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HOKKIEN CHINESE BORROWINGS IN TAGALOG

by

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ABSTRACT

Hokkien Chinese borrowings in present-day Tagalog are subsumed under the category of direct loans or loanwords. Preliminary investigation reveals that there are one hundred and sixty three Hokkien Chinese loanwords in present-day Tagalog. These loanwords constitute the data for the phonological and the semantic analyses in this study.

The sound changes that have been undergone by the Hokkien Chinese loanwords upon entering the Tagalog language are determined. Such sound changes are then formulated in rules within a generative phonology framework, using distinctive feature analysis. Specifically, the analysis dealt with the segmentals of Hokkien Chinese and the supra-segmentals of tone. Investigation of the latter indicates the non-correlation of the five Hokkien tones to Tagalog stress and non-stress. The following kinds of rules emerged: trans-linguistic rules, morpheme structure conditions and phonological rules. Trans-linguistic rules apply to Hokkien words as the latter are borrowed into Tagalog; they are rules that were synchronically present at the time Tagalog acquired the loanwords, therefore, they can also be called 'acquisition rules'. The analysis reveals that trans-linguistic rules, like the regular phonological rules, are also ordered.

The Tagalog morpheme structure conditions and phonological rules discussed are inherent in the linguistic system of Tagalog. A significant finding in relation to morpheme structure conditions is apparent from the analysis, that is, morpheme structure conditions are also ordered; this finding runs counter to the claim that morpheme structure conditions are not ordered.

Certain implications are evident from the analysis: (1) it could lead to a typology of borrowings wherein the latter can be classified and categorised on the bases of the number and the complexity of the trans-linguistic as well as the phonological rules of a language they

have undergone; such a typology would very likely reflect the degree of complexity of a donor language as opposed to a borrowing language or vice versa; (2) loanwords of different kinds, that is, coming from different language systems, can be studied - again using trans-linguistic and phonological rules as bases.

Using the generative phonology framework for the analysis of the loanwords has shown that the model can provide valid and logical explanations for seemingly irregular forms, that is, sound correspondences. It is also evident that the use of distinctive features and binary notation has simplified phonological generalisations extensively.

The semantic analyses of Hokkien Chinese loanwords in the domains of kinship and cookery yielded certain significant findings of a cross-cultural nature. Hokkien loanwords in the domain of kinship are subjected to componential analysis, while those in the domain of cookery are subjected to taxonomic analysis. The kin terms used by Ego to address and to refer to his elder siblings, i.e. *kuya*, *ate*, *diko*, *ditse*, *sangko*, *sansé* and *dete*, result from the inherent importance of the nuclear family within the Tagalog kinship structure. The borrowing of the above kin terms led to the inclusion of the semantic dimension of birth order in a componential analysis of Tagalog kin terms; this implies that componential analysis can be used as an additional technique in determining the degree of linguistic acculturation of loanwords. The presence of the Tagalog affinal kin terms of Hokkien origin, namely, *siyaho* and *insó* demonstrates the principle of selective borrowing since they are functionally different from their Hokkien equivalents: in the latter, they are used as referential terms, while in the former, they are used as address terms. Finally, the analysis on kinship terms shows that borrowings took place because of a real need to cover up the terminological gaps in the Tagalog kinship terminology.

A taxonomic analysis of the Hokkien loanwords on cookery reveals that a great number are concentrated on the category of *raw*, although the loanwords under the category of *cooked* constitute also a high percentage; the category *instruments* has the smallest number of loanwords. On a lower level of taxonomic analysis, the following categories have a higher ranking than others: *meat*, *vegetables* and *soy bean products*, indicating that the Tagalogs borrowed heavily in these areas. The category *boiled and steamed* ranked highest under the level manner of cooking, a finding which confirms the general impression that such manner of cooking is very common among the Hokkien people.

CHAPTER 1

INTRODUCTION

1.0. PRELIMINARY REMARK

H. Otley Beyer, in his brief introduction to Manuels' *Chinese Elements in the Tagalog Language* (1948), accounts for the possibility of a racial link between the peoples of the Philippines and the ancestors of the Chinese by tracing the major migratory waves that occurred in the Philippines back to the Chinese mainland and Indo-China.

The first wave of immigrants came about 3000 B.C. or 5000 to 6000 years ago. Beyer (1947:2) refers to them as the people of the Early New Stone Age because they had "polished stone axes, adzes, chisels and other tools, ..., which tell archaeologically of a much-advanced culture and craftsmanship". They constitute Beyer's "Indonesian A" type of people. The second wave of immigrants, which lasted for approximately a millenium, came during the late Neolithic Period, circa 1500 B.C. Beyer refers to them as "Indonesian B" type of people. Like the first wave of immigrants, they were also seafarers; they also "practised extensive dry agriculture" and cultivated upland rice, taro, yams and other food crops. The third wave of immigrants, otherwise known as the Copper-Bronze culture, was probably a continuation of the second. The movement took place between 800 and 500 B.C. This group possessed copper and bronze tools and ornaments and green jade ornaments. Beyer ascribes the construction of the rice terraces to them. Finally, a later wave of immigrants from mainland China, referred to as the Jar-Burial culture¹, came at about 300 to 500 A.D. The use of jars for burying the bones of ancestors was particularly identified with migrations from the province of Fukien. Although Beyer ascribes the practice of burying the dead in jars to the Hakkas, Wang (1964:281) believes that the practice should be identified with the "Hock-Lao"

tribes which differ from the Hakkas in dialects and geographical distribution.²

Assuming that the waves of migrations described in the preceding paragraph constitute the beginnings of relationships between the ancestors of the Filipinos and the Chinese, one can conclude that such relationships were anything but commercial. However, round about the seventh century onwards, beginning with the T'ang Era (618-906 A.D.), Philippine-Chinese relations took on a commercial nature, and accelerated during the Southern Sung and Yuan Periods in China (twelfth-fourteenth century). Again, archaeological evidence in the form of Sung ceramic wares indicates heavy trading between the Chinese and the Filipino traders (Beyer, 1948:xii). Round about the twelfth century, the Chinese traders began to settle at the chief ports on the island of Luzon. Heavy trading continued until the arrival of the Spaniards in 1521 limited it. Apparently, the single largest group of Chinese with which the Filipinos had trade relations came from the province of Fukien.

The present study is so titled because it involves the investigation of a distinct type of Hokkien Chinese borrowings which are generally referred to as direct loans or loanwords. Lopez (1973:397) opines that these loanwords³ were introduced into the Tagalog language around the seventh century, while Manuel (1949:94) believes that they appeared during "the historic period, a little before the coming of the Spaniards and after to the present time". Because the phonetic shapes and the semantic referents of these words have only been slightly altered, they are described as recent in this study.⁴

1.1. BACKGROUND OF THE STUDY: RELATED LITERATURE

To date, the only noteworthy linguistic treatment of Chinese elements in Tagalog had been done by Arsenio Manuel; his findings are published in his book *Chinese Elements in the Tagalog Language*, and subsequently in his articles 'The Origin of the Tagalog Language and the Chinese Contributions to Its Growth' (1949) and 'The Origin and Development of Philippine Language and Their Relation with the Chinese Language' (1953).

The first work contains three wordlists:

1. loanwords in Tagalog with corresponding etymologies in Chinese,
2. words in Tagalog with Original Austronesian reconstructions which Manuel believes to have come from Chinese,
3. polysyllabic words in Tagalog and in Original Austronesian reconstructions which Manuel believes can be traced to Chinese monosyllables.

Manuel considers his second and third lists as being more significant since they prove that there is some sort of relationship between Chinese,

Tagalog and Original Austronesian. All three lists, however, must be treated with reservation, for Manuel has not given any systematic formalisation of the sound changes that have taken place in the words.⁵

Furthermore, although Manuel's treatment is aimed at including all Chinese borrowings, it is apparent that 95 per cent of the words are Hokkien Chinese in their etymologies. The bulk of Manuel's study, therefore, is really not 'Chinese' (which should have then included borrowings from other Chinese languages) but Hokkien loanwords.⁶

In his second work, Manuel hypothesises that Tagalog and Chinese came from a common tongue which was very likely monosyllabic and which embraces the Austronesian and the Sinitic branches. Tagalog then developed into a disyllabic language while Chinese remained a monosyllabic one, although its tones were developed to perfection. The branches to which both Tagalog and Chinese belong furthermore underwent a 'transition period' where a system of word-building by 'root-combination' and 'root-reduplication' was used. Eventually, the two branches separated, with the Austronesian branch undergoing further development through affixation.

In his third work, Manuel shows why and how other Philippine languages are related to Chinese. As proof of this relationship, he decomposes certain disyllabic words in such Philippine languages as Gaddang, Ibanag, Tagakaolo and Iloko into monosyllabic components which share common meanings with the posited Chinese monosyllabic counterparts. He further indicates that there are "four epochs in the history of the association" of both the Philippine language and Chinese: the Paleolithic times which witnessed a common source of origin, the Neolithic times down to the Copper-Bronze period, the proto-historic times where trade relationships between the Filipinos and the Chinese began, and the historic period.

1.2. THE PURPOSE OF THE STUDY

In general, the purpose of the study is to examine and compare the lexicon of present-day Tagalog and present-day Hokkien Chinese.⁷ Specifically, the study will concentrate on the following areas:

1.2.1. Phonological

Loanwords of Hokkien Chinese origin found in present-day Tagalog will be studied in order to determine the sound changes that have taken place. Such sound changes will be stated in phonological rules using a generative phonological framework.⁸ The result of the phonological treatment of the Hokkien loanwords will be a general theory of phonological borrowing that may have universal implications.

1.2.2. Semantic and Cultural

The Tagalog loanwords of Hokkien origin, specifically those in the domains of kinship and cookery, will be subjected to accepted techniques of semantic analysis: componential and taxonomic analyses in order to arrive at findings that can yield certain insights of a cross-cultural nature. In the domain of kinship, the study will attempt to determine the rationale behind the presence of certain loanwords as against the absence of others by utilising results of componential analysis previously made on Tagalog kinship terminology. In the domain of cookery, the study will determine the hierarchical structure of the culinary categories of the loanwords, and in the process, discover which categories have the biggest number of loanwords.

1.3. SCOPE AND LIMITATIONS OF THE STUDY

The scope of the study will be the present-day Tagalog loanwords of Hokkien origin.⁹ These loanwords will serve as the corpus in the formulation of phonological rules within a generative phonology framework and in the semantic analyses that utilise techniques of componential and taxonomic analyses.

In the formalisation of the sound changes that have taken place in the Hokkien loanwords, this study assumes that the phonetic shapes of the loanwords in Tagalog are very close to their counterparts in present-day Hokkien. It further assumes that Tagalog phonology at the time of the inception of the Hokkien loanwords is not very different from present-day Tagalog phonology.

Formalising the sound changes in phonological rules within the generative phonological framework will not be exhaustive and extensive. The attempt must be viewed as being exploratory with the rules covering only those loanwords that are in the corpus. The Tagalog morpheme structure conditions and the phonological rules, specifically, do not purport to include all the phonological phenomena that should rightly enter into a generative phonology of Tagalog;¹⁰ they appear only as rules essential to the capturing of the phonological processes involved when a Hokkien form enters the Tagalog language.

The semantic analysis of loanwords is limited to the domains of kinship and cookery because of the fact that Hokkien loanwords in the domain of kinship constitute a handful, and though a critically significant sub-set, they will have to be treated semantically with the rest of the Tagalog kinship terminology. Also, owing to the other fact that a number of thorough componential analyses have already been made on Tagalog kinship terminology, the present study will cull the results

of previous studies and relate them to the other facets of the semantic analysis of the domain of kinship, namely, the concept of linguistic acculturation and the comparison of Hokkien and Tagalog kinship systems.

The number of loanwords in the domain of cookery is rather large, and they are, by far, the most homogeneous of the loanwords. For convenience and for other reasons (see Chapter 3, Section 3.2.1.), a taxonomic analysis, rather than a componential analysis, will be used in the semantic analysis.

1.4. METHODOLOGY

The following steps were followed in the present study.

1.4.1. Deciding on the Validity of the Corpus

The corpus of the study is the lexicon in Panganiban (1972), together with certain words in Manuel's list after these were double-checked with native speakers of Hokkien for their authenticity. To arrive at forms which are of unquestionably Hokkien Chinese origin,¹¹ three native Hokkien speakers born and raised in Amoy,¹² Fukien province, who migrated to the Philippines in their late teens, were asked to determine if the lexical borrowings presented to them were or were not part of their vocabulary before they came to the Philippines. If the answer was in the positive, then a particular lexical item became part of the final corpus; if it was negative, it was discarded from the corpus. Another check was to compare the list of loanwords with Dempwolf's reconstructions. This had been done in part by Manuel although his work is not by any means exhaustive. A third check was the use of Douglas and Barclay's *Amoy Dictionary and Supplement* (1899, 1923).¹³ Lastly, the intuition of the investigator as a native speaker of Hokkien Chinese worked as an added advantage in initial attempts at isolating possible Hokkien loanwords from the mass of Tagalog words.

1.4.2. Phonological Analysis

After the loanwords were determined, they were further examined in order to arrive at the sound changes that have occurred in the set of words. The sound changes were then formulated in rules similar to those employed by Chomsky and Halle on English in *The Sound Pattern of English* (1968), using distinctive feature analysis. Specifically, this aspect of the methodology dealt with the segmentals of Hokkien and the supra-segmentals of tone. Investigation of the latter determined the correlation of the five Hokkien tones to Tagalog stress and non-stress. The following kinds of rules, formulated within a generative phonological

framework, emerged: trans-linguistic rules, morpheme structure conditions and phonological rules.

