interfere with the readability of the text. Consider the page for 2 Nephi 13:6-10, which quotes from Isaiah 3:

> AND LET (NOT) THIS RUIN (COME) UNDER THY HAND
> IN THAT DAY SHALL WE SWEAR SAYING
> I WILL NOT BE (A) HEALER
> FOR IN MY HOUSE (THERE) IS NEITHER BREAD NOR CLOTHING
> MAKE ME NOT A RULER OF THE PEOPLE
> FOR JERUSALEM IS RUINED
> AND JUDAH IS FALLEN
> BECAUSE THEIR TONGUE(S)
> AND THEIR DOINGS
> (HAVE BEEN) AGAINST THE LORD
> TO PROVOKE THE EYES OF HIS GLORY
> ¶ THE SHEW OF THEIR COUNTENANCE
> DOTH WITNESS AGAINST THEM
> AND (BOTH) DECLARE THEIR SIN (TO BE EVEN) AS SODOM
> (AND THEY (CAN NOT) HIDE IT)
> WO (UNT0 THEIR SOUL(S)
> FOR THEY HAVE REWARDED EVIL UNTO THEMSELVES
> SAY (UN)TO THE RIGHTEOUS
> THAT IT (IS) WELL WITH (THEM)
> FOR THEY SHALL EAT THE FRUIT OF THEIR DOINGS

The date system also interferes with the text, sometimes creating unintended "words," such as *aways*:

3 Nephi 1:26

> AND THUS THE NINETY AND SECOND YEAR DID PASS AWAY$ 

Occasionally a raised footnote interferes with the preceding line. In the following example, a raised 730 footnote makes *FULLFILED* look like *FULLEILED*:

3 Nephi 20:12

> WHEN THEY SHALL BE FULLEILED
> THEN IS THE FULLFILLING OF THE COVENANT

Of course, these problems are trivial. But there is a very serious difficulty with the FARMS critical text: it relies heavily on secondary sources and not on a systematic examination of the original manuscript. The FARMS text is based on Hilton
and Jenkins' computerized text of the Book of Mormon, a text constructed by comparing the 1830 edition with the printer's manuscript. About a fourth of the original manuscript is extant, but unfortunately Hilton and Jenkins decided to ignore the original manuscript in constructing their text: 44

For most accurate "wordprint" testing we would want Joseph's dictated Book of Mormon words. These are of course not available nor is the original written manuscript, since it was mostly destroyed. Therefore the "Printer's" manuscript, a hand written copy of the first written manuscript is presumed to be the next closest complete extant text.

Of course, portions of the original manuscript are available. Nor can we assume that the printer's manuscript is an exact copy of the original manuscript. The printer's manuscript introduced many changes, although most of these differences deal with spelling and capitalization. 45 The FARMS text does include evidence from the original manuscript, but this evidence is largely based on secondary sources, such as Stan Larson's master's thesis, 46 and a selective reading of the original manuscript.

A systematic comparison of the original manuscript with the printer's manuscript and the printed editions of the Book of Mormon provides a number of substantial differences that are completely ignored in the FARMS text. In these examples the FARMS text follows the printer's manuscript and makes no mention of the original reading. Consider the following sampling from the small plates of Nephi — first the correct text based on the original manuscript and then the change that occurred in making the printer's manuscript:

**First Nephi**

<table>
<thead>
<tr>
<th>Verse</th>
<th>Original Text</th>
<th>Printer's Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:11</td>
<td>and this they said that he had done &gt; ø</td>
<td></td>
</tr>
<tr>
<td>2:16</td>
<td>wherefore I cried unto the Lord &gt; did cry</td>
<td></td>
</tr>
<tr>
<td>7:1</td>
<td>the Lord spake unto him again ^ &gt; saying</td>
<td></td>
</tr>
<tr>
<td>7:1</td>
<td>his sons should take daughters to wife that ^</td>
<td>might raise up seed &gt; they</td>
</tr>
<tr>
<td>13:12</td>
<td>I looked and beheld a man among the Gentiles which</td>
<td>were separated from the seed of my brethren &gt; was</td>
</tr>
<tr>
<td>13:24</td>
<td>it contained the fulness of the gospel of the Lord</td>
<td>of whom the twelve apostles bore record and they</td>
</tr>
<tr>
<td></td>
<td>which is the most abominable of all other churches</td>
<td>bore record according to the truth &gt; bear, bear</td>
</tr>
<tr>
<td></td>
<td>&gt; above</td>
<td></td>
</tr>
</tbody>
</table>


15:36 whose fruit is ... most desirable of all other fruits > above

17:50 if he should command me that I should say unto this water be thou earth and it shall be earth > Ø, should

18:11 the Lord suffered it > did suffer

20:6 thou hast heard and seen all this > seen and heard

22:8 it is likened unto the being nourished by the Gentiles > nourished

Second Nephi

1:5 the Lord hath consecrated this land unto me > covenanted (cf. verse 7: "this land is consecrated unto him")

These errors entered the textual tradition when Oliver Cowdery made the printer's manuscript, with the result that these errors are found in every printed edition of the Book of Mormon. These errors also occur in the FARMS text because it too does not rely on a systematic reading of the original manuscript.

problems with the apparatus

The apparatus system in the FARMS text is frequently confusing, especially when the lemma referencing system combines variants to save space. The referencing system needs to keep variants separate in order to facilitate the counting of different types of variation. Consider this example from Alma 47:34:

AND ALSO THEY WHICH\(^{331}\) WERE WITH HIM

\(^{331}\) also they which O P 1830; also they who PC; all they who 1837 thru 1911TCC, RLDS 1908; all them who 1920 1981 (all typo).

Three separate changes are involved in this example:

which to who in the 1837 and all subsequent editions

also to all, a misreading that entered in the 1837 edition and is found in all subsequent editions

they to them, a usage change in 1920 and in the subsequent 1981 edition

Sometimes the lemma system in the apparatus is difficult to decipher. For example, textual insertions can be misinterpreted
as cases of replacement, as in 1 Nephi 1:11:

AND BADE HIM THAT HE SHOULD READ

50. should read P 1830 thru 1981, RLDS 1908; it P\textsuperscript{C}; cf Alma 56:48.

The word it is added after should read; it does not replace should read.

