DOCUMENT RESUME

ED 100 125 FL 004 668

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TITLE Javanese-English Dictionary Project. Final Report.
SPONS AGENCY Institute of International Studies (DHEW/OE), Washington, D.C.
BUREAU NO BR-6-2415-FR
PUB DATE Jun 73
CONTRACT OEC-1-7-062415-0094(014)
NOTE 27p.

EDRS PRICE MF-$0.75 HC-$1.85 PLUS POSTAGE
DESCRIPTORS Concordances; Descriptive Linguistics; *Dictionaries; English; *Indonesian Languages; *Javanese; Language Usage; Morphology (Languages); Native Speakers; Phonology; *Word Lists; Written Language

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The purpose of the research covered by this final report was to produce a Javanese-English dictionary, the first ever to exist. Source materials were of two major kinds: (1) pre-Revolution sources: the two most recetnly published Javanese dictionaries (see Bibliography, Pigeaud and Poerwadarminta), predating the 1945 Indonesian war for independence; and (2) post-Revolution sources: written materials published in Java for the Javanese, and monologues and dialogues tape-recorded and transcribed by Javanese speakers, all of which came into existence after 1950. The latter materials, numbering nearly 1,000,000 textual words, were processed by computer into concordances. Other sources were word-of-mouth information from native Javanese speakers and published materials that became available in the early 1970's (the latter could be examined only cursorily in view of time limitations). The dictionary resulting from the research was published by Yale University Press in 1974. It is a general-purpose dictionary representing the Javanese language as it is currently used. The introduction describes the phonology of Javanese and its relation to the conventional spelling; it also contains a summary of Javanese morphology and a description of Javanese social stratification and its manifestation in language usage. (Author/KM)

Final Report

Contract No. OEC-1-7-062415-0094 (014)

JAVANESE-ENGLISH DICTIONARY PROJECT

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June 1973

The research reported herein was performed pursuant to a contract with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education

Institute of International Studies

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The purpose of the research covered by this final report was to produce a Javanese-English dictionary—the first ever to exist. Source materials were of two major kinds: (1) pre-Revolution sources: the two most recently published Javanese dictionaries (see Bibliography, Pigeaud and Poerwadarminta), predating the 1945 Indonesian war for independence; and (2) post-Revolution sources: written materials published in Java for the Javanese, and monologues and dialogues tape-recorded and transcribed by Javanese speakers, all of which came into existence after 1950. The latter materials, numbering nearly 1,000,000 textual words, were processed by computer into concordances. Other sources were word-of-mouth information from native Javanese speakers and published materials that became available in the early 1970s (these latter could be examined only cursorily in view of time limitations).

The dictionary resulting from the research is in the hands of the Yale University Press and is scheduled for spring 1974 publication. It is a general-purpose dictionary representing the Javanese language as it is currently used. The Introduction describes the phonology of Javanese and its relation to the conventional spelling; it also contains a summary of Javanese morphology and a description of Javanese social stratification and its manifestation in language usage.

PREFACE

The Javanese-English dictionary was funded throughout by contracts with the U.S. Office of Education under Title VI NDEA. The project began in February 1965 at Yale University and moved a year and a half later to Harvard University, where it was completed in August 1972.

When I had finished the job, I felt (to paraphrase another lexicographer, Samuel Johnson) that the wonder is not whether a dictionary is completed well or badly but that it is completed at all. The work was accomplished with the help of many people. My largest debt is to Isidore Dyen of Yale, who supported the project from the outset and gave much time to conferring with me, giving advice on matters of mechanical procedure and on language analysis. He proposed using the computer and arranged meetings with Fred Damerau, who explained the principles of concordance-making. The actual mechanics of using the computer for making concordances and related output, as well as devising means for preparing the input to maximum usefulness, I learned under the direction of Sydney M. Lamb of Yale, for whose personal help I am deeply appreciative. I benefited greatly, too, from the assistance of Thomas V. O'Neill of the Yale Computer Center.

Javanese-language materials were generously made available to me at the beginning by Rufus Hendon of Yale and by Clifford and Hildred Geertz. Later on, Javanese friends sent materials direct from Indonesia.

I acknowledge with appreciation the interest and help extended by Karl Teeter, Calvert Watkins, and Einar Haugen at the time the project moved to Harvard and thereafter.

Finding suitable informants was a problem throughout. Isidore Dyen located my first informants for me and John Echols, of Cornell University, my last ones. I appealed to both at various times and both responded on each occasion with helpful suggestions.

To the Javanese people who worked on the dictionary I am profoundly grateful for their enthusiasm and devotion to the project.

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INTRODUCTION

Javanese is the first language of some seventy million people, nearly all of them living on the island of Java. Thus the language ranks high among the languages of the world in number of native speakers, while the geographical range of its users is confined almost exclusively to an area only a little larger than New York State. With the establishment of the Indonesian Republic in 1945, Indonesian was adopted as the official language of the 3,000-island archipelago that constitutes the new nation. Javanese is now one of approximately 170 regional Austronesian languages, each with its own group of native speakers who—as a whole—comprise the nation of Indonesia and use the Indonesian language for all official purposes and who—as individuals of different ethnic groups—comprise separate linguistic communities and use their own language in their homes and social life and early elementary school years.

Javanese is the most significant of these regional languages in terms of both number of speakers and influence on the Indonesian community and language. The majority of high officials of the Republic through the years have been Javanese. And Djakarta, the national capital, is located on the island of Java.

Javanese—along with Indonesian and the other regional languages—is in a transitional state. Only within the last generation have the people of the islands been politically unified. There is mutual influence among the languages now and it seems likely that changes in both Indonesian and the regional languages will occur at a rate higher than normal during the coming decades.

Up until now, there has been no Javanese-English dictionary. A great deal of work on Javanese has been done by Dutch scholars through the period when they colonized the Indies, and most of the dictionaries are Javanese-Dutch. There is also a Javanese monolingual dictionary (see Poerwadarminta, Bibliography) and an old Javanese-French dictionary.[1] After 1945, when Java became a part of the Indonesian Republic, scholarly interest began to focus mainly on the grammar and lexicon of the Indonesian language, rather than the local languages. In view of the significant position occupied by Javanese in the Indonesian linguistic picture, it is important at this time to have a Javanese-English dictionary—not only because Javanese is an important language itself, but also because of its role vis-à-vis the Indonesian language, considering Indonesia's growing stature on the world scene.

These were the considerations that underlay the conception and birth of the present project. The Office of Education was willing to fund the undertaking in view of the absence of up-to-date lexicographical materials for so significant a language as Javanese. Further, they were interested in the project from the standpoint of exploring the use of computers in lexicography; before 1965, when the project began, little such work had been done.

1. E. M. Uhlenbeck has drawn up an exhaustive bibliography of materials on Javanese and Madurese, including of course lexicographical work. see Bibliography.