1.4.3. Semantic Analysis

Loanwords in the domain of kinship to which was applied componential analysis were examined in relation to the concept of selective borrowing (Lindenfeld 1971:17) and insights into the nature and kind of borrowings in this domain were discovered through a comparison of Hokkien and Tagalog kinship systems. Taxonomic analysis was applied to the loanwords in the domain of cookery resulting in the setting up of certain culinary categories into which the loanwords were classified. Next, the percentage of the total number of loanwords in each taxonomic category was taken in order to determine which category or categories had the highest percentage of loanwords; these could then serve as bases of generalisations of a cross-cultural nature.

1.5. SIGNIFICANCE OF THE STUDY

In theoretical terms, the study will make a contribution to the development of Philippine linguistics. Specifically, the study will show how distinctive feature analysis can be utilised in the study of loanwords. The analysis will be stated within the generative phonological framework of Chomsky and Halle. While the generative phonological analysis has been called upon in past years to show the relationship of diachronic to synchronic linguistics (Kiparsky 1968; King 1969), it has not been used exhaustively in the analysis of loanwords. If linguistics in general and Philippine linguistics in particular hope to show the effectiveness of generative phonology, the potentialities of such a framework must be tapped to the fullest. The present study is an exercise in this direction.

In the semantic analysis of loanwords, the study is significant in its use of previous componential analyses made in the domain of kinship as a means of documenting the concept of selective borrowing; hence, the technique can provide a more elegant formulation of the concept. Componential analysis is a technique that has not been tried on loanwords within the Philippine setting.

In terms of its relevance to Philippine culture and national development, the study is likewise important. The Chinese have long had an influence on Philippine life and culture, but such an influence had been absorbed "in a sort of unattentive, absent-minded way" (De la Costa n.d. 3:8).¹⁴ De la Costa believes that "it is time now for us to make the process [of assimilation of elements of Chinese culture] more of a conscious one". It is along this same line of thinking that the

present study attains relevance for it is in the study of Tagalog borrowings of Hokkien Chinese origin that the process becomes one means of "conscious absorption" to which de la Costa refers; what this means is that knowledge of the presence of Hokkien borrowings in Tagalog will lead to a conscious and deliberate awareness and acceptance of the fact that they form an integral part of the nation's and the individual's cultural heritage.

De la Costa likewise conceives of Philippine culture as still being in the process of development and points out that such a development can either be in terms of rejecting all alien elements from the indigenous culture or of integrating and synthesising cultural borrowings from other cultures. It is the latter process that he favours:

... I believe rather in acknowledging that ours is somehow a hybrid culture, ..., or at least a culture on to which over the course of time elements from other nations and cultures have been integrated. Our process of development is precisely to integrate these elements into something which is our own, a recognizably Filipino culture.

In relation to de la Costa's point of view, the study is a positive step towards the treatment of Philippine culture as a "hybrid" culture.

The implication of de la Costa's theory is that Philippine history and Philippine culture must be given their proper "accoutrements" if a true, accurate account of the heritage of the Filipino people and the Filipino race is to be preserved for posterity. Since Philippine culture has assimilated a sizable amount of Chinese cultural borrowings, the present study can present writers of Philippine history and culture with the information vital to their presentation. The search for national identity is largely dependent on a true, accurate picture of the historical and the cultural traditions that have been handed down from one generation to another. The relevance of the present study is thus further enhanced by the fact that it is in some ways related to the country's and the individual's search for national identity.

The study is also important since it presents a clear-cut picture of what constitutes Hokkien loanwords. It can thus be used as a reference by dictionary makers, language planners and educators. Furthermore, it can provide vital information to those who are concerned with the production of etymological dictionaries of Tagalog.

Finally, it is important in so far as the problem of integration is concerned. One of the objectives of the present Philippine government, as is well known, is the integration of the Chinese into the larger Philippine community. In the event that a complete integration is effected, the Hokkien dialect spoken in the Philippines will become extinct. In this connection, the study will serve to record a language

that was once in contact with Tagalog. The study will likewise provide traces of the nature and the kind of contact the Filipinos have had with the Chinese.

1.6. PLAN OF THE STUDY

Chapter 2 describes the sound changes that have taken place in the Hokkien loanwords as they enter the Tagalog language. These changes are stated in generative phonological rules of three major types: trans-linguistic rules, morpheme structure conditions, and phonological rules. Chapter 3 concentrates on a semantic analysis of the loanwords in the domains of kinship and cookery. Loanwords in the domain of kinship are treated using componential analysis; loanwords in the domain of cookery are subjected to taxonomic analysis. Chapter 4 concludes the study and reviews Manuel's own study in relation to the findings of this study; it also outlines possible areas of future research.

N O T E S

1. Beyer (1947:14) describes the jar-burial thus:

The "Jar-burial" called "Golden Urn" burial, was originated by the "Hakkas", people who lived in the interior of Fukien and other provinces in South China. Because they could not bring their ancestral graves with them in their migrations into new places, they carried their ancestors' bones in jars instead. The practice was handed down throughout the ages, so their own remains could easily be carried along whenever their descendants moved into new homelands. Where the jar-burials are still prevalent among some people in the Philippines, it is probable that the custom has been adopted from contact with the Hakka people when they first came here....

2. According to Wang (1964:281, Note 3), the Hock Lao tribes include Amoy which encompasses the peoples of Chuanchow and Changchow in Southern Fukien and Taiwan, the Chaochow or Swatao of Eastern Kwangton and Hai-Nan off the Tonkin Gulf. The Hock Laos are the only-known seafaring people among the Chinese whose professions range from junk sailors to fishermen, to pirates in the past ten centuries of Chinese history.

3. Lopez, however, does not provide a list of Chinese loanwords.

4. It is important to note here that the term 'recent' as used by linguists differs greatly from the historians' and the anthropologists' use. Beyer (1947:3), for instance, partitions Philippine history into three periods: the Prehistoric Philippines, which covers the period of unrecorded beginnings to the beginning of the Christian Era; the Proto-historic period, which covers the period from the beginning of the Christian Era to the time of Magellan's landing in the Philippines (1-1521 A.D.); and the Historic Period, which covers the period from the discovery of the Philippines by Magellan to the present. I am indebted to Dr. Arsenio Manuel for this clarification. I would like to point out, though, that Lopez (1973:397) considers the seventh century

as 'historic' as evidenced by the following statement: "In historic times, as early as the seventh century and thereafter, Chinese traders introduced numerous Chinese words, particularly terms for kinship and for cookery".

5. The same observation was made by Verstraelen (1959).

6. The major Chinese languages noted by Robert Forrest (1965) are the following: (1) Northern Chinese which include the Chin dialect of Southern Shansi and varieties of Sian and Southern Anhwei, (2) Cantonese, (3) Suchow, (4) the dialects of Min (Fukien) typified by Fuchow for the more northerly sub-groups, by Amoy (Hokkien) in the south and Hainan, and (5) Hakka. These languages, with the exception of Northern Chinese, are relatively modern developments of ancient Chinese.

7. The Hokkien Chinese here refers to the Amoy dialect spoken by my Chinese informants and myself.

8. The generative phonology framework as set forth by Chomsky and Halle, and modified by Schane, will be used in this study.

9. Such loanwords are present in the vocabulary of my Tagalog informant, Ma. Teresita Palo, who comes from Bocaue, Bulacan. I am also indebted to her for the phonetic representations of these words.

10. Work on a generative phonology of Tagalog is being completed by Ely Marquez at the University of Wisconsin.

11. I am assuming that the forms that constitute the corpus of this study are Hokkien Chinese, an assumption with which Wang Teh Ming, a Chinese dialectologist, concurs. However, the possibility that such forms may have come from other Chinese languages which came into contact with Tagalog is not entirely discarded. I am also assuming that in the case of Hokkien Chinese - Tagalog vocabulary, the direction of borrowing is from Hokkien Chinese to Tagalog.

12. I am indebted to Lim Siu Lu, Yap Bee Hiong and So Hiong To for their invaluable assistance in this phase of the work. All three were originally from Amoy, Fukien province. They migrated to the Philippines when they were about eighteen to nineteen years old; they are now in their late sixties. The items in the present corpus all appear in their vocabulary.

13. All the items in the present corpus also appear in the dictionary.

14. From his address entitled 'Chinese Values in Philippine Cultural Development' given at Xavier School, San Juan, Rizal, undated.

CHAPTER 2
THE PHONOLOGY OF HOKKIEN CHINESE LOANWORDS

2.0. INTRODUCTION

The literature on generative phonology has, to a large extent, neglected the treatment of loanwords, particularly the sound changes¹ and the sound processes that are involved. This is not due to the reason that the whole area of loanwords is an uninteresting, therefore undeserving, area of investigation, but is due to the fact that generativists are in the main still concerned with refining, improving and developing an existing framework that will be suitable for the analysis of the phonologies of natural languages. This chapter, by dwelling on the sound changes undergone by Hokkien Chinese loanwords in Tagalog, attempts to initiate future work that will employ generative phonology to analyse loanwords in the most general, economical way of formalisation which the framework has so far shown to be potentially promising.

Section 2.1. gives a brief view of the generative phonology framework, specifically its assumptions and its phonological and phonetic constituents. The distinctive features of both Hokkien Chinese and Tagalog are presented and compared in Section 2.2. Section 2.3. gives as detailed as possible the 'trans-linguistic' rules (hereinafter TL rules) undergone by Hokkien Chinese words upon entering the Tagalog system; rule-ordering, which is an important feature of the phonological rules of any language, shows its viability too in relation to the TL rules of Hokkien Chinese loanwords. The morpheme structure conditions (MS conditions) of Tagalog are given in Section 2.4. The phonological rules (P rules) of Tagalog and their ordering are presented in Section 2.5.; this section, together with 2.4., does not attempt to be exhaustive nor complete, the main concern in this study being the system of rules in Tagalog crucial to

the analysis of Tagalog loanwords of Hokkien origin. Section 2.5. summarises the chapter.

2.1. GENERATIVE PHONOLOGY FRAMEWORK

Generative phonology is a general term commonly used to refer to the phonological component of a generative transformational grammar. To date, Chomsky and Halle's proposed generative phonological model, as expounded in *The Sound Pattern of English* (1968), remains the most comprehensive work on the subject; it is likewise the most commonly used, although several modifications of the model have been suggested by linguists such as Kiparsky (1968), Kisseberth (1970), Howard (1972), Schane (1973) and Stanley (1967). It is this model which is used in the present study of Hokkien Chinese loanwords.

2.1.1. Assumptions of Generative Phonology

The transformational generative grammatical model makes several assumptions about the nature of language and language acquisition,² but it is not within the scope of this chapter to present such assumptions. What are presented are those assumptions relevant to a discussion of generative phonology.

One basic assumption of generative phonology is that utterances are made up of sequences of discrete segments (Schane 1973:24) which help to make phonological analysis an easy task since phonologists can describe sounds as simply s, z, ʒ, ʒ̄, ʒ̄̄, ʒ̄̄̄, etc. instead of some such 'laborious' terms as syllable, word, or "such clear acoustical properties as periodicity, formant, behaviour, noise spectrum, and the like" (Halle 1964:324). The implication of this assumption is that the subject matter of generative phonology is the phonetic representation of utterances, since utterances represent something that is substantive, something that is perceptible to the human ear: this notion is tied up with the ultimate goal of generative phonology, which is to provide a general theory which will explain "the competence of a native speaker in the sounds of his language" (Harms 1968:1). The linearity of the sound continuum is likewise implied by this assumption as attested by the generativists' conception of phonetic representation.

A second assumption is that sounds are segments which are divisible into smaller units called 'distinctive features'; this is a marked departure from the structuralists' view that sounds are not divisible into smaller units although their analysis involves the use of features, e.g. voiceless-voiced, bilabial-dental-alveolar-palatal, etc., and stop-fricative-affricate-etc. that are very close to the features used in

generative phonology. Distinctive features have two kinds of functions: a classificatory function and a phonetic function (Chomsky and Halle 1968:298); in the former function, distinctive features serve to distinguish lexical items by allowing only two types of feature values: plus (+) and minus (-), while in the latter function, they serve to describe the phonetic representations of surface formatives through "scales that admit a fixed number of values" (Chomsky and Halle, 298).

A third assumption is that sounds tend to group into 'natural' classes, which means that phonological segments that undergo similar sound processes are grouped together. For instance, it is more natural for p, t, k to group together than for p, t, c to do so.

A fourth assumption, which is related to the third, is that some sounds and sound processes are more natural, more 'expected' than others (Schane 1973:111). Thus, a language such as Hokkien Chinese, which has nasalised vowels, also has oral vowels. This assumption, together with the third one, has implications for language acquisition and language universals. In the former, certain sounds are easier to learn and to acquire than others since they are more natural: thus, a child learns to pronounce the stops faster and earlier than the fricatives or the affricates; in the latter, natural classes of sounds are more universal than the 'unnatural' ones, that is, they have a greater area of spread across the natural languages of the world (Schane, 111).

Analogous to the notion of deep and surface structures in the syntactic component of a transformational generative grammar is the fifth assumption, namely, that surface or phonetic representations have underlying representations that are more abstract than the former. Phonological rules, similar to transformational rules, apply to underlying phonological forms to yield phonetic representations. Implied in this assumption is the concept that the human brain is capable of abstractions and that a native speaker's competence in the sounds of his language as well as in the grammar of his language involves a finite set of rules.

2.1.2. The Phonological Framework

The phonological component in a transformational generative grammar contains the mechanism which provides the proper interpretation to the syntactic structures generated by the base structure and which have undergone the required transformational processes. The syntactic structure that is ready for phonological interpretation will appear as a string of formatives or lexical items, properly bracketed by way of indicating the syntactic categories dominating each one, and properly labelled by the self-same syntactic categories. In this section, the salient features of the phonological component are given.

2.1.2.1. *Levels of Representation*

There are two levels of representation in the phonological component: a systematic phonemic level and a systematic phonetic level.