Finally, the apparatus needs to refer to possible variations in punctuation. Consider Alma 42:16 from the second edition of the FARMS text:

NOW REPENTANCE COULD NOT COME UNTO MEN
EXCEPT THERE WERE A PUNISHMENT
WHICH ALSO WAS ETERNAL
AS THE LIFE OF THE SOUL Should BE
AFFIXED OPPOSITE TO THE PLAN OF HAPPINESS
WHICH WAS AS ETERNAL ALSO
AS THE LIFE OF THE SOUL

The phrasing of the text implies the punctuation "as the life of the soul should be, affixed." This punctuation occurs in all printed editions of the Book of Mormon. On the other hand, the first edition of the FARMS text phrases the text so that "should be" goes with "affixed" rather than "soul":

WHICH ALSO WAS ETERNAL AS THE LIFE OF THE SOUL
SHOULD BE AFFIXED OPPOSITE TO THE PLAN OF HAPPINESS

In other words, the text of the first FARMS edition implies a different punctuation: "soul, should be affixed." This is undoubtedly correct, especially in light of the last phrase in the verse: "which was as eternal also as the life of the soul." In any event, the critical text must show important punctuation variants such as this one.\textsuperscript{49}

But the most serious difficulty with the apparatus is that not all the variants are marked. As an example of this problem, consider the massive 1837 change of nearly all cases of which to who(m) or that when the referent is a human being. One example that is marked in the critical text comes from the Sermon on the Mount in 3 Nephi 13:9 (cf. Matthew 6:9):

OUR FATHER WHICH\textsuperscript{447} ART IN HEAVEN

447. which P 1830 (=KJ); who P\textsuperscript{C} 1837 thru 1981, RLDS 1908.

But many other cases of changing which to who(m) or that are left unmarked in the FARMS critical text.\textsuperscript{50} For example, in Alma 43:11 we have two examples of this unmarked change:
YEA AND THEY ALSO KNEW
THE EXTREME HATRED OF THE LAMANITES
TOWARDS THEIR BRETHREN
WHICH WERE THE PEOPLE OF ANTI NEPHI LEHI
WHICH WERE CALLED THE PEOPLE OF AMMON

Correspondingly, in some cases the reader might think that this change has been made, but in reality it hasn't. In the following example from Alma 22:1, the probable reason for leaving which unchanged is that editors have interpreted the referent to be "the house of the king" rather than "the king":

HE WAS LED BY THE SPIRIT TO THE LAND OF NEPHI
EVEN TO THE HOUSE OF THE KING
WHICH WAS OVER ALL THE LAND

Other confusing examples of unchanged and unmarked which's can be found in Alma 46:27, 49:23; 3 Nephi 10:2.

Another example of confusion occurs in Alma 5:25. In this verse the original phrase "such an one" was simplified to "such" beginning in the 1837 edition, yet the same phrase was left untouched in verses 24, 28, 29, and 31 of the same chapter. The probable motivation for the change in verse 25 is the plural referent that occurs later on in that verse:

24 DO YE SUPPOSE THAT SUCH AN ONE CAN HAVE A PLACE
25 YE CANNOT SUPPOSE THAT SUCH AN ONE269 CAN HAVE PLACE
    IN THE KINGDOM OF HEAVEN270
    BUT THEY SHALL BE CAST OUT
28 AND SUCH AN ONE HATH NOT ETERNAL LIFE
29 FOR SUCH AN ONE IS NOT FOUND GUILTLESS
31 WO279 UNTO SUCH AN ONE

To be consistent all examples of "such an one" should have been changed to "such." Unfortunately, the reader of the FARMS critical text cannot be confident that the other examples of "such an one" were not also changed to "such."

Thus the reader of the critical text needs to be sure about the possible variants. The solution is to mark every change. In this way, the reader can be sure that if the apparatus contains no indication of variance, then that means there is no variance in the text. Moreover, the marking of each variant allows for an accurate calculation (by computer, for instance) of the frequency of different variants; it also permits the reader to locate all
recommendations for a second critical edition of the Book of Mormon

I would submit the following goals for a critical edition of the Book of Mormon:

(a) readability of the text;

(b) establishment (to the degree possible) of the original text of the Book of Mormon as dictated by Joseph Smith;

(c) an apparatus that contains all the significant variants in the manuscripts and the important editions.

These goals lead to the following specific recommendations:

(1) The variants listed in the apparatus should be restricted to major manuscripts and editions: (a) those that involved Joseph Smith (O, P, 1830, 1837, 1840); (b) subsequent printings for the LDS church which established readings that have persisted (1841, 1849, 1852, 1879, 1905, 1911, 1920, 1981), as well as the important RLDS 1908 edition (which relies heavily on the printer's manuscript). We can probably ignore insignificant and idiosyncratic textual variants (such as obvious typos) that have not persisted.

(2) The critical text should reflect Joseph Smith's language, as far as it can be determined. The major sources for determining Joseph Smith's language will, of course, be the original manuscript and the printer's manuscript. Since Joseph Smith left the overseeing of the 1830 printing to Oliver Cowdery and others,51 the 1830 edition can serve only as a secondary source for establishing the critical text. Generally, variants from the published editions (including later editorializing) will appear in the apparatus.

(3) There is a need for an accurate collation of textual evidence. Rather than relying on visual comparison, the collation should be established by use of a computer. First, both the original and printer's manuscripts should be transcribed independently by at least two different individuals, then the consistency of their transcriptions should be checked by computer. Second, the printed editions should be put into computable-readable form (by the Kurzweil or some other text-reading system). Finally, the computer should be used to find all the textual variants in the manuscripts and printed editions.

(4) In order to establish the critical text, an important study will compare the printer's manuscript with what remains of the original manuscript. At least three correctors have worked
on the printer's manuscript: Oliver Cowdery (the scribe), John H. Gilbert (the compositor for the 1830 printing), and the editors of the 1837 edition. It is particularly important to know how frequently the corrections in P restore the text of O. A careful comparison will then allow us to determine the general reliability of corrections in P when O is lacking.

(5) Conjectures will normally appear in the apparatus. In a few cases, conjectures may appear in the text, but only when no reasonable explanation for the manuscript form can be maintained and the conjecture is well motivated.

(6) In order to improve the readability of the critical text, standard spellings should be used as long as those spellings make no difference in recovering Joseph Smith's language. Other original spellings should occur in the apparatus. For instance, Alma 34:39 would read as follows:

that ye may not be led away

led 01 P1 1830&] lead O P

(Numbers after O and P refer to the corrector. P1 refers to the first corrector of the printer's manuscript — that is, the corrector for the 1830 edition. On the other hand, P2 will refer to the correctors for the 1837 edition.)

(7) The text should reflect Joseph Smith's language. We should include his "bad" grammar and those spellings that might represent his (or possibly his scribes') pronunciation. Some examples of such spellings include the following:

GRIEVIOUS /gríviəs/ 'grievous' (Mosiah 7:15)
ARIVEN /ərɪvən/ 'arrived' (Mosiah 10:15)
FRAID /friːd/ 'afraid' (Alma 47:2)
MELCHESIDEK /mɛlkɛzɪdɛk/ (still pronounced this way in the LDS Church) 'Melchizedek' (Alma 13:17)
MASSACRED /mæskrəd/ ['massacred' (Alma 48:24)
ATTACKTED /ətæktd/ 'attacked' (Alma 59:5)
DROWNDED /drɔːndəd/ 'drowned' (1 Nephi 4:2)
GOVERMENT /gəvərmənt/ ['government' (Alma 60:24)
HEIGHTH /hæjtθ/ 'height' (Helaman 14:23)

(The pronunciation symbols are based on the International Phonetic Alphabet.)