OBJECTIVES

The purpose of the project was stated in the proposal to the U.S Office of Education in the following terms:

> The goal of the research is to produce a Javanese-English dictionary for general use. It will represent the Javanese language as it is used currently, incorporating recent lexical changes occasioned by the political and social upheaval undergone in Java during the past two decades, and reflecting the effects on the language of its recent juxtaposition with Indonesian.
>
> The body of lexical items is to be adequate for the requirements of an English-speaking person wishing to deal with modern spoken and published Javanese. The Javanese material is to appear in Roman script, as used in Java by the Javanese.
>
> The dictionary will contain listings of the complex derived forms as well as root forms, together with illustrative examples of their usage; such illustrations are essential to the foreigner, who otherwise cannot be sure of the precise meaning of a form in context. The definitions will describe current usage as observed from examining around 1,000,000 textual words published and spoken since 1950, and will include older usages taken from other sources. . . .
>
> [Each dictionary entry is to include:]
>
> 1. The lexical item, in its root form;
> 2. The equivalent item in other social styles (if any);
> 3. Complete glossing;
> 4. Common phrases including the item;
> 5. Its derived forms, with illustrations of usage;
> 6. Cross-references to related or otherwise pertinent items.

In some ways this has been an unfortunate time to compile a Javanese-English dictionary and in others it has been a propitious time. The language, as indicated in the foregoing section, is in a transitional state as a result of the vast political upheaval that has occurred in Indonesia over the last few decades. With changes occurring rapidly, a dictionary is likely to go out of date sooner than it might in more stable times--even taking into account the fact that any dictionary is out of date at any time because it is fixed and the language it records is constantly changing. On the other hand, perhaps it is useful to record the usage of a language at precisely such a time, for comparison with eventual changes to come within the next fifty to one hundred years.

Regarding the spelling of Javanese (in Roman script, as conventionally used in Java), after the dictionary had gone to press the Indonesian government officially adopted certain spelling changes for Javanese, to take effect over a five-year transition period. I managed to insert a footnote to this effect in the Introduction, where spelling is described, listing the major changes and giving examples.

The format of the dictionary entries of the finished product is as it was outlined in the original proposal, except that numbers 4 and 5 have been interchanged.

PROCEDURES

At the beginning of the project I organized a staff consisting of two Javanese informants (man and wife), a keypunch operator, and a typist. After about a year, the jobs of keypunch operator and typist were combined, being handled by the original keypunch operator. The staff changed shape from time to time as informants began replacing each other and as the nature of the work shifted. After the first couple of years, the staff always had a full-time secretary, who did a variety of jobs—typing letters, operating the copying machine, checking cards, handling administrative matters, and—ever-increasingly—typing up definitions.

The first task of the original staff was to organize the source materials, which fell into two major categories as described below. One of the informants and I worked on the materials we were preparing for computer processing, while the other informant worked on the other source materials.

INFORMANTS

The first informants were with the project for nearly two years. During that period, we set up certain patterns for definition-writing, developing a sort of philosophy of what the dictionary should contain, where the emphasis should lie, what sort of example sentences should be used. When these informants' visas could no longer be extended and they had to return to Indonesia, I began a search for new informants. This process was repeated regularly throughout the project. Javanese people in this country are generally here for limited periods of time—perhaps a year or two, to complete an academic degree—and our staff had a high turnover. Altogether, fifteen different informants worked on the dictionary. It was necessary, each time a change was made, to find educated, intelligent speakers from the Central Javanese area, where the standard variety of the language is spoken, from among the very limited numbers of Javanese within the geographic area where the dictionary work was being conducted.

On the one hand, the frequent change of informants provided the benefit of a larger range of views of the language, as their ages and personalities varied. Their birth dates represented a span of a quarter of a century; the older ones were born during the Dutch colonial rule in Java, they speak Dutch, and they observed and even took part in the struggle for independence. The younger ones were born into the atomic age and have known only an independent Indonesian nation—a very different environment.

On the other hand, the informant turnover seriously interrupted the continuity of the work. Each new speaker had to be made familiar with the procedures and what had gone before. Often his approach to the dictionary would be quite different from that of the previous informants. Older informants tended in general to have a more formal attitude. Some of them felt that everything possible should be included in the dictionary, even obsolescent

words and old words known to them only as entries from older dictionaries. The younger informants were quite impatient with this approach, feeling that nothing "old-fashioned" had any place in our dictionary and wishing the entries to have a fresh, modern sound; with their strong nationalistic feelings, they desired to wipe out all traces of colonialism. Ideally, both points of view—and those in between—should have been represented throughout the writing of all definitions. Under the circumstances, it was difficult to maintain a balanced approach through the years devoted to preparing definitions.

In the search for informants, it was not always possible to find speakers living in the same city where the project was based. This entailed a good deal of travel on my part, between Boston and New York, for example, and conferences always had to be conducted in less time than was needed. And the travel entailed extra expense. The bulk of the work was done through the U.S. mails.

In summation, the frequent change of informants, always entailing a difficult search for replacements, together with the problems arising from the changes, was a difficulty that plagued the project throughout its duration.

SOURCE MATERIALS

The Master File: "Old" Materials

The most recently published dictionaries are Dr. Th. Pigeaud, *Javaans-Nederlands Handwoordenboek* (1938) and W. J. S. Poerwadarminta, *Baoesastra Djawa* (1939). They have been the standard works in the decades since they appeared, and we used them as source materials; having been published before the establishment of the Indonesian Republic and the termination of the colonial period (1945), however, they constituted "old" source materials. The entries of Poerwadarminta's monolingual dictionary were typed singly onto blank IBM cards. As this work proceeded, a Javanese speaker compared them with those of Pigeaud's Javanese-Dutch dictionary and made additions and changes to the cards as necessary. These cards, numbering between 50,000 and 60,000, constituted the Master File. As other data were obtained from miscellaneous sources (excluding the corpus processed by computer), they were added to the file—for example, information picked up during conversations with Javanese speakers.

A basic difference between the arrangement of Pigeaud and Poerwadarminta on the one hand and my projected dictionary on the other was that in mine, citations were to be by root form with all material pertaining to the root listed within a single entry; in Pigeaud and Poerwadarminta, citations are by root form and also by derived forms, which have affixes that place them in different locations alphabetically from the root. As a result, information about a single root is sometimes scattered in half-a-dozen or more entries. For example, the root *ili* 'flow, current' has the forms *ilèn, ilènan, kèli, mili, ngili, ngilèkaké* (passive root, *-ilèkaké*), *ngilèni* (passive root, *-ilèni*), and *pangilèn*; in my dictionary these are all listed under one entry, ili, while in Pigeaud there is an entry ili and separate entries for -ilèkaké, ilèn (with a subentry -ilèni), kèli, mili, ngilèkaké, ngilèni, and pangilèn; only some of these are cross-referenced to ili, and some are indirectly cross-referenced (e.g. pangili I to mili [but not ili], pangili II to ngili, ngili to ngilèkaké, ngilèkaké to ili). This arrangement of entries

gave us the task of realphabetizing many cards to bring all forms of the same root together in the Master File.