On the systematic phonemic level or underlying representation, a morpheme is represented as a systematic phonemic matrix where the columns represent the segments of the morpheme, and the rows, the distinctive features. Each segment is marked + or - for each of the features: redundant features are not marked. Representations on this level are more abstract than representations on the systematic phonetic level and are enclosed in diagonal lines (/ /) (Howard 1972:4). A sentence is represented as a string of systematic phonemic matrices together with its surface structure labelled bracketing on this level.

The systematic phonetic representation gives the systematic phonemic matrices their phonetic forms. In other words, it determines how a word or a string of words is to be pronounced. The representation is, likewise, in the form of matrices where the distinctive features are given in rows and the phonetic segments in columns, but, this time, a scalar notation, rather than a binary one, is used, e.g. aspiration in stops may be in terms of the degree or force with which the stream of air is emitted through the vocal tract (Chomsky and Halle 1968:295-298). Systematic phonetic representations are enclosed in ([]).

2.1.2.2. *Morpheme Structure Conditions*

In the Chomsky and Halle framework, redundancies on the systematic phonemic level are stated in morpheme structure or lexical redundancy rules (Chomsky and Halle 1968:171). Morpheme structure rules differ from phonological rules in that the latter apply to map systematic phonemic representations into systematic phonetic representations while the former do not since they only apply to individual morphemes on the systematic phonemic level. While phonological rules change feature values, morpheme structure rules do not; rather, they state redundancies and perform this function before the application of any transformational or phonological rule. Because of these differences, Stanley (1967) suggests that redundancies on the systematic phonemic level be stated in morpheme structure conditions rather than in morpheme structure rules especially when doing so allows "us to state situations which arise in natural languages but which are not easily stated in terms of rules". Following the suggestion of Stanley, the following analysis uses morpheme structure conditions instead of morpheme structure rules to state redundancies on the systematic phonemic level.

Morpheme structure conditions are statements of the redundant features of segments and sequences of segments whose feature values are not

provided for in the dictionary matrices of respective lexical items. The morpheme structure conditions of a language are of two types: the segment structure conditions which are "statements of the feature composition of individual phonemes", and the sequence structure conditions which are "statements about possible sequences of phonemes" (Stanley 1967:393). In Tagalog, for example, η has the feature [+nasal] and since all nasals are voiced in Tagalog, η does not have to be specified for the feature [+voiced]; [+voiced], in this case therefore, is a redundant feature that will be specified in a segment structure condition. An example of a sequence structure condition is the set of consonant clusters in English whose first member is s and whose following 'obligatory' segment is any one of the voiceless stops so that sequences of segments like sp-, sk-, and st- are possible whereas sb-, sg-, and sd- are not.

In summary, it must be emphasised that there are three criteria which determine the application of morpheme structure conditions:

1. that they do not change feature values, i.e. they do not provide for the change of a + to a - (or vice versa) for a feature,
2. that they strictly state the redundancy features of segments and/or sequence of segments,
3. that they consist of an unordered set of conditions.

2.1.2.3. *Phonological Rules*

The output of the MS conditions serves as the input to the phonological rules which give the systematic phonemic matrices their derived phonetic representations. Phonological rules "may change feature values or add, delete, or permute segments" (Howard 1972:6). Some phonological rules, like some transformational rules, are also ordered. When strings of morphemes (sentences) are concerned, phonological rules apply cyclically: first to the string of morphemes enclosed in the innermost brackets, which are erased after all the relevant rules have been applied; then the whole set of rules is re-applied to the morphemes in the next-innermost brackets, and so on until no brackets are left and the whole string is given its full phonetic representation.

2.1.3. *The Phonetic Framework*

In generative phonology, each phonological segment is described in terms of the phonetic features that constitute it. The phonetic framework in this section provides the classification of the phonetic features under the following general categories which are considered to be universal.³

2.1.3.1. Major Class Features

There are three major class features: (1) sonorant, (2) vocalic or syllabic, and (3) consonantal. These features are used to describe the flow of air that originates from the lungs, is impeded or stopped in the vocal tract and, finally, is allowed to flow freely through it. They are features that "subdivide speech sounds into vowels, consonants, obstruents, sonorants, glides, and liquids" (Chomsky and Halle 1968:302).

SONORANT describes sounds produced "with a vocal tract cavity configuration in which spontaneous voicing is possible"; in non-sonorant obstruents, the vocal tract cavity configuration is such that spontaneous voicing is not possible. Sonorant sounds include vowels, glides, liquids, and nasals; non-sonorant includes stops, fricatives, and affricates.

VOCALIC sounds are those "produced with an oral cavity in which the most radical constriction does not exceed that found in the [i] and [u] and with vocal cords that are positioned so as to allow spontaneous voicing": non-vocalic sounds describe those sounds that do not have the foregoing qualifications. An alternative term for vocalic is 'syllabic', since it refers to the peak or prominence of a particular sound within the syllable. Voiced vowels and syllabic liquids are vocalic; nasal consonants, obstruents, glides, liquids, and voiceless vowels are non-vocalic.

CONSONANTAL sounds are those produced "with a radical obstruction in the mid sagittal region of the vocal tract; non-consonantal sounds are produced without such an obstruction" (Chomsky and Halle 1968:302). Stops, fricatives, affricates, nasals and liquids are consonantal; vowels and semi-vowels are non-consonantal.

A summary of the major class features applied to speech sounds is given in table form below reproduced from *The Sound Pattern of English* (p.303).

THE MAJOR CLASS FEATURES			
	SONORANT	CONSONANTAL	VOCALIC/SYLLABIC
voiced vowels	+	-	+
voiceless vowels	+	-	-
glides (I): w, y	+	-	-
glides (II): h, q	+	-	-
liquids	+	+	+
nasal consonants	+	+	-
non-nasal consonants	-	+	-

2.1.3.2. *Manner of Articulation Features*

Manner of articulation features, as the term suggests, refer to the way the speech sounds are produced. The more common ones, and the ones with which this chapter is concerned, are: continuant, lateral, nasal, flap and strident.

Continuant describes sounds whose flow of air in the vocal tract is not constricted or blocked; non-continuant (stop) describes sounds with the opposite effect. Continuant sounds include the fricatives; non-continuant sounds include the stops and the affricates.

Sonorant consonants are distinguished by the features nasal and lateral. The liquids are distinguished from nasal consonants by the feature [-nasal]; [+nasal] characterises the nasal consonants m, n, ŋ; it also distinguishes the nasal vowels from the oral ones. The liquids l and r are distinguished by the feature lateral; the latter is further distinguished by the features trill and flap. In the present study, the feature flap is included to characterise Tagalog r, which involves the flapping of the tongue.

Strident describes sounds characterised by a sibilant hissing quality; it is a feature which distinguishes fricatives like s, z, ʃ, ʒ from other non-obstruents which are not fricativised.

2.1.3.3. *Cavity Features*

The cavity features that are discussed in the following sections are coronal, anterior, body of tongue features, 'lip' feature, and glottal constrictions.

2.1.3.3.1. *Anterior, Coronal*

In the Chomsky and Halle framework, the most common place-of-articulation features for consonants are coronal and anterior. The structuralists' way of describing consonants in terms of the place of articulation such as bilabial, alveolar, palatal, etc. have been 'condensed' according to whether they are articulated in the extreme frontal region of the mouth (+anterior) or are retracted (-anterior), and according to "whether the articulator is the blade of the tongue (+coronal) or some other articulator (-coronal)" (Schane 1973:29). As an illustration, the following table shows how the features coronal and anterior distinguish the stops p, t, k:

	p	t	k
anterior	+	+	-
coronal	-	+	-

Labials are [+anterior, -coronal], palatals are [-anterior, +coronal], dentals are [+anterior, +coronal], and velars and uvulars are [-anterior, -coronal].

2.1.3.3.2. *Body of Tongue Features, 'Lip' Feature*

The body of tongue features include high, low, and back.⁴ The 'lip' feature is either rounded, in which case the sounds are produced with a narrowing of the lips, or non-rounded, in which case there is no narrowing of the lips. The body of tongue features, together with the 'lip' feature, characterises the vowel system of a language.

By way of explication, assume that there is a language with a seven-vowel system: i-e-æ-a-u-o-ɔ. The following table shows how the above-mentioned features help to distinguish these vowels:

	i	e	æ	a	u	o	ɔ
high	+	-	-	-	+	-	-
low	-	-	+	+	-	-	+
back	-	-	-	+	+	+	+
round	-	-	-	-	+	+	+

The semi-vowels y, w are also distinguished in terms of the same features, thus y has the features [+high, -back, -round] and w has the features [+high, +back, +round].

2.1.3.3.3. *Glottal Constrictions*

Sounds produced by "narrowing the glottal aperture beyond its neutral position" (Chomsky and Halle 1968:315) are described as glottal constrictions. Glottalised stops refer to stops with glottal constriction, not glottal closure; the glottal stop q can be described as having the following features [-anterior, -coronal, +glottal].

2.1.3.3.4. *Subsidiary Features*

Chomsky and Halle mention several subsidiary features but, in this section, only the more familiar ones are listed: tense, voiced, aspirated. The present study utilises all except tense.

Tense is a feature used for both vowels and consonants. It refers to sounds "produced with a deliberate, accurate, maximally distinct gesture that involves considerable effort" (Chomsky and Halle 1968:324);

non-tense (lax) sounds are produced "somewhat rapidly and somewhat indistinctly".

Voiced refers to the vibration of the vocal cords; non-voiced (voiceless) sounds have little or no vibration of the vocal cords. It is mostly used to distinguish consonants, since sonorants (like vowels, glides and liquids) rarely have voicing differences (Schane 1973:32).

Aspirated is used with consonants, especially with obstruents. Aspirated sounds refer to sounds whose production is accompanied by a strong puff of air; it is a feature that is sometimes replaced by tense.⁵

2.1.3.5. *Prosodic Features*

The prosodic features included in this study are Hokkien Chinese tone and Tagalog stress. Chomsky and Halle leave the area of tone unexplored. Following the suggestion of Wang (1967), tone and stress are not treated as single phonetic features but rather as complexes of features (see Section 2.2.6.).

2.1.3.6. *The Binariness of Phonetic Features*

Phonetic features help to distinguish one phonological segment from another; hence, the term 'distinctive features'. The binary notation, + or -, helps to distinguish the presence of a distinctive feature as opposed to its absence. Schane (1973:26) points out that the use of the binary system has an advantage, and that is, it shows explicitly the relationship between the members of pairs, such as voiced-voiceless or nasal-oral but not between other possible pairs such as voiceless-nasal, voiced-oral.

This study utilises a binary, rather than a ternary (where 0 is used), notation.

2.2. *DISTINCTIVE FEATURES OF TAGALOG AND HOKKIEN*

The distinctive features of Tagalog and Hokkien are given in Tables 1 and 2 respectively, with the redundant features enclosed in parentheses. The phonological framework adopted here is that of Chomsky and Halle (1968) and the distinctive features represent those on the systematic phonemic level. The discussion on the features of both language systems will be comparative in nature.

TABLE 1A
DISTINCTIVE FEATURES OF TAGALOG CONSONANTS

	p	b	t	d	k	g	s	m	n	ɲ	l	r	h	q
consonantal	+	+	+	+	+	+	+	+	+	+	+	+	+	+
syllabic	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sonorant	-	-	-	-	-	-	-	+	+	+	+	+	-	-
continuant	-	-	-	-	-	-	+	+	+	+	+	-	+	-
nasal	(-	-	-	-	-	-	-)	+	+	+	(-	-	-	-)
lateral	(-	-	-	-	-	-	-	-	-	-)	+	-	(-	-)
flap	(-	-	-	-	-	-	-	-	-	-)	-	+	(-	-)
anterior	+	+	+	+	-	-	+	+	+	-	+	+	-	-
coronal	-	-	+	+	-	-	+	-	+	-	+	+	-	-
voiced	-	+	-	+	-	+	-	(+	+	+	+	+	-	-)
glottal	(-	-	-	-	-	-	-	-	-	-	-	-)	+	+
strident	(-	-	-	-	-	-)	+	(-	-	-	-	-)	-	(-)

TABLE 1B
DISTINCTIVE FEATURES OF TAGALOG VOWELS AND GLIDES

	i	a	u	w	y
consonantal	-	-	-	-	-
syllabic	+	+	+	+	+
sonorant	(+	+	+	+	+
high	+	-	+	+	+
low	-	+	-	-	-
back	-	+	+	+	-
round	(-	-	+	+	-

TABLE 2A
DISTINCTIVE FEATURES OF HOKKIEN CONSONANTS

	p ^h	p	b	t ^h	t	k ^h	k	g	s	c ^h	c	m	n	ɲ	l	h	q
consonantal	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
syllabic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sonorant	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-
continuant	-	-	-	-	-	-	-	-	+	-	-	+	+	+	+	+	-
nasal	(-	-	-	-	-	-	-	-	-	-)	+	+	+	(-	-	-	-)
lateral	(-	-	-	-	-	-	-	-	-	-	-	-	-)	+	(-	-	-)
strident	(-	-	-	-	-	-	-)	+	+	+	(-	-	-	-)	-	(-)	(-)
anterior	+	+	+	+	+	-	-	-	+	+	+	+	+	-	+	-	-
coronal	-	-	-	+	+	-	-	-	+	+	+	-	+	-	+	-	-
voiced	-	-	+	-	-	-	-	+	-	-	-	(+	+	+	+	-	-)
glottal	(-	-	-	-	-	-	-	-	-	-	-	-	-	-)	+	+	+
aspirated	+	-	(-)	+	-	+	-	(-	-)	+	-	(-	-	-	-	+	(-)

TABLE 2B
DISTINCTIVE FEATURES OF HOKKIEN VOWELS

	i	e	a	o	u
consonantal	-	-	-	-	-
syllabic	+	+	+	+	+
sonorant	(+)	+	+	+	(+)
high	+	-	-	-	+
low	-	-	+	-	-
back	-	-	+	+	+
round	(-)	-	-	+	(+)

2.2.1. Major Class Features

The feature *syllabic* is here used in lieu of *vocalic* because of an attempt to frame the distinctive features of both Tagalog and Hokkien Chinese in a common framework whenever and wherever this is possible. Chomsky and Halle use the feature *vocalic* in their treatment of English phonology, but in a later section (p.354), they propose that *syllabic* be adopted following Milner and Bailey's suggestion. Insofar as Tagalog and Hokkien Chinese are concerned, the motivation for the use of *syllabic* comes from Hokkien for the following reason:

Hokkien has a syllabic velar nasal η which is not present in the underlying form but which surfaces in the phonetic representation as a result of a phonological rule labelled *Syllabicisation Rule*. By the mechanism of this rule, an underlying Hokkien form with a vowel between a preceding consonant with the features [+anterior, +coronal] (t, s) and a following velar nasal will have the vowel (whose features are very likely [+high, -back]) deleted. An example is Hokkien *hue+t η* ---) Tagalog *hweten η* from underlying Hokkien form *hue+t η* . The surface representation is the form that is borrowed into Tagalog and a trans-linguistic rule - the vowel epenthesis rule - puts a vowel back where it was deleted in the Hokkien surface form (see Section 2.3.10.).