(8) The margins should contain the following helps:
(a) references to Biblical references when the Book of Mormon quotes directly from the Bible; (b) page numbers from the 1830 edition.
(9) In order to enhance readability, the text should be written in the standard text style of today. Both upper and lower case should be used, with standard capitalization of names and sentence-initial words. The chapter and verse numbers of the current 1981 edition can be put in the margin (or perhaps in an unobtrusive form within the text). The text should be set in paragraphs (but not necessarily the paragraphing of the 1830 edition).

(10) Again for reasons of readability, the text should avoid the use of critical marks. Compared to the New Testament textual tradition, the textual variance in the Book of Mormon is not that extensive. The apparatus itself can refer directly to the text, as in Alfred Rahlfs' Septuaginta. 52

(11) The 1920 and 1981 chapter descriptions should be ignored. Only the descriptions that Joseph Smith actually dictated should be included (for example, the summary that introduces 1 Nephi). The headings added to the top of the pages in the original manuscript can also be ignored.

(12) The punctuation should basically follow the 1981 punctuation except in cases where other punctuation may be more reasonable; the apparatus should refer to cases of punctuation that make a difference in meaning.

(13) There should be no commentary in the apparatus, except as it helps to establish the text. No dates should be listed since this is a form of commentary. Determining the critical text is a well-defined task, but providing commentary is an open-ended process and is continually subject to revision. Extensive Biblical and scholarly references belong in commentaries, not in critical texts. Undoubtedly, a helpful companion to the critical text would be a textual commentary, much like Bruce M. Metzger's one for the Greek New Testament of the United Bible Societies. 53

(14) The text itself should contain no indication of how it compares to the King James Version. Instead, textual comparisons with the KJV should be restricted to the apparatus. In fact, I would propose a separate apparatus for comparisons with the KJV and Biblical manuscripts, especially since these sources play no direct role in determining the original text of the Book of Mormon.
In conclusion, I provide two examples of the proposed critical text. First, we have the opening of 1 Nephi.

1 I, Nephi, having been born of goodly parents, therefore I was taught somewhat in all the learning of my father; and having seen many afflictions in the course of my days, nevertheless, having been highly favored of the Lord in all my days; yea, having had a great knowledge of the goodness and the mysteries of God, therefore I make a record of my proceedings in my days.

2 Yea, I make a record in the language of my father, which consists of the learning of the Jew and the language of the Egyptians. And I know that the record which I make to be true; and I make it with mine own hand; and I make it according to my knowledge.

3 For it came to pass in the commencement of the first year of the reign of Zedekiah, king of Judah (my father, Lehi, having dwelt at Jerusalem in all his days); and in that same year there came many prophets, prophesying unto the people that they must repent, or the great city Jerusalem must be destroyed. Wherefore it came to pass that my father, Lehi, as he went forth prayed unto the Lord, yea, even with all his heart, in behalf of his people. And it came to pass as he prayed unto the Lord, there came a pillar of fire and dwelt upon a rock before him; and he saw and heard much; and because of the things which he saw and heard he did quake and tremble exceedingly.

1 3 to be P 1830] is P2 1837 & || 4 of the first year P1 1830& ] Ø P | the P1 1830& ] that P
Second, we have a passage from 2 Nephi which quotes from Isaiah. In this second example, I provide two apparatuses; the first gives the textual evidence, the second the KJV comparison. In the comparison I first list the Book of Mormon form, then the King James form.

9 The shew of their countenance doth witness against them, and doth declare their sin to be even as Sodom, and they cannot hide it. Woe unto their souls, for they have rewarded evil unto themselves! Say unto the righteous that it is well with them; for they shall eat the fruit of their doings. Woe unto the wicked, for they shall perish; for the reward of their hands shall be upon them!

<textual apparatus>


<KJV comparison>

13 9 doth second] they | to be even] œ | and second] œ | cannot hide it] hide it not | souls soul || 10 say] + ye | unto] to | is] shall be | them] him || 11 for they shall perish] it shall be ill with him | their] his | them] him
NOTES


2. I would like to thank Grant Boswell, Lyle Fletcher, Don Norton, Kent Jackson, and Richard Anderson for reading earlier versions of this article. Lyle Fletcher has been particularly helpful in providing important information for this paper. I would also like to thank Richard Anderson for providing copies of some original documents.

3. Incredible as it may seem, when FARMS first announced the publication of its critical text of the Book of Mormon, a national wire service reported that a text critical of the Book of Mormon had just been published (John W. Welch, personal communication).

4. In producing a text, an author may go through a number of drafts and later revisions until a final version is obtained. In such a case, the "original" form of the critical text usually refers to this finished text, not the first draft.


8. Lucy Mack Smith, *Biographical Sketches of Joseph Smith, the Prophet, and his Progenitors for many Generations* (Liverpool: S. W. Richards, 1853), 142-43. Nonetheless, there is evidence that others helped Oliver Cowdery in producing the printer's manuscript: not all of the printer's manuscript is in his hand. (See Richard P. Howard, *Restoration Scriptures: A Study of their Textual Development* (Independence, Missouri: Herald Publishing House, 1969), 27).

9. From 1 Nephi 2 through 2 Nephi 1, Alma 3-5, and from Alma 22 through Helaman 3, all with lacunae; plus fragments from Alma 10-19 and 3 Nephi 26-27.


12. For example, in chapter 24 of Mosiah, 4 out of 11 occurrences of this phrase have been removed (at the beginning of verses 11, 12, 20, and 25).


14. I owe this example to Lyle Fletcher.


16. The text of this passage is based on the original and printer's manuscripts; later editors have not altered the switching between *thou* and *ye* in this passage.

17. See pages 61 and 71 of Fletcher's thesis (already cited) for the following two examples.

18. I owe this example to Lyle Fletcher. For other examples from Shakespeare, see Fletcher's thesis (already cited), 92-103.


20. For further examples and discussion, see chapter 8 of Fletcher's thesis (already cited).


25. David Whitmer, An Address to All Believers in Christ
(Richmond, Missouri: 1887), 12.

26. Charles Anton, in two different letters (written in 1834 and 1841), discussed Martin Harris's visit to him in February 1828. He claims that Harris said Joseph Smith translated from behind a curtain. In 1842 the Reverend John Clark claimed that Martin Harris told him in the fall of 1827 that while translating Joseph Smith used a thick curtain or blanket to separate himself from Martin Harris, who was acting as scribe. (See pages 213 and 218 of Milton V. Backman, Jr., Eyewitness Accounts of the Restoration (Orem, Utah: Grandin Book Company, 1983).) Early on in the translation, Joseph Smith quite probably used a curtain while translating, especially if he was translating directly from the gold plates, since at that time no one was permitted to see the plates.