The Master Index: "New" Materials

The second major body of source materials was a corpus of Javanese texts all of which came into existence well after the establishment of the Indonesian Republic (1945). These materials, nearly 1,000,000 textual words, consisted of monologues and dialogues by Javanese speakers tape-recorded and transcribed, and books and periodicals published in Java for the Javanese, covering a wide variety of subjects.

It was in this area of the work that we used the computer. The entire corpus was processed into concordances.[1]

Text Segmenting and Keypunching

Before the computer work could begin, I needed to learn the techniques. It was my exceptional good fortune that right around the time I was beginning the project at Yale, Sydney Lamb came to Yale, and, among his other tasks, began conducting a series of short courses on using the computer in the humanities. A specific area of his instruction covered concordance-making, with his program UNICON and the related routine UNICOUNT. The process of concordance-making is fully and lucidly described in Lamb's manuals (see Bibliography) and is not repeated here. To apply the techniques specifically to Javanese, I proceeded as follows.

Javanese has three separate vowels—designating different phonemes—conventionally spelled *é*, *è*, and *e*; it also has two varieties each of *t* and *d*, spelled *t* and *ṭ*, *d* and *ḍ*. Since no diacritics were available for keypunching and computer use, we devised the spellings *ee* (for *é*) and *ea* (for *è*), using *e* for conventionally-spelled *e*; we punched *t.* for *ṭ* and *d.* for *ḍ*.

Javanese words are subject to a good deal of affixation, and before any keypunching could start, the words of each text had to be segmented so that the resulting output would list the words by root form, ensuring that all forms of the same word would appear together in the same concordance entry. (The same practice enabled us to call for affixes alone, on subsequent runs, for examination of their usage.) Each text, then, had to be pre-edited for keypunching by someone who recognized the segments, i.e. who knew Javanese. For example, the form *ndandani* has a prefix *n-* and a suffix *-i*; the red-penciler would mark these off (right in the book) by inserting a vertical line at the boundaries. The keypunch operator was instructed to punch a hyphen after a prefix and before a suffix, with a blank between:

n- dandan -i

In the output, the form would then be listed under *dandan*, along with its other forms that appeared in the same text: *dandan -an*, *di- dandan -i*, and so on.

1. The following description details the procedures I followed for this work, and the Bibliography shows the manuals I used. At the time I did my computer work (1965-66), the Yale Computer Center had the IBM 7094 DCS, which I used exclusively. Around the time I finished, Yale installed the IBM 360 system, and I stored my data on tapes suitable for the 360: see the listing in the Appendix. I have not been able to keep abreast of computer applications to lexicography done by other workers and consequently am unable to assess my work in relation to theirs. My description here covers the steps I took, and my evaluation of the process in terms of my own project appears in the Conclusion below.

More complicated cases entailed handling affixes which assimilated with root sounds rather than simply attaching to them: *mangan*, for example, has the root *pangan* (*m-* plus *pangan*). We handled this by punching **mangan / pangan /* , using an asterisk to designate words that were to be restricted during the computer run, i.e. not listed as separate items in the concordance. Similarly, *patèn* (from *pati*) was punched **patean / pati / : njuwèni* (from *suwé*) as **njuweani / suwee /* . These punchings ensured that all forms of the same root would be brought together into single concordance entries.[1]

Another complication in Javanese morphology is infixes. We adopted the technique of pulling these out from their words and punching them ahead of the word, e.g. from *tinimbang* (a root *timbang* with *-in-* infixed after the initial consonant):

$-in- timbang

(The dollar-sign was an infix-marking device and brought all infixes together "alphabetically" by initial character in the concordances; the hyphens before *and* after *-in-* showed that it was an infix.) An infixed form also, then, would be listed among the other forms of the root in the concordance: *timbang, n+- timbang, di- timbang, $-in- timbang, timbang -an,* and so on.

Some consonant-initial Javanese words are reduplicated, by placing in front of the word an extra syllable consisting of the initial consonant plus vowel *e* (or, in very formal usage, the initial consonant-plus-vowel of the word). In order to bring together all reduplicated syllables alphabetically, for observation, we punched the initial consonant—whatever it was—with *q:* for example,

qe- timbang -an (= *tetimbangan*)
qe- lara (= *lelara*)
n- qe- djaluk (= *ndjedjaluk*)

Doubling—a common phenomenon in Javanese—was shown by punching *-2* after the doubled portion:

suwee -2 (= *suwé-suwé*, usually written *suwé*[2])
dipun- raos -2 -aken (= *dipun raos-raosaken*)

Doubling with vowel change, a process whereby the vowels of the (usually) first member differ from the root vowels, we marked with *-3* (a device for enabling us to retrieve all vowel-change doublings later by calling for listings of *-3*):

**bola- bali -3* (= *bola-bali*, root *bali*)

Thus, we punched all affixes with hyphens placed to show whether they were prefixes, infixes, or suffixes; and we punched all roots without hyphens, to show that they were main-entry items.

1. These handlings of assimilated spellings are not ideal, and another time I think I would try to devise a technique that would keep the forms parallel with structurally similar non-assimilated forms, perhaps by some such method as I actually adopted in the dictionary entries to show assimilations—by placing an umlaut over an assimilated nasal prefix (this could be keypunched as *m+*, or some such notation, so that *mangan*, for example, would be punched as *m+- pangan*, making it parallel to *ndjupuk* (keypunched *n- djupuk*) and by placing a diacritic over a *k* or *n* that follows a vowel change (e.g. *njuwèni* could be punched *nj+- suwee -nx -i*). This system would have the further advantage of allowing one to make computer runs from the same text cards instructing the computer to list, say, all of the affixes, or certain ones of them, instead of making only some of the affixes retrievable, as they are under the system I actually used.

On every punched card for every text, the first ten columns were reserved for coded references to the source. These were brief and unambiguous. For example, we processed three issues of a magazine called *Mekar Sari*. The code name of the first was MSa, the second MSb, the third MSc. A number following this coding referred to the page; then a letter referred to a section of a page (as marked on the copy by the person segmenting the text); from then on, the cards were numbered for that page section. The coding MSB14A02, for example, meant *Mekar Sari* (second issue), page 14, section A, card number 2. Since a punched card has only 80 columns for characters, and a single line of concordance output holds 131 characters, at least one coding always appeared for a given line in a concordance entry, and often two. Later on, when examining the entries during the defining process, if we needed more context for a given word than was shown in the 131 characters appearing in the line of output, we could put our hands on the precise location in the source text immediately because of the coding numbers.