In both Tagalog and Hokkien, the vowels are specified for the feature [+syllabic]; the features *consonantal* and *sonorant* also apply to all segments in the two languages.

2.2.2. Manner of Articulation Features

The feature nasal distinguishes *m*, *n*, *ŋ* from the other non-nasals in both Tagalog and Hokkien in the underlying representation. While Hokkien has a series of nasalised vowels - *ĩ*, *ẽ*, *ã*, *õ*, *ũ* - these are not present as such in the underlying representation; rather, they are represented as oral vowels plus a nasal segment. A phonological rule of Hokkien will nasalise an oral vowel that occurs before a nasal segment, which is later deleted by a deletion rule, leaving a nasalised vowel as the surface phonetic representation. In this case, the feature nasal is necessary to distinguish the nasalised vowels from the oral ones.

Hokkien has a liquid *l* which is distinguishable by the feature [+lateral]. Tagalog, on the other hand, has two liquids: *l*, *r*, therefore it needs the features lateral and flap to distinguish one from the other. Because of such morphemic alternants as *bakud* ~ *bakuran* and *bukid* ~ *bukiran*, Tagalog *r* could be treated as a surface representation of an underlying *d*; however, in such words as *paruparo* 'butterfly' and *laroq* 'to play', *r* is clearly not a surface representation of an underlying *d*, hence, in this analysis, *r* is treated as a systematic phoneme.

Continuant in both phonological systems distinguishes *s* from *t*, and *h* from *q* in Hokkien; it further distinguishes *c^h*, *c* from *s*. It is redundant for the oral vowels in both Tagalog and Hokkien, the nasal vowels in Hokkien, and the semi-vowels or glides *w* and *y* in Tagalog.

2.2.3. Cavity Features

Anterior distinguishes the labials and the dentals from the velars in both Tagalog and Hokkien. Dentals are set apart from the other obstruents by the features [+anterior, +coronal]. The velars are specified for the features [-anterior, -coronal].

Glottal distinguishes *q* from *h*; for the rest of the obstruents, it is a redundant feature. Chomsky and Halle consider *q* as a glide (1968: 307), but in Tagalog, it is clearly an obstruent (stop) since there is a stoppage of the air passage at the glottis.

Although Chomsky and Halle are also of the opinion that the traditional vowel features high, low, back can be employed as further specifications on the [-anterior] consonants (1968:305), their use is restricted to the treatment of vowels in this study.⁶

2.2.4. Vowel Features

The vowels of Tagalog and Hokkien are specified in terms of the features traditionally identified with them: high, low, back, round. In the Tagalog phonological system, however, these features are used to distinguish only three vowels: i-a-u in the underlying representation. The Tagalog vowels e and o are surface representations which result from the application of the Tagalog phonological rule on vowel lowering; these vowels are found only in borrowings. On the other hand, in the Hokkien phonological system, the vowel features distinguish the five vowels: i, e, a, o, u.

Tagalog i, Hokkien i, e are always [-round]; Tagalog u, Hokkien o, u are always [+round]: therefore, the feature round is redundant. However, the feature is retained in order to save on redundancy rules; round is also used to distinguish w from y in Tagalog.

2.2.5. Subsidiary Features

Voiced is an important distinctive feature in both phonological systems since it distinguishes the [+voiced] segments b, d, g of Tagalog, b, g of Hokkien from the [-voiced] segments p, t, k of Tagalog, p, k of Hokkien. For the rest of the segments in both systems, voiced is a redundant feature.

Aspirated distinguishes the aspirated obstruents p^h, t^h, k^h, c^h of Hokkien from the unaspirated ones: p, t, k, c. King (1969) uses the feature tense to distinguish the aspirated segments from the non-aspirated ones; in a phonological system where an extra feature can be discarded in favour of only one feature that is applicable to various differing segments in accordance with the notion of the simplicity metric (Schane, Harms, Chomsky and Halle), King's approach would be acceptable. However, in the phonological systems of Tagalog and Hokkien, tense is not a necessary distinctive feature of the vowels and, therefore, need not be specified. If tense is not a specified feature in both systems, it matters little that it should be replaced by the feature aspirated. For these reasons, this investigator has chosen to use the feature aspirated rather than tense; also, the feature aspirated provides a more accurate phonetic description of the particular kind of articulation accompanying the segments concerned. It is likewise more accurate to describe the phonological process of de-aspiration as the loss or the dropping of the feature aspirated in the trans-linguistic rule (see Section 2.3.2.).

2.2.6. Prosodic Features

Since Hokkien is a tonal language, its phonological matrix must include the distinctive features for the five underlying (systematic phonemic) tones. Wang (1967) has set up features for seven tones in Hokkien, but the study has found that only five of the tones correspond to those found in the particular dialect spoken in the Philippines. The distinctive features of Wang are viable and they are, therefore, adopted here, with the exception of the feature long:

	⌋	↗	↘	↓	┘
High	+	+	+	-	-
Falling	-	-	+	+	-
Rising	-	+	-	-	-

Examples for the five tones are given below. (It is a standard convention in Chinese linguistics to indicate the same set of tones in two separate sets of symbols: one for tones given in isolation, the other, for tones superimposed on individual morphemes.)

⌋	kaŭ	'to hook'
↗	kaú	'monkey'
↘	kaù	'nine'
↓	kaũ	'to arrive'
┘	kaū	'thick'

Tagalog, on the other hand, is a stress language. In Tagalog, a distinction can be made between strong (') stress and weak or non-stress (˘).⁷ The distinctive features of Tagalog stress is charted below as:⁸

	'	˘
High	+	-

2.2.7. Summary

A comparison of the phonological matrices of both Tagalog and Hokkien leads the present investigator to conclude that Hokkien has twenty-seven phonological segments, and Tagalog has twenty, with Hokkien having seven more than Tagalog. Tables 3 and 4 summarise the segments shared by both systems, as well as those that are exclusive to each. Charts enclosed in continuous lines indicate commonly-shared segments; those enclosed in broken-lines indicate segments exclusive to Tagalog, while those in double-lines indicate exclusiveness in Hokkien.

TABLE 3
TAGALOG AND HOKKIEN CONSONANTS

	p	b	t	k	g	s	m	n	n	l	h	q	p ^h	t ^h	k ^h	c ^h	c	r	
consonantal	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
syllabic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sonorant	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
continuant	-	-	-	-	-	+	-	-	+	+	+	-	-	-	-	-	-	-	-
nasal	(-	-	-	-	-	-)	+	+	+	(-	-	-)	(-	-	-	-	-)	-)	(-)
lateral	(-	-	-	-	-	-	-	-	-)	+	(-	-)	(-	-	-	-	-)	-)	-
flap	(-	-	-	-	-	-	-	-	-)	-	(-	-)	(-	-	-	-	-)	-)	+
strident	(-	-	-	-	-)	+	(-	-	-	-)	-	(-)	(-	-	-	+	+	-)	(-)
anterior	+	+	+	-	-	+	+	+	-	+	-	-	+	+	-	+	+	+	+
coronal	-	-	+	-	-	+	-	+	-	+	-	-	-	+	-	+	+	+	+
voiced	-	+	-	-	+	-	(+	+	+	+	-	-)	-	-	-	-	-	-	(+)
glottal	(-	-	-	-	-	-	-	-	-	-)	+	+	(-	-	-	-	-)	-)	(-)
aspirated	-	(-)	-	-	(-	-	-	-	-	-	+	-)	+	+	+	+	-	-)	(-)

— Commonly shared by Tagalog and Hokkien

== Exclusive to Hokkien

-- Exclusive to Tagalog

TABLE 4
TAGALOG AND HOKKIEN VOWELS AND GLIDES

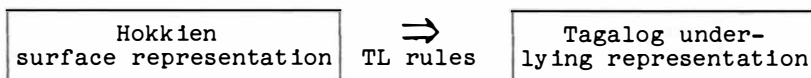
	i	a	u	e	o	w	y
consonantal	-	-	-	-	-	-	-
syllabic	+	+	+	+	+	-	-
sonorant	(+)	(+)	(+)	(+)	(+)	(+)	(+)
high	+	-	+	-	-	+	+
low	-	+	-	-	-	-	-
back	-	+	+	-	+	+	-
round	(-)	-	(+)	(-)	(+)	+	-

- Commonly shared
- ≡ Exclusive to Hokkien
- - - Exclusive to Tagalog

2.3. TRANS-LINGUISTIC RULES OF HOKKIEN LOANWORDS

Trans-Linguistic rules (TL rules)⁹ are rules that apply to Hokkien words when these are borrowed initially into Tagalog. They can be viewed as rules that took form during the acquisition stage, that is, they were synchronically present at the time Tagalog acquired the Hokkien loanwords.¹⁰ Although TL rules belong to the Tagalog linguistic system, they do not constitute part of the regular phonological rules of Tagalog since they form a sub-set of rules applicable only to forms that have been borrowed into the language. TL rules capture the sound changes undergone by these loanwords and are important because they provide formalisation for the sound changes in distinctive features.

Application of the TL rules on surface Hokkien representations results in trans-linguistically derived forms, which serve as the underlying forms in Tagalog to which the regular phonological rules of Tagalog are applied; therefore, the derived trans-linguistic forms provide the abstract or the systematic phonemic representations. The following diagram shows the effect of TL rules:



This section deals with the TL rules. The sound changes are presented under general categories that represent major sound processes.

2.3.1. Detonalisation

A close and exhaustive comparison of Hokkien tone and Tagalog stress patterns in the loanwords reveals that there is no correlation between Hokkien tone and Tagalog stress, as Table 5 shows. The first column gives all the possible combinations of Hokkien tones found in the Hokkien forms that have been borrowed into Tagalog; actual Hokkien examples with their corresponding Tagalog forms, are given in the appropriate columns. Examples are restricted to the disyllabic words of Tagalog. Forms with stress on the penultimate syllable are given first, followed by those with stress on the ultimate syllable.

All Hokkien forms, therefore, undergo a trans-linguistic rule called the Detonalisation Rule whose formalisation follows (distinctive features of tone and stress are abbreviated as [+tone] and [+stress]):

(1) [+tone] → ∅

The assignment of stress on the Hokkien forms is determined by the Tagalog P-rule on stress placement.

TABLE 5
NON-CORRELATION OF HOKKIEN TONE AND TAGALOG STRESS

# 1		#			
┘	┘	HOKKIEN gū+à	TAGALOG guyaq	HOKKIEN dT+cì	TAGALOG ditse
┘	┘	kō+ióq	kúyoq	lāŋ+só	lansón
┘	┘	pēq+c ^h aĩ	petsay	t ^h aū+cǎŋ	tutsán
┘	┘	dT+kô	diko	iān+suĩ	yansóy
┘	┘	bî+hūn	bihon	hōŋ+bàq	humbà
┘	┘	-	-	tiēŋ+laú	taŋlaw
┘	┘	c ^h ĩ+taũ	sítaw	k ^h ĩn+c ^h aĩ	kintsáy
┘	┘	sâ+kō	sánko	-	-
┘	┘	hó+sē	húsi	-	-
┘	┘	ló+mí	lome	án+kōŋ	ĩkōŋ
┘	┘	-	-	k ^h ú+c ^h aĩ	kutsáy
┘	┘	kám+tō	kámto	-	-
┘	┘	cuf+kuì	siyúkoy	cú+àm	suwám
┘	┘	kò+ǎ	kúya	-	-
┘	┘	sò+sí	súsiq	sàm+ióq	samiyóq
┘	┘	-	-	-	-
┘	┘	-	-	-	-
┘	┘	bàq+cuì	bátsoy	kièn+cì	kinse
┘	┘	-	-	t ^h ǎŋ+à	taŋà
┘	┘	-	-	-	-
┘	┘	-	-	-	-
┘	┘	-	-	-	-

2.3.2. De-aspiration

Hokkien has three voiceless aspirated stops which are represented as p^h , t^h , k^h on the systematic phonemic level. These segments invariably lose their aspiration in their borrowed forms. Examples of de-aspirated forms are:

HOKKIEN	TAGALOG	
$p^h\text{õŋ}$	poŋ	'term used in mahjong'
$t^h\text{ǎŋ}+\text{à}$	taŋa	'potato bug or worm'
$k^h\text{î}n+c^h\text{aĩ}$	kintsay	'celery'
$\text{â}+p^h\text{iǎn}$	apiyan	'opium'
$\text{ǎŋ}+k^h\text{ǎk}$	aŋkak	'reddish leaves'

and are formally noted by the De-aspiration Rule as:

$$(2) \left[\begin{array}{l} +\text{consonantal} \\ -\text{syllabic} \\ -\text{continuant} \\ +\text{aspirated} \end{array} \right] \rightarrow [-\text{aspirated}]^{11}$$