27. The rest of this 1870 statement is missing; for the quote, see John W. Welch and Tim Rathbone, "The Translation of the Book of Mormon: Basic Historical Information," preliminary report (Provo, Utah: Foundation for Ancient Research and Mormon Studies, 1986), 25.

28. On the other hand, we cannot automatically accept everything in these statements. The testimonies of these witnesses are only valid with respect to what they actually witnessed. They obviously saw Joseph Smith translating, but they could not actually know what Joseph himself saw in the hat since they themselves did not translate.

30. See the second definition of syllable in the OED (already cited): "the least portion or detail of speech or writing."

31. According to another account of this same interview, the name was Sariah, Lehi's wife. (See footnote 22 on page 8 of Welch and Rathbone (already cited).)

32. As quoted on page 8 of Welch and Rathbone (already cited).

33. For example, Lehi in the Desert (Salt Lake City: Bookcraft, 1952) and An Approach to the Book of Mormon (Salt Lake City: The Church of Jesus Christ of Latter-day Saints, 1957).

34. Lehi in the Desert (already cited), 29.


36. See the note to Isaiah 3:23 in Alfred Rahlfs, Septuaginta (Stuttgart: Deutsche Bibelgesellschaft, 1935).


38. Anderson (already cited), 81.


45. See the comparison of the original and printer's manuscripts in Howard (already cited), 29-35.


47. Here Nephi is referring to the Isaiah passage which he has just quoted (1 Nephi 21:23, Isaiah 49:23): "and kings shall be thy nursing fathers and their queens thy nursing mothers."

48. This same criticism applies to Stan Larson's master's thesis (already cited). None of these errors are mentioned in Larson's thesis.

49. For another example, consider the possible punctuation for the word continually in 1 Nephi 8:30.

50. In the 1837 edition of the Book of Mormon, 1 Nephi alone contains 86 changes of which to whom or that, yet only 15 of these changes are noted in the FARMS critical text: who, 13 out of 78; whom, 2 out of 6; that, 0 out of 2 (Lyle Fletcher, personal communication).

51. John H. Gilbert, "Memorandum Made September 8, 1892," quoted in Welch and Rathbone (already cited), 30; also see Lucy Mack Smith (already cited) 141-42.

52. Already cited.

Psychology, Psycholinguistics and Cognitive Science: 
Is There a Place for Linguistics?

Bruce L. Derwing
Dept. of Linguistics, University of Alberta

1. Introduction

In a paper now nearly a decade old (Derwing 1979), I outlined some of the early history of modern psychology and linguistics. In brief, the origins of experimental psychology are generally traced back to the last half of the nineteenth century, and particularly to the work of Wilhelm Wundt, whose deep interest in language is widely documented. At that time the field of linguistics did not yet exist as such, but there was a co-existent discipline called 'philology' that also concerned itself with language phenomena. Although some of the major German figures in these two fields apparently knew and to some extent even interacted with one another, there was little in the way of overlap in the kind of work that they actually did. Specifically, while the psychologists were concerned "to trace the mental processes that precede, accompany and follow utterances" (in the words of one of Wundt's commentators [Blumenthal 1970:6]), the philologists were mainly preoccupied with the much narrower, complementary tasks of studying genetic relationships among languages and in clarifying the ways in which language forms changed through time.

The emergence of linguistics as an identifiable academic discipline was more-or-less concurrent with the rise to dominance of the strict behaviorist tradition in psychology, that anomalous era when psychologists generally lost interest in the psyche. There is far more than mere coincidence involved here. For to the extent that psychologists lost interest in internal cognitive processes generally at this time, they also lost concern for the special case of language processes. By default, therefore, the investigation of language phenomena fell for a time almost completely into the hands of the linguists, who naturally carried along with them some of the fundamental ideas they had received as part of their earlier philological heritage. The most pernicious of these old ideas, in my view, was the notion that languages were analogous to "living organisms" (cf. Bierwisch 1971:13 and Robins 1969:181), and the corollary that words and other language forms were "things or natural objects with an existence of their own" (attacked in Jespersen 1924:17). Since these early days, in fact, linguistic theorists have largely persisted in the reified view of language as a kind of 'natural' object, analogous to a stone or organism, that has an inherent organization or 'structure' that can be discovered and even 'explained' without reference to those human beings who produce the forms in the first place.

Eventually, of course, the limits of behaviorism became evident, psychologists renewed their interest in the human mind, and it became respectable once again for them to be interested in such questions as how language forms are learned, stored, retrieved and, in general, used. In fact, it became much more than respectable, as a number of influential figures (just like Wundt two
generations before) came to the opinion that human language was likely to provide one of the best windows (if not the very best) on the human mind in general. As luck would have it, however, because of the long period of benign neglect of language throughout the behaviorist era, the psychology of the day had virtually nothing to say about the subject. (In fact, Boring’s famous history of the field [1950], does not even mention the term “language” in its index.) Psychologists were thus forced to turn to linguistics as virtually the sole repository of what knowledge of language there was at that time, and when the term psycholinguistics was first coined in the 1950’s, it was quite naturally anticipated that linguists would play a major, if not central, role in the development of the emerging new science that this term was intended to denote, viz., “the science of encoding and decoding processes in individual communicators” (cf. Koch 1963:248, citing Osgood).

Moreover, on first inspection, the new cognitive psychologists very much liked what they saw, which was a developing model of generative grammar that seemed to possess the appropriate ‘dynamic’ quality needed for the characterization of speech production and comprehension. As shown in Derwing (1979), however (see especially the ‘cake grammar’ outlined in n. 3, p.133), generative grammars are, just as they have always been, models of static language ‘products,’ not models of language processes or ‘recipes’ for assembling those products (cf. Chomsky 1965 and elsewhere, who has repeatedly and vehemently denied the legitimacy of any such procedural interpretations for grammars).

Thus in time the truth came out: linguists (still philologists at heart) were interested in modeling ‘languages’ (or ‘knowledge of languages’, under some accounts), not at all in modeling the psychological activities of speakers or hearers, and the ‘dynamic’ characteristics of the linguistic models that had once seemed so appealing for psychological purposes were exposed as nothing more than a notational sham.1 By this date, in fact, the disillusionment of psychologists with the formal linguistic approach seems to have become quite severe, in that linguistic models of grammar have been widely judged to be psychologically unrealistic (cf. Carroll 1986:58).2

The task of describing and modeling actual language production and comprehension thus, by default, fell largely into the hands of psychologists and AI scientists, with results in the past

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1 Cf. the parallel swing in the view of the linguistic philosopher, J.J. Katz, who held in the mid sixties that ‘every aspect of the mentalistic theory [of generative grammar] involves psychological reality’ (1964:133), but by the mid eighties had backed off to a fully Platonist view of grammars as ‘theories of abstract objects’ (1984:21) and of linguistics ‘as different from the psychology of language as number theory is from the psychology of mathematical reasoning’ (p. 27).