The Concordances

As each text (punched on cards) was submitted to the computer for processing, a preliminary run was made using UNICOUNT, a program which produces a listing of all words in the text together with the number of occurrences of each. This was useful information to have; the output was also used for making up a restriction list to accompany the UNICON concordance-making run—a list of items the computer was *not* to print out—for example, all affixes; all punctuation; the word for 'and,' perhaps, and similar high-frequency, low-interest words; or whatever else we wanted to restrict.

The very first concordance produced successfully proved the value of processing source materials in this way. From cards punched on a single pass by a keypunch operator through a prepared text, we had obtained an alphabetically organized listing of all the words in the text in their contexts, arranged by root form and showing all occurring forms of that root—a listing that would have taken many, many times the time and effort if produced by hand. It was obvious at a glance, by observing the length of an entry, which were high-frequency words. A word under examination could be seen in all the forms that appeared in the text together with their immediate contexts

The major portion of the concordance-making was completed during the first phase of the project (one and one-half years). Thereafter, concordances were made from time to time, as time permitted, when interesting recently-published materials became available.

Indexes

When the first concordance became available, it was a simple matter to look through its alphabetized listing and see if a particular word under investigation appeared in that text and, if so, to examine its occurrences and forms. As the number of concordances grew, it took more and more time to look through every one; and so, after a dozen or so had been made (about 240,000 textual words), an index to them was made by computer, using the DISCIN routine. From the UNICOUNT output for each text (described above), we punched onto cards all the words appearing in every text together with the code name of the text (e.g. MSA, MSB, MSC). The resulting index listed each word (root) followed by a string of code letters designating the concordances in which the form appeared. In effect, this index was a master list of the words occurring in books, magazines, newspapers, and transcribed tapes totaling 240,000 words. The length of the listing for each, i.e. the number of texts in

which a given word appeared, suggested its breadth of use among different speakers and authors.

Twice more as the computer work proceeded such indexes were made. At the end, a Master Index was made from the separate indexes. This Master Index showed all the words in the entire corpus of "new" materials, the nearly 1,000,000 words of text. This list formed the other major body of source material for the dictionary (the first being the Master File described above).

It is difficult to determine how many new vocabulary items were uncovered from the "new" materials and how many items from the "old" list failed to appear in the new. I would guess that the overlap was around 85 percent.

THE DEFINING PROCEDURE

Mechanical Procedures

Every word in both the Master File and the Master Index was examined by at least two Javanese speakers, and most by several more. We rented an A. B. Dick copying machine and duplicated Master-File cards on sheets for distribution to the informants, along with other pertinent materials; on each sheet was noted the concordances in which the word appeared. The informants then submitted their comments to me on the same sheets. The concordances were examined for each item, some by the informants and some by me, checking for current meanings. A fairly high number—perhaps 15 to 20 percent—of words from the Master File (the old sources) were unfamiliar to many of today's speakers, especially the younger ones. In some cases the words were familiar but the meanings had shifted somewhat. Many times, of course, one informant's impression of the meaning and currency of words conflicted with others'. Clearly, the opinions of each are important, reflecting a range of meaning as well as a factor of change in the language.

A handful (under 100) of words from the Master Index (the new sources) that were at first glance unfamiliar to informants were nearly always found to be misprints (committed by either the typesetters or our keypunchers), coinages (of which Javanese are fond), poetic-license usages, or—in the case of under a dozen—just plain unknown, apparently, to anyone other than the author of the text.

After gathering as much data as possible on each word, I myself drafted all definitions. Data-gathering included listing all derived forms of each root that I could find, along with special phrases using the word. The definitions were then typed on blank IBM cards and added to a growing Definition File.

When the first draft of the definition file was completed, it was copied in its entirety (from the cards, using the A. B. Dick copier) and read through from start to finish by two special informants. This reading settled most questions but raised some new ones and still left discrepancies and inconsistencies. Revisions were made and a final draft was then prepared and submitted to two highly intelligent, competent, meticulous, and widely experienced Javanese speakers who gave it one last reading and spent many hours conferring with me on a number of points that still needed clarification. The form in which the definition

file emerged from this final process is the form it has taken in the pages which have now gone to press.

Writing Definitions

From the very start, writing definitions for a dictionary involves making decisions, each crucial and each irrevocable in the sense that when one alternative principle is chosen, the other is excluded. In the present case, for example, it had to be determined at the outset whether to place all forms of the same word in a single entry or scatter them to the points where they would fall alphabetically under their various affixed forms (as in Pigeaud and Poerwadarminta: above, p. 4), with cross-references back to the root form. Advantages of the former are that it is convenient for a reader to see in one place all the information on his word; this shows him the scope and range of the word, and he can observe something about its complexity and deduce how commonly it is used from the mere length of the definition. The chief disadvantage is that in Javanese the words a reader wants to look up are very often prefixed or otherwise disguised from their root form, and he must first learn a set of complicated rules and procedures for penetrating these disguises before he knows what root to look up his word under; some readers would probably prefer to be able to look up specific forms since they would be easier to find. (The rebuttal to this argument is that a person who knows enough about Javanese to be looking up words in the dictionary will understand the morphological processes well enough not to be dismayed by the practice; one who is just learning about Javanese will learn faster by using a dictionary that demonstrates for him the ways in which roots are built up.[1]) In any event, one alternative or the other has to be adopted—after thoughtful weighing of the pros and cons—and the one that is rejected may be the one that some readers would have preferred.

This is only one example. Many decisions must be made, many techniques devised, many problems dealt with. Dictionaries often get poor reviews, and probably one reason is that of the many decisions the compiler had to make, a substantial number might have been decided differently by the reviewer.

Having made preliminary major format decisions, the compiler is faced with the task of choosing the English expressions for defining the words. Between languages spoken by peoples of greatly differing cultural backgrounds, there are not many words with one-to-one semantic correspondences, so that single-word glosses are often not adequate. Moreover, the literal gloss is not always the same word one would substitute for that word in a context. For example, in our definition of *trima* 'to accept without protest, to resign oneself to,' none of the examples can conveniently apply the words of this literal glossing; natural English calls for such translations as 'I'll make do with wood,' 'they made the best of it and . . .,' 'had to be content with . . .,' 'let it pass,' and others.

My general practice was to gloss cited forms literally, for precision and economy, and

1. In order to give the reader every possible assistance in his looking-up process, I included at the close of the Introduction two index guides: the first listed initial segments of words (prefixes, infixes, reduplicating syllables) which disguise root forms, each listing accompanied by a reference to the point in the Introduction where the process was described; the second list was a similar guide for penetrating end-of-word disguises.

to translate examples freely, to give a feel for the type of English situation the word applied to. An alternative practice would have been to give long, complicated glosses which endeavored to cover the field, and few or no examples.