This rule says that if a Hokkien loanword contains a segment with the features in the matrix left of the arrow, it loses its aspirated feature in Tagalog.¹²

The Hokkien voiceless aspirated alveolar affricate c^h also undergoes de-aspiration so that the de-aspiration rule applies as illustrated by the following examples:

HOKKIEN	TAGALOG	
$p\bar{e}q+c^h\text{aĩ}$	petsay	'Chinese cabbage'
$k^h\text{î}n+c^h\text{aĩ}$	kintsay	'celery'

What differs between the rule de-aspirating c^h and that in the foregoing paragraph is the matrix of features to the left of the arrow:

$$(3) \left[\begin{array}{l} +\text{consonantal} \\ -\text{syllabic} \\ -\text{continuant} \\ +\text{strident} \\ +\text{anterior} \\ +\text{aspirated} \end{array} \right] \rightarrow [-\text{aspirated}]$$

To economise on the number of rules affecting this particular sound change, the two rules can be collapsed through a disjunctive notation. What is important is the fact that there is a general phenomenon taking place in the aspirated stops and the aspirated affricate:

$$(4) \left[\begin{array}{l} +\text{consonantal} \\ -\text{syllabic} \\ -\text{continuant} \\ +\text{aspirated} \end{array} \right] \rightarrow \left[\begin{array}{l} +\text{consonantal} \\ -\text{syllabic} \\ -\text{continuant} \\ +\text{strident} \\ +\text{anterior} \\ +\text{aspirated} \end{array} \right] \rightarrow [-\text{aspirated}]$$

2.3.3. Bi-segmentalisation

In the following Hokkien forms, Hokkien c^h and c further undergo a rule which splits a single segment into two: $t+s$:¹³

HOKKIEN	TAGALOG	
$p\bar{e}q+c^h a\bar{y}$	petsay	'Chinese cabbage'
$d\bar{i}+c\bar{i}$	ditse	'appellation given to second elder sister'
$b\grave{a}q+cu\grave{i}$	batsoy	'chopped and sauteed entrails of pig with soup'
$k^h\grave{i}n+c^h a\bar{y}$	kintsay	'celery'

which can be formulated as the Bi-segmentalisation Rule:

$$(5) \left[\begin{array}{l} +\text{consonantal} \\ -\text{syllabic} \\ -\text{continuant} \\ +\text{strident} \\ +\text{aspirated} \end{array} \right] \rightarrow \left[\begin{array}{l} +\text{consonantal} \\ -\text{syllabic} \\ -\text{continuant} \\ -\text{aspirated} \end{array} \right] \left[\begin{array}{l} +\text{consonantal} \\ -\text{syllabic} \\ +\text{continuant} \\ +\text{strident} \end{array} \right]$$

But counterexamples to this rule are, however, evident in the following form:

HOKKIEN	TAGALOG	
$ci\grave{a}n+s\acute{i}$	siyanse	'frying instrument'
$c^h\bar{o}+cu\grave{a}$	sotsuwa	'medicinal/straw paper'
$c^h\grave{i}+ta\bar{u}$	sitaw	'species of string beans'
$c\bar{u}+k^h\bar{e}$	sukiq	'long-standing customer'

Here, the original Hokkien segments merely become Tagalog s under a different environmental condition: morpheme initial position. In contrast, the bi-segmentalisation occurs in morpheme final position as in Hokkien $p\bar{e}q+c^h a\bar{y}$, Tagalog *petsay*. A further refinement in the formalisation of the bi-segmentalisation rule, therefore, has to be added:

$$(6) \left[\begin{array}{l} +\text{consonantal} \\ -\text{syllabic} \\ -\text{continuant} \\ +\text{strident} \\ +\text{aspirated} \end{array} \right] / + _ \# \rightarrow \left[\begin{array}{l} +\text{cons.} \\ -\text{syll.} \\ -\text{cont.} \\ -\text{stri.} \\ -\text{aspir.} \end{array} \right] \left[\begin{array}{l} +\text{cons.} \\ -\text{syll.} \\ +\text{cont.} \\ +\text{stri.} \end{array} \right]$$

i.e. a Hokkien voiceless affricate that appears as the initial segment of the second morpheme in a word becomes a combination of two phonological segments *t+s* in Tagalog. If *c^h*, *c* appear as the initial segment of the first morpheme in a Hokkien word, it becomes *s* in the trans-linguistic stage, the formalisation of which is as follows:

$$(7) \left[\begin{array}{l} +\text{consonantal} \\ -\text{syllabic} \\ -\text{continuant} \\ +\text{strident} \\ +\text{aspirated} \end{array} \right] / \# _ \rightarrow \left[\begin{array}{l} +\text{consonantal} \\ -\text{syllabic} \\ +\text{continuant} \\ +\text{strident} \\ -\text{aspirated} \end{array} \right]$$

In the formalisation of the foregoing rules, the environmental constraints appear on the left side of the arrow. This notation is here used to distinguish environmental constraints motivated by the Hokkien environment from those motivated by the Tagalog environment. This seems to be a neater way of compartmentalising Hokkien segments and environments from Tagalog segments and environments, since the TL rules involve phonological changes from one language system to another. This kind of notational device has not been used in the literature on generative phonology. It will be used in the rest of the TL rules in this section to show the sound changes from one language system to another.

In relation to the change from Hokkien *c^h*, *c* to Tagalog *ts*, *s*, a fundamental question arises: which language system provides the motivation for the constraints, Tagalog or Hokkien? Intuitively, Hokkien seems to be the logical choice, since it is the Hokkien morphemes

that provide the bases for the syllable structure in Tagalog; this being the case, it would seem infelicitous for Tagalog to provide the environmental constraints. Furthermore, while it may seem that Tagalog may provide the proper motivation through a morpheme structure condition that stipulates that word-initial segments never include *ts*, this is not actually the case, for Tagalog has Spanish loanwords whose word-initial segments include *ts* as in *tsinelas*, *tsitsaron*, *tsampaka*, etc.¹⁴

In view of the foregoing discussion, the TL rule on bi-segmentalisation must be further refined to look like the following:

$$(8) \left[\begin{array}{l} +\text{consonantal} \\ -\text{syllabic} \\ -\text{continuant} \\ +\text{strident} \\ +\text{aspirated} \end{array} \right] / \alpha <^+ \text{---} > \rightarrow \left[\begin{array}{l} +\text{cons.} \\ -\text{syll.} \\ -\text{cont.} \\ -\text{stri.} \\ -\text{aspir.} \end{array} \right] \left[\begin{array}{l} +\text{cons.} \\ -\text{syll.} \\ +\text{cont.} \\ +\text{stri.} \end{array} \right]$$

The 'alpha-environment' convention (Harms 1968:71) is employed here although the conditions do not strictly adhere to that set by Harms.¹⁵ Nonetheless, it is a device that can be adopted here since it captures the environmental constraints in the most general and economical way, that is, it stipulates that a Hokkien *c*, *c^h* which does not conform to the specified alpha-environment will have the features of only the second segment.

In actuality, when Hokkien *c^h*, *c* become Tagalog *s*, the phonological process involved is no longer one of bi-segmentalisation as it involves simply the replacement of one set of segment features by another set. But the rule as formalised shows two disjunctive trans-linguistic sound changes undergone by a single Hokkien segment, thus capturing a generalisation that may not otherwise be ordered and, therefore, would apply simultaneously; this manner of rule formulation, however, has been viewed to be more complex (Schane 1973:88).

In the light of the foregoing discussion, the following Hokkien words would have the following abbreviated derivations:

$c^{\hat{h}}i+ta\bar{u}$	$c^{\bar{h}}o+cu\grave{a}$	Hokkien form
$c^{\hat{h}}i+tau$	$c^{\bar{h}}o+cua$	Detonalisation Rule
$ci+tau$	$co+cua$	De-aspiration Rule
	$co+tsua$	Bi-segmentalisation Rule

si+tau	so+tsua	Bi-segmentalisation Rule
	so+tsuwa	Glide Insertion Rule
sitau	sotsuwa	derived TL form

Counterevidence to the above TL rule appears in the Tagalog word *sansé* 'appellation for third elder sister' whose seeming irregularity can be accounted for by the Tagalog MS condition on syllable structure (see Section 2.4.2.).

Sansé is derived from the Hokkien word $s\hat{a}+c\grave{i}$. By the mechanism of the rule on bi-segmentalisation, the second Hokkien morpheme $c\grave{i}$ becomes *tse* in Tagalog; $s\hat{a}$ becomes *san* by virtue of the nasal segmentation rule. The result of the application of these rules, which need not be ordered, is **santse*. Once the word gets into the Tagalog system, the MS condition on syllable structure applies, and because Tagalog does not allow a CVCCVC morpheme structure, **santse* becomes *sansé*. The full derivation of the word is as follows:

$s\hat{a}+c\grave{i}$	Hokkien form
sa+ci	Detonalisation Rule
saN+ci	Nasal Segmentation Rule
saN+tsi	Bi-segmentalisation Rule
saN tsi	Morpheme Boundary Deletion Rule
saN tsi	Derived TL-Tag. underlying form
saN+si	MS condition on syllable structure
saN+sí	Stress Placement Rule
san+sí	Nasal Assimilation Rule
san+sé	Vowel lowering Rule
sansé	Derived form

A similar path of derivation is also found in the Tagalog word *kinsé* 'fore shank of cow used in soup' which comes from Hokkien $ki\grave{e}n+c\grave{i}$:

$ki\grave{e}n+c\grave{i}$	Hokkien form
kien+ci	Detonalisation Rule
ken+ci	Vowel Cluster Simplification Rule
ken+tsi	Bi-segmentalisation Rule
kin+tsi	Vowel Raising Rule
kin tsi	Morpheme Boundary Deletion Rule
kin tsi	Derived TL-Tag. underlying form
kin+si	MS condition-syllable structure
kin+sí	Stress Placement Rule
kin+sé	Vowel Lowering Rule
kinsé	Derived form

On the other hand, Tagalog *kintsáy* 'celery' from Hokkien $k^h\grave{i}n+ca\grave{i}$ seems to provide counterevidence to the MS condition on syllable

structure. It is very likely, however, that the *ts* in *kintsáy* is the result of an analogy to several Hokkien words whose second morpheme *caĩ* 'vegetable' and whose corresponding forms in Tagalog is *-tsay* as in:

HOKKIEN	TAGALOG	
p̄ēq+c ^h aĩ	pétsay	'Chinese cabbage'
k ^h ú+c ^h aĩ	kútsay	'green leek used as food flavouring'

In the Tagalog forms *pétsay* and *kútsay*, *ts* is treated as a unitary segment that appears initially in the second formative; as such, they conform to the Tagalog canonical form CV(C)+CVC and provide the proper environment for the application of the Tagalog phonological rule on stress placement (see 2.5.1.).

2.3.4. De-nasalisation

Hokkien nasal vowels are de-nasalised in the Tagalog borrowed forms when such vowels appear in morpheme final position of a Hokkien word. This sound change is captured in the following rule called the De-nasalisation Rule:

$$(9) \left[\begin{array}{l} \text{[-consonantal]} \\ \text{+syllabic} \\ \text{+nasal} \end{array} \right] / + ___\# \rightarrow \text{[-nasal]}$$

and is seen to have applied in the following forms:

HOKKIEN	TAGALOG	
taū+koâ	tókwa	'bean curd'
lûn+piâ	lúmpyaq	'rolled dumpling'
hō+piâ	hópyaq	'mongo bean cake'

However, a different sound change takes place when Hokkien nasal vowels appear in morpheme-initial position of a Hokkien word, as attested by the following examples:

HOKKIEN	TAGALOG	
sâ+cì	sansé	'appellation given to third elder sister'
sâ+kô	saṅkó	'appellation given to third elder brother'

A nasal segment is added to the vowel segment, which in turn loses its nasal feature. This is an instance of a feature becoming raised to the status of a segment. The following rule, called the Nasal Segmentation Rule,¹⁶ formalises this sound change:

$$(10) \left[\begin{array}{l} \text{[-consonantal]} \\ \text{+syllabic} \\ \text{+nasal} \end{array} \right] \rightarrow \left[\begin{array}{l} \text{[-consonantal]} \\ \text{+syllabic} \\ \text{-nasal} \end{array} \right] \left[\begin{array}{l} \text{+consonantal} \\ \text{-syllabic} \\ \text{+nasal} \end{array} \right]$$

i.e. a nasal vowel becomes a combination of an oral vowel plus a nasal consonant.

2.3.5. Glottalisation

Through the mechanism of the Glottal Segment Insertion Rule, a glottal stop (q) is added at the end of a Hokkien word whose final segment is a vowel, as attested by the following examples:

HOKKIEN	TAGALOG	
taū+hû	tahóq	'bean curd'
gū+à	gúyaq	'small cow'
só+sí	súsiq	'key'

The rule is formalised as follows:

$$(11) \quad \emptyset / \left[\begin{array}{l} -\text{consonantal} \\ +\text{syllabic} \end{array} \right] \text{ ______ } \# \rightarrow \left[\begin{array}{l} +\text{consonantal} \\ -\text{syllabic} \\ -\text{continuant} \\ -\text{anterior} \\ -\text{coronal} \\ +\text{glottal} \end{array} \right]$$

It is not always the case, though, that q is added at the end of a Hokkien word for there are counterexamples such as the following:

HOKKIEN	TAGALOG	
hòŋ+bàq	humbá	'highly spiced dish of meat'
bî+cò	bítso	'rice-flour cake'
hòk+bū	hukbó	'army'

While the addition of a final glottal stop appears to be very much within the realm of Tagalog MS conditions, the motivation for it comes from Hokkien, since it provides the environmental condition that triggers final glottalisation. At this point, however, the glottalisation rule is an ad hoc one, since it has been shown to be inapplicable in quite a number of items which fit the stipulated environment. Suffice it to say that at this point, glottalisation is a phonological process that affects a number of Hokkien words; this is not to mean that the rule cannot be subject to future revisions that can formulate the sound change in an even more general way. This question is open and the rule, as it is given here, is tentative rather than definite.