2 While a small number of diehards and apologists still remain (e.g., Berwick & Weinberg 1983) who still hope to salvage the old ‘derivational theory of complexity’ theory by one means or another, the broad consensus today, among linguists and psychologists alike, seems to be that that theory is as dead as a doornail, and along with it the feasibility of the idea that generative grammars, as traditionally conceived, have any likely role to play in psycholinguistic modeling.
decade or so of such dramatic proportions as to place linguistic research in an almost ludicrous position, by comparison. Thus, for example, while generative grammarians preoccupy themselves with such questions as whether or not certain pronouns and noun phrases can in principle refer to the same person (such as the emphasized words in such marginally grammatical sentences as *Near Dan, he saw a snake and To him, I spoke in Ben's office*) and to concoct various purely structural hypotheses to account for their own judgments (such issues, in fact, form the empirical and methodological underpinnings of one of the more popular recent developments within generative syntax, known as GB theory [cf. Chomsky 1981]), cognitive scientists have meanwhile moved on to the experimental exploration of what specific semantic, morphological, syntactic, discourse and pragmatic factors determine what the precise antecedent of a pronoun actually is in a given on-line language use situation, which is, of course, the psycholinguistic question of interest (see Smyth 1986 for a detailed overview and discussion, as well as some of the relevant experiments).

In short, linguistics, as it is normally practiced today, is facing a crisis of relevance. As time goes on, fewer and fewer psychologists look to linguists for ideas and evidence bearing on the psycholinguistic task (much less for guidance), and more and more look to their own resources and models, which they can readily understand, interpret and test. The essence of the crisis, therefore, is not simply that psychologists are beginning to ask whether linguistic models are relevant to their work (i.e., language processing in all of its forms, such as word recognition or lexical access, sentence production, discourse comprehension, etc.), but that they have largely finished with the asking and have decided, for the most part, that the answer is in the negative. They may still make use of a few fundamental ideas that were originally developed in linguistics (such as constituent structure, the morpheme and the phoneme), but they generally find current theorizing to be largely incomprehensible, both in content and motivation. As a result, as Cutler has noted, 'psychological research in the service of linguistics has almost disappeared' (1986:162); thus, if there are any new ideas coming out of the field that might prove useful to the larger psycholinguistic enterprise (as I have argued below), it is the linguists themselves who are going to have to make this evident.

Alternatively, linguists may go on as before, blindly talking of the supposed 'explanatory adequacy' of their ideas, but if they end up as the only ones who accept, believe or even understand what it is they they are doing, it will be they who are the losers. There is nothing to be gained by beating around the bush: the hard fact is that psychologists can get along perfectly well without linguistics; at worst, they may reinvent the wheel (albeit in a more useful form) and plod along somewhat longer than necessary with a less than optimum cross-linguistic perspective. But, for them, such a step will not be fatal, as the psycholinguistic enterprise is not in doubt: speakers do produce utterances and hearers do comprehend them, and attempts to model such real processes are on solid ground (as the current explosive growth of programs in 'cognitive science' indicates). On the other hand, linguistics cannot get along without psychology, not, that is, if it wishes to continue to bask in the kind of 'cognitive limelight' that it has long since become
acustomed to. The pay-off for linguistics, if there is to be one at all, is to be found in the contribution it makes to the cognitive or psycholinguistic enterprise. (What else, after all, are linguistic theories good for?) In the dreary non-psychological, go-it-alone scenario of so-called 'autonomous linguistics,' therefore, we can anticipate that the field will surely shrivel back into an isolated, narrow and purely taxonomic (i.e., arbitrary) enterprise that generates obscurantistic descriptions of relatively obscure, dying languages, explores their (generally untestable) historical origins, or otherwise occupies itself with esoterica that are of little concern to anyone else in the outside world.

2. On Making Linguistics Relevant

I, for one, however, remain convinced that linguistics (as the only discipline whose practitioners are driven both by inclination and training to look hard at the details of human languages) still has a great deal more to offer than that, but a major reconstruction job is now required to demonstrate this, and, for reasons already discussed, the onus is now on us linguists to make the case.

I therefore have two specific suggestions to offer at this juncture: (1) that linguists make some effort to temper the current free-wheeling theorizing which now occurs in our field by constraints that follow from experimental tests and (2) to demonstrate, once again by experiment, that linguistic theory has some potentially useful raw material as grist for the psycholinguistic mill, and is not just playing arbitrary 'games' with language forms. I will attempt to illustrate each of these possibilities here with examples selected from research recently conducted in our own laboratory, all of which gained impetus from developments in linguistic theories of morphology and phonology.

2.1 Psychological Constraints on Linguistic Theories

One obvious way to improve the case that linguistic theory is relevant for psychology is by demonstrating that linguistic theorizing is itself subject to psychological constraints. This is, in fact, a minimum token of good faith that linguists are willing to participate in the psycholinguistic enterprise, rather than letting their speculations run rampant or even fly in the face of the best evidence of psychological plausibility and accountability. Since linguistic theories invariably arise initially out of attempts to account systematically for regularities exhibited by language forms (i.e., the language product), there is no guarantee, at the outset, that the systems ('grammars') so devised will have any psychological content whatever, or even be readily interpretable in psychological terms, as I have already indicated. Attempts can be made, however, to inject such content and to develop such interpretations, and to test the resulting theories through appropriately designed experiments (see Derwing 1979 and 1980 for an extended morphological example, and the review by Jaeger & Van Valin 1982).

Since linguistic theorizing at base has so little in the way of essential psychological content,
however, a perennial problem is one of selection; that is, if nothing is psychologically motivated or directed at the outset, where does one start in the attempt to find areas of possible psychological relevance? This is by no means a trivial question, since by all accounts (and especially, I dare say, to the eyes of an outsider), the linguistic literature presents an almost bewildering array of detail and formal descriptive machinery, enough to daunt even the most intrepid of curiosity-seekers. Linguistic theory also appears to move at a staggering, even breathtaking, pace, such that just about the time one has managed to pour through enough of the detail to feel s/he is getting a handle on the situation, the ground rules or direction can suddenly change, leaving one to ponder a theory that even linguists concede is no longer relevant or interesting.