Not all dictionaries give examples of their cited and glossed forms. I felt it was important to do so, for reasons given in my Introduction to the dictionary:

> [The] examples . . . are designed to serve a variety of purposes. For one thing, they provide an opportunity to show the spelled-out versions of the subentry shorthand notations . . . which we have adopted for the dual purpose of saving space and revealing the structure of derived forms clearly.
>
> For another thing, examples show words in their natural setting, *i.e.* a context, and hence broaden or clarify the semantic range of a form in a way that a bare glossing cannot do. Further, examples can show other words that are commonly used in conjunction with the word under definition—a feature that many students of languages find helpful. . . . We have attempted as often as possible to provide examples which give glimpses into Javanese life and ways of thinking.
>
> The fact is, truly helpful examples are hard to find. Linguistic contexts extend far beyond the brief phrase or sentence. Many examples that are short enough for the space available in a dictionary are unnatural, simple-minded, or textbook-like, or else they are parts of larger contexts in which they function smoothly but, once excised, become meaningless or alter their meanings or sound incomplete or puzzling. Elicited examples, on the other hand, generally provide less insight than examples in which the speaker or writer was not aware that he was making an example of the word.

Before I began this project, I felt that I knew how to write a dictionary—that it would simply be an extension of the familiar process of drawing up glossaries for particular books. It turned out, though, that there were entirely different problems involved in writing total definitions. Basically, it was necessary to get the entire feel of each word, insofar as possible; to discover the range of usage (which often led in unexpected directions); to assimilate informants' views on the word and make some kind of judgment in cases of disagreement; and eventually to set the results down on paper in an organized format and worded as felicitously as I could manage. I tried to balance the definitions—that is, to avoid making a word seem more complicated than it was by saying too much about it, while also not minimizing its complexity and importance by saying too little—so that the definitions would have a balanced relationship to one another throughout. I found definition-writing an enormous task, and a stimulating, frustrating, exhausting, and fascinating one. It is a job that can be learned only by doing it; then, after one knows how, it is possible that he is not interested in putting his experience to good use by writing another dictionary.

RESULTS

The manuscript of the dictionary is now in the hands of the Yale University Press and is scheduled for publication in the early spring of 1974.

In its present form, I believe that it lives up reasonably well to the objectives outlined for it when it was first conceived (above, p. 2). We have produced a general-purpose dictionary of the Javanese language as it is currently used by educated urban speakers from Central Java, the standard-language area. It contains between 20,000 and 25,000 main entries, many of them having subentries which swell the lexeme count by perhaps 15 to 20 percent. The scope of the work is described in the Introduction:

> The changes in Indonesia are reflected linguistically in the daily justaposition of Javanese and Indonesian. Educated urban speakers use Indonesian alongside of Javanese as required by the occasion--mainly, in all official situations, or in social situations where non-Javanese Indonesians are present, or even with other Javanese whom they do not know well and hesitate to address in the socially stratified lexicon of Javanese. Nearly half (around 47 percent) of Indonesia's estimated 125 million population is Javanese; each language exerts continual influence on the other, and each inevitably infiltrates the other. Indonesian words appear in Javanese published materials. Any foreigner using a Javanese dictionary these days will also need to keep an Indonesian dictionary handy.
>
> My practice here has been, in general, to include only a few commonly used Indonesian words which have largely replaced the corresponding Javanese word (also listed) or for which there is no separate Javanese lexical item, or which the Javanese use with Javanese affixation rather than Indonesian (*e.g.* lengkap). Conversely, an occasional Javanese word is shown with Indonesian affixation alongside its Javanese affixation (*e.g.* pertimbangan among the other forms of the root timbang). Technological and academic terminology is Indonesian, borrowed from Western languages for the most part, and I make no effort to duplicate the work of Indonesian lexicographers in that area, though strictly speaking such words are also Javanese. Higher education became available to Indonesians in their own languages only after their nation became politically independent in 1945, and the terminology borrowed into Indonesian--the language of secondary and higher education--has also become a part of each separate Indonesian language.
>
> I have not endeavored to include more than a sprinkling of technical terms from such highly specialized fields as wayang, batik-making, and agriculture, nor esoteric and mystic terms used in astrological and chronogrammatic reckonings. English words whose meanings are obvious (*e.g.* hèlikopter) are also not included except in a few cases as examples of the Javanese tendency to assimilate new words into their morphological patterns (*e.g.* from propaganda, mropaganda *or* mropagandakaké to propagandize; from aksi action, ngaksèkaké to activate something). English-speaking readers quickly become accustomed to such equations as *Eng. -sion, -tion = Jav. -si* (*e.g.* komposisi composition) or *Eng. -tive = Jav. -tip, -tif* (*e.g.* kréatip creative).
>
> "Regional" vocabulary--defined as words spoken outside the Central Javanese area--is represented by only a few items which are considered to be generally well known in Central Java. Research into the Javanese dialects is urgently needed, and it is hoped that reports on such work will soon become available. Such large-scale investigation has obviously been beyond the scope of the present project.

In the Introduction to the dictionary I have also urged readers to communicate to me common words they do not find listed, as well as common meanings not shown for items

which are included. These are examples of the kinds of thing I have *not* intended to omit from the lexicon.

The introductory matter also includes a complete description of the phonology of Javanese along with a description of the spelling practices and variations now practiced in Java;[1] a concise summary of the complex morphological system of Javanese;[1] and a description of the various social styles inherent in the Javanese language and their application among speakers in their daily speech.[2]

1. This material was based on my previous analyses as set forth in *Beginning Javanese* (1961) and *Intermediate Javanese* (1963).

2. The material on social styles has been greatly expanded from that which appears in my two earlier books.

CONCLUSIONS

EVALUATION OF THE COMPUTER USE

As I have said above (p. 5, *fn.*), my knowledge of computer use in lexicography is limited to my experience on my own project. I used the computer for processing textual source materials, for obtaining word counts from those materials, and for indexing the concordance output.

If I had the dictionary to do over again, I would without question use the same methods. They provided me with a list of all the words appearing in several dozen texts, in alphabetical order, together with a line of context and a reference number showing the source of each occurrence so that I could quickly find the total context in the original publication. It would have taken many years to produce by hand the results I obtained in under two years.

The materials are only as useful as one designs them to be, by careful preparation of the texts beforehand, and it is worth the time required to devote careful thought to this preparation. It is useful to keypunch the materials in such a way that they can be put to other uses later, if one wants to retrieve forms for, say, certain kinds of grammatical analysis. The programs I used are quite flexible, and by learning what they could do, I was able to keypunch texts in such a way that they could make use of this flexibility. Several of the concordances I produced, for example, consisted exclusively of Javanese affixation (using the same punched cards from which the full concordances were produced): this material was of great value in preparing the dictionary definitions of the affixes, as well as providing an easily accessible source of examples for various types of affixation and combinations of affixes. And it is still available for any future work I might want to do.