2.3.6. Glide Insertion

Whenever a Hokkien word with vowel clusters the first element of which has the features [+high, ±back, ±round] is borrowed into Tagalog, a glide is inserted, as the following, called the Glide Insertion Rule, indicates:

$$(12) \quad \emptyset / \begin{bmatrix} -\text{cons.} \\ +\text{syll.} \\ +\text{high} \\ \text{a} \text{back} \\ \beta \text{round} \end{bmatrix} \quad \begin{bmatrix} \begin{bmatrix} -\text{high} \\ -\text{a} \text{back} \\ -\beta \text{round} \end{bmatrix} \\ \begin{bmatrix} -\text{high} \\ \text{a} \text{back} \\ -\beta \text{round} \end{bmatrix} \\ \begin{bmatrix} -\text{high} \\ -\text{a} \text{back} \\ \beta \text{round} \end{bmatrix} \end{bmatrix} \rightarrow \begin{bmatrix} -\text{cons.} \\ -\text{syll.} \\ +\text{high} \\ \text{a} \text{back} \\ \beta \text{round} \end{bmatrix}$$

i.e. a glide that comes between two vowels shares the same features as the first vowel; the second vowel must have features whose values are opposite to those of the first. Thus, the Hokkien form $\text{l}\bar{\text{u}}\text{n}+\text{pi}\hat{\text{a}}$ will have the y glide inserted between i and a resulting in Tagalog $\text{lumpi} \text{y} \text{aq}$. Other examples are:

HOKKIEN	TAGALOG	
$\text{si}\bar{\text{o}}+\text{ma}\check{\text{y}}$	siyomay	'steamed dumpling'
$\text{si}\bar{\text{o}}+\text{pa}\check{\text{u}}$	siyopau	'steamed rice cake'
$\text{ci}\hat{\text{a}}\text{n}+\text{s}\acute{\text{i}}$	siyanse	'frying instrument'
$\text{h}\bar{\text{o}}+\text{pi}\hat{\text{a}}$	hopiyaq	'sweet-mongo cake'

In the following examples, the w glide is inserted:

HOKKIEN	TAGALOG	
$\text{su}\check{\text{a}}+\text{h}\acute{\text{e}}$	suwahe	'species of small shrimps'
$\text{c}^{\text{h}}\bar{\text{o}}+\text{cu}\hat{\text{a}}$	sutsuwa	'medicinal/straw paper'
$\text{hu}\bar{\text{e}}+\text{t}\check{\text{ŋ}}$	huweteŋ	'a number-pairing game'
$\text{m}\bar{\text{i}}+\text{su}\hat{\text{a}}$	misuwa	'fine, thread-like noodles'

There are, however, some apparent exceptions to this rule. For instance, the Tagalog forms guyaq and kuya come from Hokkien $\text{g}\bar{\text{u}}+\hat{\text{a}}$ and $\text{k}\bar{\text{o}}+\check{\text{a}}$ respectively. The original forms did not have a vowel cluster; rather, a juncture segment + intervenes between two successive vowels in two separate morphemes. This sound change is formalised in the following rule, called the Y-Glide Insertion Rule:

$$(13) \quad [+ \text{ juncture}] / \text{V} ___ \text{V} \rightarrow \begin{bmatrix} -\text{consonantal} \\ -\text{syllabic} \\ +\text{high} \\ -\text{back} \\ -\text{round} \end{bmatrix}$$

i.e. the y glide is inserted between two morphemes where the last segment of the first is a vowel and where the initial segment of the second is likewise a vowel in the original Hokkien form.

2.3.7. Glide Substitution

A glide is substituted for the first or the second vowel segment of a Hokkien form if the vowel cluster appears either initially or finally in a morpheme. For example, the Hokkien form $k\bar{o}+i\acute{o}q$ which has an initial vowel cluster in the second morpheme becomes $k\acute{u}yoq$ resulting in the substitution of i by y . Similarly, in the Hokkien form $b\bar{o}+u\acute{i}+s\acute{i}t$ 'unlucky', the w glide is substituted for the initial segment u of the second morpheme resulting in the Tagalog form $buw\acute{i}sit$ 'jinx, ill-omened'. The Glide Substitution Rule can be formulated thus:

$$(14) \left[\begin{array}{l} -\text{consonantal} \\ +\text{syllabic} \\ +\text{high} \\ \text{aback} \\ \beta\text{round} \end{array} \right] / \left\{ \begin{array}{l} + \text{---} \text{V C}_o \\ \text{C}_o \text{ V ---} \# \end{array} \right\} + \left[\begin{array}{l} -\text{consonantal} \\ -\text{syllabic} \\ +\text{high} \\ \text{aback} \\ \beta\text{round} \end{array} \right]$$

i.e. a vowel segment with the features high, back, round will be replaced by a glide with the same features in certain environments. Environmental conditions are inherent in the original Hokkien forms: that is, Hokkien $+i\acute{o}q$ becomes Tagalog $-yoq$ in $k\acute{u}yoq$ since the first environmental constraint applies, but in a form like Hokkien $b\grave{a}q+cu\grave{i}$, the Tagalog form is $batsoy$ with i becoming y rather than u becoming w since it is the second environmental constraint that is applicable. More examples of this sound change follow:

HOKKIEN	TAGALOG	
laú+laù	lawlaw	'loose'
hT+kaú	hikaw	'earring'
k ^h ú+c ^h aĩ	kutsay	'celery'
pò+t ^h aú	puthaw	'small ax'
iān+sui	yansoy	'coliander'

2.3.8. Vowel Raising

The Hokkien oral vowel e becomes i and the Hokkien vowel o becomes u at all times by the mechanism of the TL rule on vowel raising. These sound changes are exemplified by the following forms:

HOKKIEN	DERIVED TL FORM	TAGALOG	
gōŋ+gǒŋ	*guŋ guŋ	guŋgón	'stupid'
hō+sē	*hu si	húsi	'cloth material made from abaca fiber'
sò+sí	*su si	súsiq	'key'
ō+taũ	*u tau	útau	'soy bean'

Except for Hokkien $g\eta+g\eta$, the rest of the forms have derived TL forms that are identical to the Tagalog surface representations. In such cases, the Tagalog phonological rule of vowel lowering (see Section 2.5.7.) would apply vacuously.

The vowel raising rule is formalised as follows:

$$(15) \begin{bmatrix} -\text{consonantal} \\ +\text{syllabic} \\ -\text{high} \\ -\text{low} \\ \alpha\text{back} \end{bmatrix} \rightarrow \begin{bmatrix} +\text{high} \\ \alpha\text{back} \end{bmatrix}$$

i.e. a vowel segment with the features [-high, -low, -back] will be replaced by a vowel segment with the features [+high, -low, -back], and a vowel segment with the features [-high, -low, +back] will be replaced by a vowel segment with the features [+high, -low, +back].

Hokkien $g\bar{o}\eta+g\bar{o}\eta$, by this rule, therefore, becomes * $g\eta\eta g\eta$ and surfaces as the Tagalog $g\eta\eta g\eta$ after the application of the Tagalog vowel lowering rule.

The TL rule on vowel raising is properly motivated by the fact that Tagalog shows the tendency to conform to more natural phonological processes, namely, that the three-vowel system i-a-u is more natural than i-e-o (Schane 1973:111). This tendency further supports the linguistic fact that Tagalog, before the entrance of Spanish loanwords, possessed a three-vowel system: i-a-u. There are two implications in relation to the foregoing: (1) that the Hokkien loanwords that have undergone this sound change probably entered Tagalog at a time when the latter had a three-vowel system, and (2) in language as in biological organisms, there is an atavistic tendency to revert to the original structure which conforms to the linguistic history of a particular language.

2.3.9. Vowel Cluster Simplification

In the foregoing sections, discussions have centred on what sound processes Hokkien vowel clusters have undergone in the forms borrowed into Tagalog: glides are inserted in certain environments while in other environments, the first or the second element of a vowel cluster is replaced by a glide. Other Hokkien vowel clusters are simplified as attested by the following forms:

HOKKIEN	DERIVED TL FORM	TAGALOG	
hiêŋ+à	*heŋ a	hiŋa	'to breathe'
tiêŋ+hè	*teŋ he	tiŋhoy	'lamp'
taū+g'é	*tu ge	toge	'bean sprout'
t ^h aū+cǎŋ	*tu tsaŋ	tutsaŋ	'short hair on woman's head'
kaï+luáq	*ki luwaq	kelwaq	'mustard'

where Hokkien ie becomes e, Hokkien au becomes u, and Hokkien ai becomes i in initial morpheme position as evident in the forms in the second column. This trans-linguistic sound change, called the **Vowel Cluster Simplification Rule**, is formalised as follows:

$$(16) \left[\begin{array}{l} \text{-consonantal} \\ \text{+syllabic} \end{array} \right] / \#C_0 _ _ V + \rightarrow \emptyset$$

i.e. the first element of a vowel cluster is deleted when this occurs in initial morpheme position.

The single vowels that have remained after vowel cluster simplification has taken place, namely e, u and i will later be changed to i by the TL rule on vowel raising, and to o and e by the Tagalog phonological rule on vowel lowering, resulting in the Tagalog surface representation forms in the third column above.

The following derivations illustrate how the vowel cluster simplification rule fits in the total scheme of TL rules in relation to the examples given:

hiêŋ+à	t ^h aū+cǎŋ	kaï+luáq	Hokkien form
hieŋ+a	t ^h au+cǎŋ	kai+luaq	Detonalisation Rule
-	tau+cǎŋ	-	De-aspiration Rule
-	tau+tsaŋ	-	Bi-segmentalisation Rule
heŋ+a	tu+tsaŋ	ki+luaq	Vowel Cluster Simplifi. Rule
hiŋ+a	-	-	Vowel Raising Rule
-	-	ki+luwaq	Glide Insertion Rule
hiŋ a	tu tsaŋ	ki luwaq	Morpheme Boundary Deletion Rule
hiŋ a	tu tsaŋ	ki luwaq	Derived TL-Tag. underlying form

The Hokkien word t^haū+sǎi¹⁷, which becomes Tagalog tawsi, has apparently not undergone the cluster simplification rule. There is a very close similarity between the Hokkien and the Tagalog forms, a similarity which leads one to suspect that the borrowing must have taken place very recently.

2.3.10. Vowel Epenthesis

Hokkien words like huē+tŋ 'number-pairing game' and lāŋ+sŋ 'cooking apparatus made of bamboo slats fixed in a tin ring used for steaming' do not have any vowel in the second morpheme; in this case, it is the nasal that is syllabic. In their borrowed forms in Tagalog, these become hwéteŋ and lansón respectively with a vowel inserted between two successive consonants. One way of formalising this change is by way of the following rule, called the Vowel Epenthesis Rule:

$$(17) \quad \left[\begin{array}{l} \text{-consonantal} \\ \text{+syllabic} \\ \text{ahigh} \\ \beta\text{back} \end{array} \right] + C __ \left[\begin{array}{l} \text{+cons.} \\ \text{+syll.} \\ \text{+nasal} \end{array} \right] \rightarrow \left[\begin{array}{l} \text{-cons.} \\ \text{+syll.} \\ \text{ahigh} \\ \beta\text{back} \end{array} \right]$$

i.e. a vowel which shares the features of a preceding non-contiguous vowel is inserted between two consonants on the condition that the second consonant is a syllabic nasal.

In the case of Tagalog lansón, the application of the rule should result in *lansón, which later changes to lansón by a Tagalog dissimilation rule. The formulation of this rule, however, will not be attempted here since it does not apply to a big number of words.

The change from Hokkien huē+tŋ to Tagalog hwéteŋ involves still another rule called the De-syllabisation Rule whose formalisation follows:

$$(18) \quad \left[\begin{array}{l} \text{+consonantal} \\ \text{+syllabic} \\ \text{+nasal} \end{array} \right] / \vee __ \rightarrow \text{[-syllabic]}$$

i.e. a syllabic nasal in Hokkien will lose its syllabicity if an epenthetic vowel has been inserted before it.

2.3.11. Metathesis

Metathesis is a sound process that also occurs in Hokkien loanwords although it is not a very common one. Chomsky and Halle (1968:358-364) favour the transformation format for its formalisation. In the Hokkien forms cuí+kuì and siū+tiék, the vowels in the initial morpheme are metathesised via a TL rule resulting in Tagalog siyukoy and switik. Vowel metathesis can be accounted for through the following TL rule called the Vowel Metathesis Rule which has a transformational format:

$$(19) \quad \text{Structural Description:} \\ C_0 \left[\begin{array}{l} \text{-consonantal} \\ \text{+syllabic} \end{array} \right] \quad \left[\begin{array}{l} \text{-consonantal} \\ \text{+syllabic} \end{array} \right] + \Rightarrow \\ \begin{array}{cccc} 1 & 2 & 3 & 4 \\ \text{Structural Change: } & 1 & 3 & 2 & 4 \end{array}$$

Normally, the glide substitution rule should apply to Hokkien *cuí+kuì* resulting in **suykoy*, but this does not happen. However, *cuí+kuì* has undergone metathesis, but only in the two vowel segments in the first morpheme. Cases of this sort has led Chomsky and Halle to remark that:

. . . we would require that all or some segments mentioned in the metathesis rule be supplied with a special abstract feature [+Metathesis]. The 'cost' of such a rule would then be equal to the number of features mentioned in the SD plus the number of segments to which we have assigned the feature [+Metathesis]. (1968:361).