I can offer two guidelines on this score. First of all, given the relatively short half-lives that novelties in linguistics do indeed seem to characteristically exhibit, these are probably best left alone to stew in their own juices for awhile before the attempt is made to build any ambitious program of experimental psycholinguistic research around them. The fundamental ideas that endure for many years, however, especially through some of the numerous paradigm shifts that must make pure linguistics a particularly frustrating enterprise, are a different story altogether and are probably some very good candidates for a closer look. My second consideration follows from what is undoubtedly the main motivation for experimental research in any discipline, namely, to sort out the wheat from the chaff. Since practical considerations dictate that only a select number of notions can be inspected with the requisite degree of care and perseverance, it follows that attention should be directed first and foremost to those issues which lie closest to the heart of the particular theories under examination, for if things are amiss at the core, the details scarcely matter — and by nipping misdirected theories in the bud, of course, a lot of unnecessary busy work can thereby be saved by all.

For example, one of the oldest and most enduring of all the notions from linguistics is the concept of the morpheme. Linguists may engage in apparently endless debate about the details of exactly how words ought to be separated into their meaningful parts (not to mention about how words themselves might best be defined or identified), or about how to represent or describe the resulting pieces, or even about what to call these bits, but the basic idea of the morpheme as a fundamental linguistic unit simply refuses to go away. It makes good sense, therefore, for the experimental linguist to inquire whether or not the morpheme is a valid concept for ordinary, everyday language learners and users — and, if so, to try and find out where these ordinary speakers draw their own lines.

Consequently, I spent more than a decade, off and on, struggling with this issue, yielding the battery of test questions that appears below. This particular question-set is taken from Smith & Derwing (1987), but its parts been used in various combinations in a number of studies to assess a subject's ability (or willingness) to recognize a root morpheme (such as teach) as part of some presumably derived word (such as teacher):

3See Van der Hulst and Smith (1982:2) for the briefest of epitaphs for a school of thought that dominated North American phonological and morphological thinking for the better part of two decades.
Q1. Definition of derived word. (Does the subject use the root? see Berko 1958)
Q2. Berko-type nonsense-word probe. (Is the root used? see also Derwing & Baker 1979)
Q3. (CF-1) Does the derived word ‘come from’ (CF) any other word? (Is the root indicated? see Smith 1987)
Q4. Does the subject know the root word? (confirmed by having the subject define the word.)
Q5. (CF-2) Do you think that the derived word ‘comes from’ the root word? (asked if the root was not identified in Q3) (Smith 1987)
Why do you think the derived word ‘comes from’ the word you suggested? (asked if the root was identified in Q3)
Q6. Did the subject ever think of this relationship before? (Derwing 1976)

This research has served to yield a good deal of interesting new data on the morpheme recognition capabilities of linguistically untrained speakers, and especially on the role of the two primary factors of similarity in meaning and similarity in sound that bear on this issue. Various auxiliary factors (such as orthography, construction type, affix productivity and the like) were also identified which can influence subjects’ judgments on these tasks and which therefore need to be controlled and independently assessed (see Derwing & Baker 1986).

Another fundamental and enduring idea from linguistics is the notion of rule, in our case a phonological or morphological rule. In a language like English, of course, morphology is clearly finite and, strictly speaking, rules are not necessary to describe the basic linguistic facts in this domain, which could all be accounted for in principle by simply listing everything in the lexicon. Moreover, even in a morphologically deprived language like English, it is well established that some degree of morphological productivity exists, and that young English-speaking children are prone to create ‘new words’ (like ‘one-ty one’ [meaning ‘eleven’]) as the situation requires.5

This is powerful evidence that children can and do extract some kind of rules, or at least engage in what has aptly been dubbed ‘rule-governed behavior.’ But, assuming for the moment that it is internalized rules of some kind that we are talking about here (I will later briefly discuss an

4McCawley (1986) has also employed a variant of this question, which elicited judgments on whether the root word ‘was contained in’ the derived word, and results are reported in Derwing and Nearey (1986) from a more direct ‘word-cutting’ experiment, as well.

5This need not imply, as in classical generative phonological accounts, that the function of a rule is to simplify the lexicon, or that a form listed in the lexicon could not also be derived by rule (see Derwing 1988b for some alternative views that are consistent with current psycholinguistic evidence regarding the content and structure of the mental lexicon).
interesting alternative approach), how far does the child actually go? How general, in other words, are the generalizations that the child latches on to? Linguists typically push generality to its very limits, almost as an article of faith (this is the chief symptom of what I like to call 'the linguists' disease;' which is to seek out maximum regularity whether it is there to be found or not; see especially Derwing 1973 and 1974), but what do ordinary speakers, once again, do? And which particular rules, as postulated by linguists, might most profitably be examined from this psychological point of view?

It was argued by Chomsky and Halle (1968) that a particular set of vowel alternations constituted the 'central problem in the noncyclic phonology of English' (p. 99) and that the key rule involved (the so-called 'vowel shift' rule) was 'without doubt the pivotal process of modern English phonology' (p. 187). There is little wonder, therefore, in the face of such strong claims, that this rule (and its adjuncts) would capture the early attention of those experimentalists who were interested in assessing the psychological plausibility of classical generative phonology (GP) and some of its later successors (cf. Halle 1977 and Halle & Mohanan 1985). By this time, therefore, a number of investigators, including two Alberta graduate students (R. Cena and H.S. Wang), have subjected this rule and its variants to a quite extensive bit of psychological scrutiny, using as many as four different experimental techniques: PRODUCTION TESTS (à la Berko 1958; e.g., Ohala 1974; Steinberg & Krohn 1975), PREFERENCE or WELL-FORMEDNESS JUDGMENT TESTS (e.g., Myerson 1976, Armbruster 1978), RECALL TESTS (in which nonsense word-pairs showing these and other, arbitrary alternations were taught to see which pairs were remembered best — and which ways the errors went when the pairs were mis-remembered; e.g., Myerson 1976, Cena 1976, 1978), and, finally, CONCEPT FORMATION TESTS (in which some members of the supposed class were taught in order to see how well subjects spontaneously generalized to the other supposed members; e.g., Moskowitz 1973, Jaeger 1980, Wang 1985). Data collected from all of these sources can now be seen to converge on one clear and quite solid conclusion, namely, that five of these alternations operate together as a (semi-) productive set, but only five, and that these results fit none of the phonological theories proposed. What the data do fit, however, is a theory that typical, literate English speakers have pretty much all learned (or been taught) the familiar long vs. short spelling rule for the five vowel letters of the alphabet (see Wang & Derwing 1986 for full details).