The word-count routine was useful for statistical purposes: for frequency counts, and for observing which variant of a word occurred most commonly. Used in conjunction with the concordances, where contexts were available, they provided supplementary information, such as whether certain variants were more formal than others.

To be sure, processing materials by computer produces a good deal of sheer bulk in the form of output, and it is necessary to have adequate space not only for spreading out and examining the output, but also for keeping the punched cards and other paraphernalia connected with the procedures.

I believe that for the type of dictionary I was making, it would not have been helpful to try to use the computer beyond the stage where I used it—that is, in the defining process itself. Between languages of peoples so different culturally, the correspondences in semantic range are quite different on the whole; and many words and concepts present in one of the cultures are simply lacking in the other. Now for technical dictionaries, for example, in which terms correspond more precisely from language to language and can often be translated with single-word glosses, the computer undoubtedly provides great shortcuts. But for a general-purpose dictionary, many entries must be developed through examination of many

occurrences and clarified by discussion with native speakers; and I do not know how this can be done adequately by machine.

GUIDELINES AND LEARNING PROCEDURES

My original proposal to the U.S. Office of Education stated that the goal was to produce a dictionary that would meet the needs of an English-speaking person in Java. Such a person is presumably many people, each with different needs. One might prefer a tourist-type word list with quick-and-easy glosses, to enable him to make his way about by using detached words eked out with gestures. Another might be interested in living and doing research among a group of mountain people. Someone else might wish to investigate, say, a particular phase of Javanese dance-drama, batik-making, or agricultural practices, and would profit from a dictionary containing detailed technical terminology. Still another might wish to delve into old Javanese literature and hope to find meanings for obsolete and obsolescent forms and Old Javanese words. None of these people would find my dictionary adequate for his purpose. I have included no more than a smattering of regional vocabulary, technical terminology, and Old Javanese (*Kawi*) words, limiting myself in these areas to the most commonly used and widespread words. The task of investigating regional varieties of Javanese is an enormous one, and research in this area is needed; but such an investigation was far outside the scope of the present project. Technical terminology falls into a similar category: accumulating it requires intensive on-the-spot research, and this could not be done in the course of a project conducted entirely in the United States; moreover, much of it is regional or confined to certain small groups. As for old words, we excluded most of them to conform to the principle of compiling a dictionary that reflected the current state of usage. Other segments of the lexicon were included or excluded, to the best of our ability, in conformity with the same principle.

These guidelines were developed as we went along—as we examined our materials and discussed specific lexical items. We therefore had little idea for quite some time what size dictionary we were preparing. The audience we were addressing was always somewhat nebulous in my mind. In fact, I do not know where one might find clear general guidelines for dictionary compilation. It is not feasible to set up as a goal a dictionary containing a certain number of entries. Presumably the statistically most common items would be the candidates for inclusion in such a dictionary. The question of what an "item" or "entry" was would have to be redefined for each language. It would be a tricky matter selecting the corpus from which the 10,000 (or whatever) most common words were to be ascertained: one would need to cover an enormous range of material to be sure of having a sufficiently representative set of source materials.

As I have said, one learns how to write a dictionary by writing one. This means that at the end, having developed some techniques that operate well, he is ready to begin—but it is too late. If he had known then what he knows how, he could have done the job a lot more efficiently and for a lot less money. When organizing source materials, for example, he ought to have a consistent approach to handling the growing bulk of paper and/or cards

that keep accumulating. If he starts out using certain techniques and finds a quarter of the way through that some other method would work much better, he may have a good bit of work to do over again, or to alter, at some cost in time, accuracy, and disorganization of his files. When he starts writing definitions, should he concentrate first on short, uncomplicated words, or on long, complex ones in order to get them out of the way sooner? Should he start with the *a*'s and go straight through to the *z*'s, or take some other route? If he is going to use the computer, how can he use it to his best advantage? It seems to me that people embarking on dictionary projects could make excellent use of the experience of more seasoned lexicographers, if only it were available.

THE PROBLEM OF TIME

The Javanese-English dictionary was begun in February 1965 and ended in August 1972—a span of seven and a half years. The last year was devoted to preparation of the final manuscript, reducing the dictionary-writing time to six and a half years. The first year and a half was largely spent preparing and organizing source materials as described above; this leaves five years of actual intensive definition-writing. For a dictionary of 25,000 entries, this means one must write 5,000 definitions a year, or 416⅔ definitions a month. Assuming 22 working days to the month, nearly 20 definitions a day, on the average, must be written every working day for five years. Writing a definition is more than setting the words down on paper; this part happens only after complete data on the word have been gathered from all available sources, and studied, and often the word must be discussed at some length with Javanese speakers.

Thus it would have been difficult enough to get all the definitions written if indeed I had been able to spend 7 or 8 hours a day doing nothing but writing definitions (and not taking into account the not inconsiderable time required for writing the introductory matter, 40 pages of it in the finished dictionary). But many other things also had to be done.

The project was funded in a series of phases, each a year and a half in duration. I was never sure, as the end of each phase approached, whether funding would be continued further; in fact, I was often warned that I should investigate other sources against the eventuality that the Office of Education discontinued support. Some weeks before the close of each phase, I had to take time out from the work to prepare new proposals to submit for the next phase. This involved drawing up drafts, conferring at length with various people, redrafting sometimes two or three times, and finally submitting them and then waiting for the results. Each such instance usually required two or three weeks. The people I conferred with at these times were always most helpful, as was the Office of Education, and, while regretting the loss of time on the job, I very much appreciated their efforts.

A more than usually time-consuming proposal submission occurred several years before the dictionary was finished, when the Office of Education required that before the proposal for the next phase could be seriously considered, I would have to locate a publisher for the finished work. This was an unusual request to set before a publisher, but the Office of Education felt it was a necessary step to reassure themselves that the work would ultimately be brought to successful completion. Fortunately, the Yale University Press had published my two previous books on Javanese and was willing to accept the dictionary in principle at

that time, pending receipt of a final manuscript and acceptance of it by their Publications Committee.

I have mentioned the high rate of informant turnover with which the project was plagued. Each time a change became necessary, time had to be taken out to locate new speakers of Javanese. This involved letter-writing, traveling, and interviewing on my part. When I succeeded in finding people to join the project, there was a certain lag while the informant became acquainted with our procedures and the work that had been done before.

Secretaries, too, who joined our staff were prone to falling in love and/or having babies, requiring them to leave; and another lag would ensue each time another secretary had to be found.

Any interruption of the work, of course, added more pressure to the definition-writing schedule, and I extended the working days and weeks as much as possible. I took no vacations between 1965 and 1972. I would have liked to reserve some time at the end, to go over the manuscript and polish the style; I would also have liked, say a year before the entries were completed, to process some new materials from Java dating from the early 1970s, which undoubtedly would have added some interesting new entries to the dictionary; but there simply was not time.