Applying the suggestion of Chomsky and Halle, *ui* in *cuí+kuì* and *iu* in *siū+tiék* will be specified in addition to its other features, for the feature [+Metathesis] and the derivations for both will appear as follows:

<i>siū+tiék</i>	<i>cuí+kuì</i>	Hokkien form
<i>siu+tiék</i>	<i>cui+kui</i>	Detonalisation Rule
<i>sui+tiék</i>	<i>ciu+kui</i>	Metathesis Rule
<i>suwi+tiék</i>	<i>ciyu+kui</i>	Glide Insertion Rule
<i>suwi+tek</i>	-	Cluster Simplification Rule
<i>suwi+tik</i>	-	Vowel Raising Rule
-	<i>ciyu+kuy</i>	Glide Substitution Rule
-	<i>siyu+kuy</i>	Bi-segmentalisation Rule
<i>suwi tik</i>	<i>siyu kuy</i>	Morpheme-boundary Deletion Rule
<i>suwi tik</i>	<i>siyu kuy</i>	Derived TL-Tag. underlying form

2.3.12. Morpheme Boundary Deletion

The Hokkien words borrowed into Tagalog are generally composed of two morphemes, each of which has a meaning different from that contained in the composite form. For instance, Tagalog *petsay* '*Chinese cabbage*' comes from the two Hokkien morphemes *péq* '*white*' and *c^haĩ* '*vegetable*', but the form *pēq+c^haĩ* means '*Chinese cabbage*' rather than '*white vegetable*'. Therefore, all the Hokkien words borrowed into Tagalog have two levels of meanings; the literal and the idiomatic ones, but it is the idiomatic meaning, not the literal one, that is borrowed into the Tagalog language, together with the corresponding phonetic form. Once a Hokkien word is borrowed into Tagalog, there is no trace whatsoever of the meanings of each of the individual morphemes.

The foregoing trans-linguistic phenomenon manifests itself in a trans-linguistic rule called the Morpheme Boundary Deletion Rule which can be formally stated as follows:

(20) [+morpheme boundary] → ∅

i.e. a morpheme boundary, symbolised as + in isolation, will become null

as a result of this particular rule. The morpheme boundary deletion rule, together with the detonalisation rule, applies to all Hokkien words borrowed into Tagalog. There are no exceptions to these two rules, and, as a result, both of them are aptly called 'major rules'.¹⁸

While the detonalisation rule is the first TL rule that applies to all Hokkien words in all instances, the morpheme boundary deletion rule has to be applied after certain other rules have already applied. This is further discussed in Section 2.3.13.

2.3.13. Order of Trans-linguistic Rules

The TL rules applicable to Hokkien loanwords are classified in this section into ordered and unordered rules.

2.3.13.1. *Ordered Rules*

The TL rules that are ordered are presented below. Except for the detonalisation rule and the morpheme boundary deletion rule, the rest of the rules are presented in pairs to indicate the ordering of one rule in relation to the other. The sequence of presentation of the paired rules does not necessarily imply that they are ordered as they are presented.

2.3.13.1.1. *Detonalisation Rule*

The detonalisation rule is considered as a major rule¹⁹ that applies to all Hokkien words entering the Tagalog system as loanwords without exception. As such, it must be applied before the rest of the TL rules. The detonalisation rule is not only a major rule but also a very basic rule as examples have indicated a lack of correlation between Hokkien tone and Tagalog stress patterns. It would likewise seem logical that a basic rule should be ordered first in a series of rules.

2.3.13.1.2. *De-aspiration and Bi-segmentalisation Rules*

In connection with the TL rules that change Hokkien c^h to c , and Hokkien c to Tagalog ts , a fundamental issue inevitably arises: Are the rules on de-aspiration and bi-segmentalisation ordered? The investigator favours rule-ordering for the following reasons: (1) generative phonology is aimed at describing the language competence of a speaker-hearer, particularly his knowledge of the rules that convert underlying forms into phonetic representations. Chomsky has, on many occasions, hypothesised that the human mind goes through minutely-programmed stages before it produces the observable surface event; (2) if the rules are ordered, which one comes first, the de-aspiration

rule or the bi-segmentalisation rule? The investigator favours the de-aspiration rule coming first because it has an analogue in the de-aspiration rule for the series of Hokkien aspirated stops. Furthermore, it seems that the natural tendency, as attested by Grimm's Law (Lehmann, 1962:93), is for natural languages with aspirated obstruents to lose their aspiration. In generative phonology terms, this is viewed as a natural phonological phenomenon by which languages tend to simplify their overall phonological structure by dropping certain features. If anything, the de-aspiration rule demonstrates "the metatheoretical principle that we expect to find rules which make segments less marked" (Schane 1973:117).

If one were to consider Hokkien c^h becoming ts before de-aspiration, one would have an intermediate form that would look like ts^h . Historically, there is no linguistic evidence that can attest to the presence of an aspirated segment in Tagalog in particular and in Original Austronesian in general (see Dempwolff 1938). Furthermore, if aspiration is to be considered as a feature attached to s resulting in s^h , it presupposes that Early-Tagalog had this sound, which is very unlikely. Intuitively too, it seems implausible to de-aspirate an original non-aspirate $*s^h$.

In this light therefore, the words *petsay* and *kintsay* will have the following derivations:

$k^h i n + c^h a \Upsilon$	$p \bar{e} q + c^h a \Upsilon$	Hokkien form
$k^h i n + c^h a i$	$p e q + c^h a i$	Detonalisation Rule
$k i n + c a i$	$p e q + c a i$	De-aspiration Rule
$k i n + t s a i$	$p e q + t s a i$	Bi-segmentalisation Rule
$k i n + t s a y$	$p e q + t s a y$	Y-glide Substitution Rule
$k i n \ t s a y$	$p e q \ t s a y$	Morpheme Boundary Deletion Rule
$k i n \ t s a y$	$p e q \ t s a y$	Derived Tl-Tag. underlying form

2.3.13.1.3. *Vowel Epenthesis and De-syllabicisation Rules*

The vowel epenthesis rule has to be applied first before the de-syllabicisation rule since the application of the latter rule is dependent on an environmental condition created by the former rule. To illustrate, reference is here made to the derivations of *huweten* and *lanson*

$h u \bar{e} + t \eta$	$l \bar{a} n + s \eta$	Hokkien form
$h u e + t \eta$	$l a n + s \eta$	Detonalisation Rule
$h u w e + t \eta$	-	Glide Insertion Rule
$h u w e + t e \eta$	$l a \eta + s a \eta$	Vowel Epenthesis Rule
$h u w e + t e \eta$	$l a \eta + s a \eta$	De-syllabicisation Rule

huwe teŋ	laŋ saŋ	Morpheme Boundary Deletion Rule
huwe teŋ	laŋ saŋ	Derived TL-Tag. underlying form
-	lan soŋ	Dissimilation Rule

The original syllabic feature present in the nasal consonant is switched over to the epenthetic vowel. This is a case of regressive assimilation, rather than progressive assimilation for it would be redundant to show that a Tagalog vowel acquires the feature syllabic from a following syllabic nasal.

2.3.13.1.4. *Metathesis and Glide Insertion Rules*

The derived TL form of Tagalog *siyukoy* presented in Section 2.3.11. and here repeated for easy reference likewise indicates the ordering of the metathesis rule before the glide insertion rule:

cuf+kuì	Hokkien form
cui+kui	Detonalisation Rule
ciu+kui	Metathesis Rule
ciyu+kui	Glide Insertion Rule
ciyu+kuy	Glide Substitution Rule
siyu+kuy	Bi-segmentalisation Rule
siyu kuy	Morpheme Boundary Deletion Rule
siyu kuy	Derived TL-Tag. underlying form

2.3.13.1.5. *De-nasalisation and Glottal Segment Insertion Rules*

Whenever the TL rules on de-nasalisation and glottal segment insertion have to be applied to a single item, the former is ordered before the latter as exemplified in the following derivation:

lūn+piã	Hokkien form
lun+piã	Detonalisation Rule
lun+piya	Glide Insertion Rule
lun+piya	Denasalisation Rule
lun+piyaq	Glottal Segment Insertion Rule
lun piyaq	Morpheme Boundary Deletion Rule
lun piyaq	Derived TL-Tag. underlying form
lun piyaq	Tag. Nasal Assimilation Rule

Application of the de-nasalisation rule will yield a word-final segment that is an oral (or non-nasal) vowel which will further provide the proper environment for the application of the glottalisation rule.

2.3.13.1.6. *Cluster Simplification and Vowel Raising Rules*

The cluster simplification rule must precede the vowel raising rule in its application as the derivation of Tagalog *hiṅá* indicates (see Section 2.3.9.). Since the vowel raising rule replaces a single segment with another vowel, it is inapplicable in instances where two vowel segments (vowel clusters) are involved; vowel clusters would automatically block the application of the vowel raising rule. It is only through the mechanism of the vowel cluster simplification rule where two vowel segments, e.g. *ie*, become a single segment, e.g. *e* that the proper environment for the application of the vowel raising rule is created.

2.3.13.1.7. *Morpheme Boundary Deletion Rule*

The morpheme boundary deletion rule is the last ordered rule to be applied to allow all the rules with environmental constraints to be applied first. If the morpheme boundary deletion rule were to be applied earlier in the series, even as early as the detonalisation rule, the application of the rest of the rules with environmental constraints would be ineffective since the boundary markers are not present to delineate the areas of application. For example, the glide insertion rule specifies that the glide *w* should be inserted in the vowel cluster *ua* in the Hokkien word *suā+hé* resulting in *suwa+he*. If the morpheme boundary deletion rule is applied before the glide insertion rule, *suā+hé* becomes *suahe* and there is no means of determining whether *suahe* does in fact have a vowel cluster for the word could possibly be broken up into *su+a+he*, which does not provide the proper environment for the application of the glide insertion rule.

2.3.13.2. *Unordered Rules*

The rest of the TL rules, namely, the glide substitution rule and the cluster simplification rule, are ordered after the general or 'major' rule of detonalisation and before another major rule - the morpheme boundary deletion rule; in this sense, they are ordered. However, in the sense that their application is not dependent on the application of a previous rule, they are unordered.

2.4. MORPHEME STRUCTURE CONDITIONS OF TAGALOG

This section contains the morpheme structure²⁰ conditions that apply to Tagalog loanwords of Hokkien origin. The MS conditions that appear here are restricted only to the sequence structure conditions. Since

redundant features of Tagalog phonological segments have already been specified in Section 2.2., it is not necessary to give the segment structure conditions here.²¹

2.4.1. Condition on Medial Consonants

In the following underlying forms of Hokkien origin, a glottal stop *q* that occurs in a syllable within a word is deleted:

baq+tsoy	→	batsoy
maq+mi	→	mami
peq+tsay	→	petsay
peq+saq	→	pesaq

This is due to a morpheme structure condition in Tagalog that specifies that 'in word interior syllable final position' all consonants, except *h* and *q*, can occur (Llamzon 1968:51). Formally stated, the condition will appear in the form below:

$$(21) \quad N \quad (C) \quad \sim \quad \left[\begin{array}{c} +\text{consonantal} \\ -\text{syllabic} \\ -\text{sonorant} \\ -\text{continuant} \\ +\text{glottal} \end{array} \right] \quad / \quad CV \quad _ _ +$$

$$\left[\begin{array}{c} +\text{consonantal} \\ -\text{syllabic} \\ -\text{sonorant} \\ +\text{continuant} \\ +\text{glottal} \end{array} \right]$$

which means that the two matrices of segment features above constitute a negative (symbolised by *N*) condition (symbolised by *(C)*) within the environment of a syllable within a word, which will prevent the occurrence of such Tagalog forms as *baqtsoy and *maqmi.

The notion of the 'negative condition' is one of three kinds of MS conditions²² proposed by Stanley (1967:427), which means that all the matrices in a language are accepted except matrices in the negative condition. The implication behind the negative condition is that it is for use in stating the systematic phonemes not present in the language.

In adopting Stanley's negative condition, two revisions have been made here which appear adequate enough to cover the difficulties posed by this particular morpheme structure condition of Tagalog. The difficulty that is being referred to is the inadequacy of the regular MS rule to state in economical and general terms the non-occurrence of

q and h in a syllable within a word; this illustrates Stanley's point when he says that MS rules do not allow us "to state situations which arise in natural languages but which are not easily stated in terms of rules" (see Section 2.1.2.2.). A regular rule would have required that a consonant should include all the feature values of all the systematic phonemes of Tagalog except h and q; in effect, the form of such a rule would look like the following:

$$(22) \quad [C] \rightarrow \left[\begin{array}{l} +\text{consonantal} \\ -\text{syllabic} \\ \pm\text{sonorant} \\ \pm\text{continuant} \\ \pm\text{anterior} \\ \pm\text{coronal} \\ \pm\text{lateral} \\ \pm\text{strident} \\ \cdot \\ \cdot \\ \cdot \end{array} \right] / \text{CV} \text{ ____ } +$$

This difficulty is further compounded by the general MS condition that MS rules do not change feature values. As a result, a rule of the form:

$$(23) \quad \left[\begin{array}{l} +\text{consonantal} \\ -\text{syllabic} \\ -\text{sonorant} \\ +\text{glottal} \\ -\text{continuant} \end{array} \right] \rightarrow \emptyset / \text{CV} \text{ ____ } +$$

is not allowed since all the features to the left of the arrow become deleted to the right of the arrow, which, in effect, violates the cited restrictive condition. Clearly, it is notationally more elegant and linguistically more general to state in this situation what particular segments may not appear in a particular environmental context.