So how can such developments be employed to enhance the psychological plausibility of current linguistic theorizing? For an answer to this question, we cannot look to classical GP, as that particular linguistic model has already died its own natural death (cf. n. 3 above). An approach called lexical phonology (LP), however, is not only very prominent on the contemporary linguistic scene, but is also the closest living descendant of the classical GP tradition and, of all its current competitors, the model closest to it in spirit, as well (for example, it posits very abstract underlying forms, makes liberal use of extrinsic rule ordering, and still invokes the transformational cycle, albeit in a somewhat more constrained form). Its main theoretical distinction, no doubt, is its integration of morphological and phonological processes (with the consequent elimination of boundary symbols) by means of an elaborate system of ordered strata/levels associated with the
Lexicon.

LP also incorporates one very important empirical advance, which ought not to be minimized. Specifically, it explicitly specifies a level of representation ('lexical representation,' which is the output of the lexical component and the input to a set of completely general 'post-lexical' rules) as the mental representation or store. This is also claimed to be the representation that serves as the basis of native speaker same/different judgments, that is associated with the assignment of pauses, that is manipulated in secret code languages, and that is even the level of representation involved in speech errors (see, for example, Mohanan 1982:78-94). This is an important empirical advance in two respects: first, it involves the explicit recognition of the essential relevance of these four domains of data; thus any large-scale attempt to describe a language in this framework will yield a large number of very specific representations that can in principle be subjected to testing (see Campbell 1986, Hombert 1986 and Shattuck-Hufnagel 1986, which nicely illustrate some of the experimental possibilities). It is also important to notice that in exposing itself to potential falsification in this way, LP makes a major gain in empirical content over classical GP, which did not go out on such a limb as far as its own underlying/lexical representations were concerned. (Fromkin thus makes some questionable assumptions in her analysis of speech error data, concluding, among other things, that these data support the GP account that the English velar nasal derives from an underlying /ng/ [1975: 51]; however, now in LP, where underlying and lexical representations are distinct and only the latter is taken as the level appropriate for speech error manipulations, her results must be explainable in terms of /ŋ/, not the underlying or pre-lexical /ng/. Fortunately for the theory, Smith 1982 has already shown that the speech error data can be accounted for at least as well under the /ŋ/ analysis as the /ng/ analysis.)

The unfortunate thing in all this is, however, that the true 'heart' of LP is not these lexical representations, which are the output of the lexical component, but rather the formal machinery inside, together with the vast array of semi- or non-productive processes postulated as being linked to morphological operations. Without gaining experimental access to these, therefore, any model could claim empirical equivalence to LP by the mere positing of the same set of lexical representations. It is in this area, therefore, that the procedures and findings discussed earlier in this section can be employed to beneficial effect.

In LP, much as in its GP progenitor, morphological analyses and operations are predicated upon what professional linguists find intuitively satisfying or plausible (e.g., that such words as fable and fabulous [a 'vowel shift' pair] are morphologically related, and that some version of the vowel-shift rule is a central part of the phonology of English [cf. Kiparsky 1982; Halle & Mohanan 1985]). There is no longer any good reason for linguists to base their theories on such an informal body of evidence. Using the procedures outlined above for morpheme recognition (supplemented, perhaps, by other, more 'subliminal' approaches, as illustrated in Fowler, Napps & Feldman 1985), data can now be readily obtained for the empirical evaluation of any number of proposed morphological relationships (see Derwing 1976, for example, for data on the specific fable-fabulous pair); by the same token, proposed phonological or morphological rules can
similarly be evaluated by means of the techniques outlined above that have successfully been
used for them (showing, as indicated, that vowel shift is not a viable phonological process at all,
but rather something quite different).

If LP responds to this challenge of empirical accountability, its status as a plausible
psychological theory will correspondingly be greatly enhanced. On the other hand, if linguistic
theorists of this and other schools persist in their narrow-minded commitment to so-called 'internal'
(i.e., familiar) evidence only (cf. Ohala 1987), they risk even further alienation from the very field
that they most need to court. The relationship between theory and data is a reciprocal one: if
experimental evidence from real-time language processing is irrelevant to linguistic theory, then
linguistic theory is, by the same account, irrelevant to real-time language processing. One cannot
have one's cake and eat it, too.

2.2 The Psychological Utility of Linguistic Concepts

Another way for linguistics to enhance its status in the eyes of psychology is to show that at
least some of the ideas that have emerged from purely linguistic research (that is, from the close
examination of so-called 'primary linguistic' data) have some potential utility for contemporary
language user models. One such model, called Parallel Distributed Processing (PDP) (or, less
formally, 'connectionist theory'), has recently generated a great deal of discussion and
enthusiasm and has been specifically applied to the investigation of morphological issues (see
especially Rumelhart & McClelland 1986, which deals with the description and acquisition of the
English past tense inflection). In a recent review, in fact, Sampson sees in PDP not only an
empiricist model that is likely to give Chomskian rationalism a good run for its money, but even 'an
intellectual paradigm fully as revolutionary as the generative paradigm ever was' (1987:871). The
PDP analyses illustrated, however, are all cast in the framework of holistic segments (e.g., regular
allomorphs of the past tense inflection), without regard for their further analysis into bundles of
phonological features.6

There is good experimental evidence to indicate, however, that a feature analysis is required
(or some formal equivalent to it) in order to account for the developmental sequences (or 'stages')
observed. This is particularly evident in the case of the regular English plural inflection. The
study involved was a cross-sectional one that used the Berko (1958) nonsense-word probe
technique as a test for productive knowledge of the regular plural endings (Innes 1974).
Although an age-based analysis did not yield any definitive developmental patterns, a new
analytic technique, called 'response coincidence analysis' yielded some quite remarkable results,
which could only be seen once the subjects were pooled into homogeneous performance
groups (see Baker & Derwing 1982 and Woods, Fletcher & Hughes 1986, Chapter 14, for
details).

6Some of the other problems with PDP-based linguistic accounts, such as those raised by Pinker & Prince in their
review (1988), are discussed in Derwing 1988b.
The point of particular relevance to the issue at hand, however, is the fact that, at each stage of this developmental picture, performance on the nonsense /\xi/-stem was comparable with that on the other sibilant-final stems. What is remarkable about this, of course, is that there are no plausible /\xi/-stem plurals that might serve as the real-word analogs here, at least none that the small children involved were likely to know. It looks very much, therefore, that the children have learned to pluralize this type of nonsense stem not by analogy to other /\xi/-stem words, but rather by analogy to other (i.e., non-/\xi/) sibilant stems. In other words, to accommodate such data within a PDP account, it would seem that nodes for phonetic features would also have to be appended, with vast further extensions to the connectionist networks involved.

Another place where linguistics might contribute to psychology is in the development of models of word recognition and/or lexical access. So far as I know, all such models have heretofore assumed that lexical items were both represented and primarily accessed in terms of their constituent phonemes, i.e., individual segments (see, for example, Morton 1969, Forster 1976, Marslen-Wilson & Welsh 1978, Elman & McClelland 1984, etc.), though syllable strategies might also be sometimes employed (Cutler et al., 1986). We have done a considerable amount of work in our laboratory on the psychological status of the phoneme, as well as a number of other phonological units that have proposed by linguists as potential ‘building blocks’ for the mental lexicon.