To the Office of Education, it seemed that the project took a long time. To me, it seemed as if there was never enough time. I am grateful to those in authority there whose patience and acceptance of my time estimates enabled the project finally to be brought to a successful conclusion.

RECOMMENDATIONS

TRAINING FOR LEXICOGRAPHERS

Dictionary-making is such an expensive proposition that any means of making it less so is desirable. It seems to me that much time (hence money) could be saved if prospective dictionary-writers were to formulate specific procedural guidelines in advance, and that they would be better equipped to do this realistically if they had some kind of advance training—perhaps in the form of seminars attended by groups of people planning to write dictionaries and by people who have written dictionaries.

If the prospective lexicographers were going to use computers, preliminary courses along the lines of those conducted at Yale by Sydney Lamb (above, p. 5) would be extremely useful. In combination with such courses, experienced lexicographers who had made a variety of computer applications could give immensely valuable advice to trainees.

THE PROBLEM OF LOCATING INFORMANTS

I have indicated in this report that a good deal of time and anxiety were spent locating informants to replace speakers whose visas expired in mid-project. It would have been most helpful to have been able to line up informants at the beginning of the project who would see it through to the end. But this could never be done because of two factors. (1) There were very few Javanese speakers in the United States at any given time, and when they became informants it was as an activity secondary to their main purpose (study or teaching—i.e. they were moonlighting). They could not devote the time and energy to the work that it deserved. (2) I could never guarantee employment to a Javanese speaker for more than a limited time—a year and a half at the maximum—since my funds were granted for phases of a year and a half each, with no assurance that another phase would be funded. If I had been able to plan farther in advance, I would have been able to make attractive offers to highly qualified permanent informants, perhaps bringing them to the United States for this purpose and guaranteeing them security for a definite period.

I wonder whether others have similar informant trouble. If the problem is fairly general, perhaps a pool could be made available, through a central clearinghouse, of foreign nationals who could be made available to an institution, or group of institutions, for a firm period of time and at a salary commensurate with that of comparable academic appointees. The salaries could come from project funds—perhaps from two or more simultaneous or overlapping projects. This would provide freedom from insecurity both to the foreign national and to one, or possibly more, principal investigators.

WORK NEEDED IN JAVANESE

Many specialized terms in the important field of Javanese dance-drama—a cultural area that plays a basic role in the Javanese ethos—had to be omitted from our dictionary because of the considerations discussed earlier in this report. It was always our hope that eventually we might produce a dictionary devoted exclusively to the lexicon of this tremendously significant sector of Javanese life and culture. The work could probably be done in two years, in the United States, with the help of a small staff—a pair of carefully selected Javanese speakers and a clerical assistant.

Another important task is investigating the regional dialects of Java. This work would require a team of field investigators working in Java, and I would not care to project an estimate of the time or staff it would require.

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APPENDIX 1

SUBJECT DATA

The Subject Data called for under the Javanese-English dictionary project contract will be kept available for examination or use for five years following the date of this report. Please address Mrs. David Horne, West Fairlee, Vermont, 05083.

The following materials constitute the Subject Data (exclusive of the dictionary itself—which will become available through the Yale University Press in the spring of 1974—and this final report).

1. Program decks (UNICON, UNICOUNT, DISCOUNT, DISCIN) used for producing concordances, word lists, and indexes.
2. Tapes adaptable for use on the IBM 360 system, containing the input to all concordances made during the project.[1]
3. Computer listing for converting the above tape input to 360 use.
4. Copies of two manuals for making concordances (see Bibliography, Lamb and Gould).
5. Six representative texts that were processed by computer for the project, as follows:

   Asmara, Any. *Pahlawan Trikora.* Sala, 1964.
   A current novel about a dedicated young man who gave his life for his country.

   Deenik, A. C., and A. van Dijck. *Kembang-Setaman.* Djakarta and Groningen, 1952.
   A three-volume book of articles and stories on a wide variety of educational subjects, keyed for middle-school students.

   Mekar Sari. Jogjakarta. Issues of 1 August 1964 and 1 March 1965.
   A current magazine published weekly.

   Widajat, Widi. *Radjapati Njalawadi.* Semarang, 1964.
   A detective novel.

   Wignjadisastra, R. *Tataran.* Groningen and Djakarta, 1950.
   A three-volume children's book about life and activities in a rural Javanese village.

   Winduwinata, Prijaja. *Dongèng Sato-Kéwan.* Djakarta, 1952.
   A political novel satirizing bureaucracy.
6. Xerox copies of the concordances made from the above six texts.

1. The tapes are stored at the Yale Computer Center, Whitney Avenue, New Haven, Connecticut.

BEST COPY AVAILABLE

APPENDIX 2

SAMPLE CONCORDANCE PAGE

(See pages 5-7 of report)