The phoneme issue, in particular, has been explored here and elsewhere by means of quite a number of different experimental techniques, including CONCEPT FORMATION (Jaeger 1980), DISCRIMINATION TESTS (Derwing & Nearey 1981), STRING SIMILARITY JUDGMENTS (Vitz & Winkler 1973; Derwing & Nearey 1986) and even simple SEGMENT COUNTS (e.g., Dow 1981; Derwing, Nearey & Dow 1986). In general, the results of all of these studies tend to confirm a traditional taxonomic phonemic analysis.

This superficially very neat picture is much complicated, however, by a rather large body of literature which suggests that children and illiterates are not very good at counting or otherwise manipulating individual segments or phonemes. (Some new data are reported in Dow 1987 and Dow & Derwing 1987, in fact, indicating that English-speaking children are better even at manipulating whole onsets than they are at manipulating any of their constituents parts.) Some recent cross-linguistic work also suggests that educated adult speakers with non-alphabetic orthographic traditions (such as Mandarin Chinese, as reported by Read, Zhang, Nie & Ding 1986) can’t manipulate segments very well, either. (To illustrate with an anecdote, one of our own Chinese graduate students once confessed to me — in perfect English — that before he had

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7 Except the /\xi/-stem, whose special status can be explained (see Derwing & Baker 1979:212).
8 Linguists commonly use the word rouges to illustrate this pattern in introductory courses, but this is a highly marked plural of a mass noun - and even the root seems to be losing ground rapidly to blush these days. (There used to be a word rouge, I understand, to refer to a one-point conversion in Canadian football, but this usage has long disappeared from the local scene in Edmonton.)
started to study 'Western linguistics,' he had no idea that words like *can* and *not* had anything at all in common.) The potential theoretical implications of these preliminary findings are enormous, for they suggest the strong possibility that, contrary to the long-standing tradition of western linguistics, the segment (or phoneme) may not be the natural, universal unit of speech segmentation, after all, and that the orthographic norms of a given speech community may play a large role in fixing the scope of the 'basic' phonological units that the members of such a community actually perceive.

Finally, metrical phonology (MP) presents what is undoubtedly the most radically different of the currently popular approaches to phonological theory. As is well known, it grew out of consideration of certain suprasegmental phenomena (e.g., stress, and in autosegmental phonology, tone) that could not be conveniently handled under the purely segmental approach of SPE. The result has been the creation of a vast theoretical framework of new levels ( tiers) and units. As suggested by the preceding discussion, all of this theoretical apparatus must be empirically justified, if anything of psychological import is to be made of them.

To date, in fact, the results have been rather encouraging on this score. One important feature of MP has been the re-emergence of the syllable as a viable structural unit; moreover, no longer is the syllable viewed as a mere sequence of phonemes (as in SPE and in Hooper 1972). Formal (and presumably universal) procedures are proposed both for determining syllable boundaries (cf. Selkirk's Maximal Onset Principle, 1982) and for analyzing the syllable into its integral constituent parts, as in the typical right-branching structure for the English word *blind*, according to which the syllable is first broken down into the onset */bl-/ and the rhyme (or rime) */-aynd/, then the latter into a nucleus (or peak) */ay/ and a coda */nd/. (Other theorists, such as Iverson & Wheeler 1987, argue for a left-branching structure, at least for some languages, which links the onset with the nucleus).

The experimental investigation of these ideas was begun by Treiman in the early eighties (Treiman 1982, 1984) and my student, Maureen Dow, continued the effort in her dissertation, completed in 1987. We can now confirm, therefore, based on a variety of different experimental techniques (unit counting, global sound similarity judgments, and especially string manipulation techniques of various kinds), that the integrity of onset and coda units has been established for English, as well as the superiority of a right- over a left-branching model of the English syllable (see Derwing, Dow & Nearney 1987 for a summary account). On the other hand, more recent work by Treiman & Danis (1988) indicates that, while English speakers are highly consistent in counting the number of syllables in words, they are at the same time quite uncertain, under some circumstances, about the location of the syllable boundary in VCV environments. This result challenges not only the universal applicability of such influential proposals as Selkirk's Maximal Onset Principle (not to mention the associated notion of ambisyllabicity), but the very idea of the well-definedness of the syllable in general. (Note that Cutler et al. 1986 also explain differences in the speech perception strategies used by English and French speakers in terms of the relative ease of establishing precise syllable boundaries in the two languages.) The results for MP in general have thus been mixed so far; nonetheless, the results have been encouraging enough.
to persuade me that this is the most promising model for the immediate future of phonological investigation, which is precisely why my own experimental efforts have taken a sharp turn in its direction.

At the very heart of MP, for example, is the venerable notion of the 'sonority hierarchy', i.e., that all segments have their natural place on a specific sonority scale (with open or low vowels at the high end and voiceless stop consonants at the other); this has served as the foundation stone upon which syllable structures have been hypothesized in the first place. Recent suggestions have also been made to the effect that there may be no sharp division between the nucleus (sonority peak) and coda, but rather that segments are bound successively closer to the vowel or syllable nucleus as a function of their place on the sonority scale. Such claims are also specific enough to lend themselves to experimental test and we had some encouraging preliminary results to report on this matter at the LSA in December (Derwing, Nearey & Dow 1987).

No single experiment is sufficient to conclusively resolve such issues, however. Since so many of the experimental procedures we have been using are new and open to the challenge of validity, we must take pains to insure that our key findings can be replicated under varied experimental conditions (cf. Derwing 1979). Perhaps an equally limiting aspect of our research effort to date is its preoccupation with English; clearly, since universal claims are often involved, it is vital that these experiments be extended to other languages (cf. Derwing 1988a).

3. Prospectus and Conclusions

Either linguistics of the next century will forsake its autonomy and participate in the cognitive enterprise as a full experimental partner or, if it persists in holding doggedly to its own set of 'purely linguistic' methods and models, it will likely wither back into its former role as a minor branch of anthropology, roughly on a par with archeology, leaving to others the systematic exploration of the unique 'window' that language provides into the human mind.

In sum, today's linguist has come face to face with a question that I posed only in hypothetical terms in Derwing (1973:333): cognitive science, with the study of language processing as its heart, is alive and well and linguists are going to have to decide whether they want to participate in its future development, or rather to continue to languish in their own little world of uninterpreted models of language, where major decisions are made on the basis of 'thought experimentation' and arbitrary principles of theory evaluation. I have no doubt which of these choices linguists will opt for in the long run, but in the short run they are letting others run far ahead with the ball. It would be a shame if the first speaker-hearer models were built with scarcely a linguist on hand to celebrate the event.
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