27

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2 DJAM SAKA ILANG -ING D.OMPEAT MAU , D.OMPEAT BISA BALI TEMEN  MSB23L04 -AN . DEENEE SING N+ NJOPEAT / TJOPEAT / D.OMPEAT MAU O
- WLANLAI -AKIL . MSB23P04 D.ASAR PANTJEAN WIS KA- SENGSEM TEMEN -AN . PA- NG- RUMAT -EE MARANG  MSB23Q01 PER+ KUTUT -EE MBOKMANAW
MSB23X01 KUNCU SWARA -NING PER+ KUTUT . KA- TAMAT -2 -AKEE TEMEN -AN . ORA  MSB23X02 PANGLING 8 KUWI PER+ KUTUT -EE D.EAWEAKEE . S
AN  MSC02U02 -EE MAS *PERSON , KUWEE RASA -NEE KOH ORA SREG TEMEN NANG ATI . SEBAB  MSC02U03 KUWEE BASA -NEE DUDU *NAME GEL .  MSCO
*PLACE NING  MSC02V01 GUL -EE NG- OMONG -NA KUWEE ORA *NAME TEMEN -AN , ORA KOH MALAH BUNGAH  MSC02V02 , NING RASA -NEE MALAH KAJA
ALAH BUNGAH  MSC02V02 , NING RASA -NEE MALAH KAJA DI- INA . TEMEN -AN KO MAS . JA  MSC02V03 SE+ NADJAN -A ALA JA ORA NG- APA -A BAH
JAN WONG *PLACE JA TETEP 6 KU 66 BALE  MSC02Y02 .  MSC02Y03 TEMEN -AN KO MAS RED. . ADJA MANING -2 , LAH . INJUNG DJAN NG- RASA  MS
G -2 , LAH . INJONG DJAN NG- RASA  MSC02Z01 KAJA DI- LETJEE TEMEN -AN , KUH . JA DJADJAL SI DI- GALIH . EENGGA  MSC02Z02 -NEE ANA W
IH -EE *PERSON AREP DI- GOD.A .  MSC05X02 *PERSON IKU , SA- TEMEN -EE PUTRA PA- M- B+ ADJENG -EE *PERSON , NATA  MSC05Y01 ING *PLAC
APA -NEE LAN GULIAK PUSAKA  MSC07T01 SING KENA DI- PERTJAJA TEMEN -AN .  MSC07T02 $UM- TRAP MATJAN SING ARE' DI- DU IKU SING KAWGGA
GUI KA- BALA = $UM- DUNUNG DADI BALA , DJALAR -AN WIS TELUK TEMEN -AN .  MSC08Q02 SUSUL -AN ING KUPIJA 1 . KUPIJA = PALUPI , LEPIJA
-NEE SA- DAJI -2 ,  MSC08R02 TJATJAH -EE LEKSA -N , IKU SA- TEMEN -EE APA 7 TEKA -N SEPREENEE A+  MSC08R03 KEAH KANG ISIH NG- ANDEL
U3 WANGSUL -AN , 1 . U D , TINDAK-  MSC09T01 TANDUK IKU SA- TEMEN -EE DURUNG BISA  MSC09T01 DI- ANGGO UKUR -AN $UM- GATUK . MULA AD
GA -N , A+ MARGA A- NG-  MSC11Z02 GALIH DEENEE NGANTI LAWAS TEMEN ORA RAMPUNG . SA- RAWUH -EE ING PA-  MSC11Z03 LAGA -N , BANDJUR A
+ KUWEE MA+ NGGUH ANA *PLACE LAGAK -MU KOK  MSC12D002 BEEDA TEMEN IA NDUK -  MSC12D003 TEMBUNG -EE MAS *PERSON ING SA- WIDJI -NING
A+ PEENGIN BALI JEAN URA N+ NUDJU / TUDJU / PEKLU  MSC13Q03 TEMEN -AN .  MSC13Q04 TAUN IKI P- ANEA -N -AN -EE / ANI / *PLACE KA- TO
NG NJATA URA PISAN -2 N+ MARDI / PARDI / UTAMA ,  MSC14JJ02 TEMEN -EE MALAH KUSOK-BALI -NEE , PANASTEAN WATAK -EE , KANG DI-  MSC14
MSC18B003 SAKA BASA *TIUNG *HUA 7 JEAN MANGKUKU KOK DJADJAH TEMEN -AN SANGKAL  MSC18CC01 -AN KITA IKI 8 WERUH *PL
U02 MANDIKA -N IKU URA  MSC22B03 GAMPANG . KITA KUDU SIJAGA TEMEN -AN N+ NGENA -NI / KENA / UBARAMPE+  MSC22C01 +
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A- NG- UPAKARA -NEE . STYLE MEMLU / ILU / N+ NEMTU -KAKEE / TEMTU  MSB2DAA01 / ADI LUHUNG -ING DJOGEAD MAU , DAD
NDAKA , PANGJENENGAN -IPUN K- EETJAL -AN / ITJAL / GARWA . TEMTU  MSC05T02 -NIPUN PG- NG- GALIH SAREG KA- SEPEA
PUN DAD PUNIKA KULA  MSC06C03 BOTEN SAGED NG- ATUR -AKEN . TEMTU -NIPUN KULA KEDAH TAROS -AN $UM-  MSC06D01 KI

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-2 DI- ANA - KAKEE  MSB05P03 KUNGKRUS KAJA DEENEE KANG $IN- TEMU ING WEKTU IKI .  MSB05P04 MARGA SAKA IKU , MEST.I BAEE TANSAH GAWE
2PUI LUNGA -NEE *PERSON . UTAWA BISA UGA N+ PA- NEMU -NEE / TEMU / IBU -NEE  MSB12F02 *PERSON SAIKI WUS BEDA 7 SA- WIS -EE IBU -NEE
K- ANGGO NG- GULLAK -I *PERSON URA  MSB12J02 BAKAL BISA KE- TEMU SE- DINA RUNG DINA . MEST.I -NEE BAKAL KUDU KEREP  MSB12J03 QE- LU
M- SEBAR D.ISIK -2 -AN  MSB12P02 BISA -NEE N+ NEMU -KAKEE / TEMU / DYAH AJU *PERSON KEMBANG -ING KUT.A  MSB12P03 *PLACE KANG ING  M
GULLAK TAKSI ING PAPAN AD.EG -2 -AN TAKSI . SAPA WERUH KE- TEMU KARO  MSB13K02 WANUH -AN  MSB13K03 ING KONO . D.UWIT LIMANG RUPIJA
NG+U. KAJATA ,  MSB15I05 1 . A- NG- LAHIR -NA N+ PA- NEMU / TEMU / KANG TEMEN . 2 . N+  MSB15J01 MAKSUDI -JA / PARSUDI = PERSUDI =
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HA -N ,  MSB16P03 DAD $UM- TIMBAL LAHIR MAU MEST.I UGA $IN- TEMU ING AKAL , DJALAR -AN  MSB16S01 URIP SE- PISAN ORA BAKAL BISA SEMP
BIONING2 PISAN , A+ WIT ANGGER -2 $UM- TIMBAL LAHIR MAU $IN- TEMU ING NG+ AKAL  MSB16S02 , $IN- TEMU ING KE- DADEE -JAN -2 2 2 / DA
- TIMBAL LAHIR MAU $IN- TEMU ING NG+ AKAL  MSB16S01 , $IN- TEMU ING KE- DADEE -JAN -2 2 2 / DADI / ALAM [illegible] $IN- SEMUT  MSB16S50
MSB16B02 LAGANG IKU URA ANA . MUNG M- A+ NUT N+ PA+ NEMU / TEMU / KANG URUS ,  MSB18B03 BARANG -EE WONG SA- LAKI - RABI IKU  MSB18
[illegible] PARA SAIDJANA URA ANA N+ PA+ NEMU / TEMU / KANG SA- WIDJI ,  MSB19D03 SAIKU ANA KANG NG- ANGGEP WARIS LAN A
[illegible] URA PAD.A , M- A+ NUT N+ PA- NEMU -NEE / TEMU /  MSB19R04 MASJARAKAT ING KONO .  MSB19R05 GAND.EANG KANG MANGSON
[illegible] *PLACE , PUNGGAWA MAU BANDJUR N+ NEMU -NI / TEMU /  MSB23L01 SALAH SIDJI -NING TUKANG KEAH KANG AREP D.INES MENJANG
[illegible] GULLAK -I MAU BISA N+ NEMU -KAKEE /  MSB23AA02 TEMU / PER+ KUTU -EE KANG $IN- KASIH MAU . BENER , ORA LUPUT .  MSB24AA
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