The solution lies in the use of the negative condition with the following revisions: (1) the addition of an environmental constraint to the condition, which further changes a segment structure condition (as originally conceived of by Stanley) to a sequence structure condition, and (2) the extension of the condition to cover systematic phonemes which are present in the language. Revisions 1 and 2 have turned out to be both viable and perhaps should be considered in future revisions of the structure of MS conditions.

2.4.2. Condition on Syllable Structure

Tagalog has a MS condition which specifies that the basic morpheme structure in its system is CV(C)CV(C). This is formalised as a positive condition called the Syllable Structure Condition with the following form:

$$(24) \quad P \quad (C) \quad + \quad \begin{bmatrix} +\text{conson.} \\ -\text{syll.} \end{bmatrix} \quad \begin{bmatrix} -\text{cons.} \\ +\text{syll.} \end{bmatrix} \quad \left(\begin{bmatrix} +\text{cons.} \\ -\text{syll.} \end{bmatrix} \right) \quad + \\ \begin{bmatrix} +\text{cons.} \\ -\text{syll.} \end{bmatrix} \quad \begin{bmatrix} -\text{cons.} \\ +\text{syll.} \end{bmatrix} \quad \left(\begin{bmatrix} +\text{cons.} \\ -\text{syll.} \end{bmatrix} \right)$$

The motivation for this condition lies in the fact that there must be a mechanism in the system that can segmentalise underlying forms of Hokkien origin into formatives that will correspond to the syllable structure of Tagalog. Furthermore, the condition helps to indicate that consonant clusters within the same morpheme or formative are not allowed in the system.²³ Thus, an underlying form like *hunbaq* cannot be decomposed into formatives consisting of **hunb+aq*. The condition is likewise necessary for its relevance to the general stress placement rule, since the latter assigns stress on the basis of the syllable structure of Tagalog; thus, the MS condition on syllable structure is logically ordered before the P rule on stress placement.

Implicit in this rule is the fact that underlying forms of Hokkien origin lose their morpheme identities, that is, morphemes lose their original individual meanings. Formatives replace morphemes, which dictates that the analysis of Tagalog loanwords must be in terms of formatives, not morphemes.

Another point that must be stressed here is the order of application of the MS condition on syllable structure in relation to the MS condition on de-glottalisation; in the derivation of *batsoy* below, the former is ordered before the latter:

<i>bàq+cuì</i>	Hokkien form
<i>baq+cuì</i>	Detonalisation Rule
<i>baq+tsui</i>	Bi-segmentalisation Rule
<i>baq+tsuy</i>	Y-glide Substitution Rule
<i>baq tsuy</i>	Morpheme Boundary Deletion Rule
<i>baq tsuy</i>	Derived TL-Tag. underlying form
<i>baq+tsuy</i>	MS condition-syllable structure
<i>ba+tsuy</i>	MS condition-medial consonants
<i>bá+tsuy</i>	Stress Placement Rule
<i>bá+tsoy</i>	Vowel Lowering Rule
<i>bátsoy</i>	Derived Tagalog form

The condition for de-glottalisation (MS condition on medial consonants) presumes the presence of a MS condition that states the basic morpheme structure of Tagalog. In relation to this, there is an implication that the MS condition on syllable structure must apply before the MS condition on de-glottalisation, a consideration which questions the validity of Stanley's theory that MS conditions are an unordered set.

2.4.3. Condition on Disyllabic Structure

Tagalog has a MS condition on disyllabic structure which accounts for the tendency of Tagalog words towards disyllabism. Hokkien words which have entered into Tagalog as loanwords, have, in the process, become disyllabic through the deletion of entire morphemes or of single phonological segments. This is attested by the following examples:

HOKKIEN	TAGALOG	
pēq+sàq+hí	pésaq	'fish boiled with spices'
pàq+sí+lán	paslán	'to kill'
tán+ē+sòq	tansóq	'copper'
ín+án+kôn	inqon	'grandfather'

which indicate that tendencies towards simpler syllable structure is more natural; Schane (1973:117) has even suggested that a metatheoretical principle to this effect be formulated.

From the examples given above, it is apparent that it is usually the middle morpheme in a three-morpheme Hokkien word that gets deleted; this process, otherwise known by the name haplology, is motivated by the MS condition formalised below as a positive condition:

(25) P (C) + [+syllable] [+syllable]

i.e. a Tagalog morpheme normally consists of two syllables.

2.5. PHONOLOGICAL RULES OF TAGALOG

In Section 2.3., Hokkien words that have entered into the Tagalog language as borrowed forms have been shown to have undergone a number of TL rules, some of which are necessarily ordered, some not. The resulting derivations which may be termed as 'intermediate' derivations serve as the underlying representations in Tagalog to which all relevant phonological rules of the language begin to apply. This section deals only with the P rules of Tagalog that operate on the loanwords of Hokkien origin; as such, therefore, it does not make an attempt to be exhaustive in its presentation.

2.5.1. Stress Placement Rule

In the TL rule of detonalisation, all Hokkien words lose their tones before they enter into the Tagalog system. Stress in Tagalog does not involve the same kind of complex operations as English stress,²⁴ since the former involves only two kinds of stresses: strong and weak stress (Schacter and Otones 1972).

Inasfar as Hokkien loanwords are concerned, the stress placement rule of Tagalog has the following formalisation:

(26) [V] + [+stress] / (C___) + C___(C) #

whereby the disjunctive ordering convention explicitates that the rule must assign stress first to the vowel in the penultimate syllable of a Tagalog word if it is an open syllable; otherwise, it is the vowel in the final syllable that gets the stress.

Almost all of the Hokkien words borrowed into Tagalog consist of two morphemes and fit into the disyllabic structure of Tagalog without difficulty.²⁵ Application of the disyllabic stress placement rule is exemplified in the following:

Stress on Penultimate Syllable		On Ultimate Syllable	
HOKKIEN	TAGALOG	HOKKIEN	TAGALOG
bàq+cuì	bátsoy	sâ+cì	sansé
bî+hùn	bíhon	iān+suí	yansóy
gū+tô	góto	sín+k ^h è	siŋkíq
gū+à	gúyaq	hôn+bàq	humbá
hT+kaú	híkaw	hók+bū	hukbó

Through the mechanism of the TL rule on glide insertion, two-morpheme Hokkien words also become trisyllabic, but the trisyllabic forms are actually underlying forms in Tagalog. The stress placement rule is applied to these underlying forms as the following examples show:

Stress on Penultimate Syllable		On Ultimate Syllable	
HOKKIEN	TAGALOG	HOKKIEN	TAGALOG
siō+paú	siyópaw	ciân+sí	siyansé
siō+maí	siyómay		
cuí+kuì	siyúkoy		
ciâ+hū	siyáho		
suā+hé	suwáhe		

The trisyllabic words will later appear as disyllabic in their final derived forms through the vowel deletion rule (see Section 2.5.2.) which forms part of a 'conspiracy' to fit morphological forms into the syllable structure of Tagalog.

2.5.2. Vowel Deletion Rule

One of the P rules that converts an underlying form in Tagalog into its corresponding phonetic representation is the Vowel Deletion Rule formally stated below as:

$$(27) \begin{bmatrix} -\text{consonantal} \\ +\text{syllabic} \\ \alpha\text{back} \\ \beta\text{round} \end{bmatrix} \rightarrow \emptyset / \text{ ____ } \begin{bmatrix} -\text{consonantal} \\ -\text{syllabic} \\ \alpha\text{back} \\ \beta\text{round} \end{bmatrix}$$

i.e. a vowel that agrees in backness and in roundness with a following glide is deleted. Application of this rule gives the derivation of the following items:

hopiyaq	buwisit	huwete	misuwa	underlying form
hopíyaq	buwísit	huwéte	misúwa	first cycle-Stress Placement Rule
hopyaq	bwisit	hwete	miswa	Vowel Deletion Rule
hópyaq	-	-	míswa	2nd cycle-Stress Placement Rule
hópyaq	bwísit	hwéteŋ	míswa	derived form

2.5.3. Palatalisation Rule

Application of the vowel deletion rule creates an environmental condition that motivates the application of the Palatalisation Rule to Hokkien borrowings; a first approximation of the rule gives:

$$(28) \begin{bmatrix} +\text{consonantal} \\ -\text{syllabic} \\ +\text{strident} \\ +\text{anterior} \\ +\text{coronal} \end{bmatrix} \begin{bmatrix} -\text{consonantal} \\ -\text{syllabic} \\ -\text{high} \\ -\text{back} \end{bmatrix} \rightarrow \begin{bmatrix} +\text{consonantal} \\ -\text{syllabic} \\ +\text{strident} \\ -\text{anterior} \\ +\text{coronal} \\ +\text{continuant} \end{bmatrix}$$

i.e. the segment sequence sy becomes palatalised to ʃ. The application of this rule is evident in the following examples:

siyopaw	→	syopaw	→	ʃopaw
siyomay	→	syomay	→	ʃomay
siyukoy	→	syukoy	→	ʃukoy
siyaho	→	syaho	→	ʃaho

where the forms in the last column are the final derived or the phonetic representations of the forms in the first column.

However, there is evidence that the palatalisation rule as presented needs further refinement. The sequence of segments ts is likewise subjectible to palatalisation resulting in the segment ʃ whose only

difference from ξ lies in its feature value of - for continuant, an example of which is *petsay* + *pečay*. The palatalisation rule that changes *sy* to ξ and *ts* to ξ is a context-free one; in the latter, the application is obviously motivated by such sociolinguistic factors as one's educational background and social status, a topic that is beyond the scope of this study. In view of the foregoing, the revised palatalisation rule must have the following formalisation:

$$(29) \left[\begin{array}{l} \left[\begin{array}{l} +\text{consonantal} \\ -\text{syllabic} \\ +\text{strident} \\ +\text{anterior} \\ +\text{coronal} \end{array} \right] \left[\begin{array}{l} -\text{consonantal} \\ -\text{syllabic} \\ -\text{high} \\ -\text{back} \end{array} \right] \\ \left[\begin{array}{l} +\text{consonantal} \\ -\text{syllabic} \\ -\text{strident} \\ +\text{anterior} \\ +\text{coronal} \end{array} \right] \left[\begin{array}{l} +\text{consonantal} \\ -\text{syllabic} \\ +\text{strident} \\ +\text{anterior} \\ +\text{coronal} \end{array} \right] \end{array} \right] \rightarrow \left[\begin{array}{l} \left[\begin{array}{l} +\text{consonantal} \\ -\text{syllabic} \\ +\text{strident} \\ -\text{anterior} \\ +\text{coronal} \\ +\text{continuant} \end{array} \right] \text{a} \\ \left[\begin{array}{l} +\text{consonantal} \\ -\text{syllabic} \\ +\text{strident} \\ -\text{anterior} \\ +\text{coronal} \\ -\text{continuant} \end{array} \right] \text{b} \end{array} \right]$$

i.e. sub-rule (a) changes *sy* to ξ and sub-rule (b) changes *ts* to ξ .

2.5.4. Nasal Assimilation Rule

Nasal assimilation is a common phonological process in Tagalog which is extended to apply to its underlying forms of Hokkien origin. Thus, the general Nasal Assimilation Rule (Schane 1973:70).

$$(30) \left[\begin{array}{l} \text{C} \\ +\text{nasal} \end{array} \right] \rightarrow \left[\begin{array}{l} \alpha\text{anterior} \\ \beta\text{coronal} \end{array} \right] / \text{---} \left[\begin{array}{l} -\text{sonorant} \\ \alpha\text{anterior} \\ \beta\text{coronal} \end{array} \right]$$

applies to the following Hokkien forms:

HOKKIEN	TAGALOG	
lûn+piǎ	lumpiyag	'mixed vegetables and shrimps wrapped in wrappers of dough'
hòŋ+bàq	humbá	'highly spiced dish of chicken or pork'
bĭn+põ	bĩmpo	'face towel'
sâ+cì	sansé	'appellation for third elder sister'
tâŋ+é+sòq	tansóq	'copper'
sâ+kó	sankó	'appellation for third elder brother'

The following derivations indicate how the nasal assimilation rule actually applies to underlying forms of Hokkien origin:

saNse	binpo	inkoŋ	laŋsaŋ	underlying form
saNsé	bínpo	inkón	laŋsán	stress placement rule
sansé	bím̄po	iŋkón	lansán	nasal assimilation rule
-	-	-	lansón	dissimilation rule
sansé	bím̄po	iŋkón	lansón	derived form

2.5.5. Degemination Rule

Tagalog has a P rule that deletes one of two successive identical consonants. The rule, called the Degemination Rule has the following formalisation:

(30) [C] → ∅ / ____C²⁶

and applies to such underlying forms of Hokkien origin as bak+kíyaq and pak+kíaw resulting in ba+kíyaq and pa+kíaw respectively.

The following is an illustration of the application of the degemination rule:

bak+kíyaq	pak+kíaw	underlying form
bak+kíyaq	pak+kíyaq	1st cycle-Stress Placement Rule
bak+kíyaq	pak+kíaw	Vowel Deletion Rule
bak+kíyaq	pak+kíaw	2nd cycle-Stress Placement Rule
ba+kíyaq	pa+kíaw	Degemination Rule
bakíyaq	pakíaw	derived form

The foregoing derivations indicate that the cluster simplification rule must be ordered late in a series of rules for the following reason: it has to allow the proper environmental condition for the application of the stress placement rule in the second cycle; that is, a close penultimate syllable. If the degemination rule were to be re-ordered as in the following:

bak+kíyaq	pak+kíaw	underlying form
bak+kíyaq	pak+kíyaq	1st cycle-Stress Placement Rule
ba+kíyaq	pa+kíaw	Degemination Rule
ba+kíyaq	pa+kíaw	Vowel Deletion Rule
bá+kíyaq	pá+kíaw	2nd cycle-Stress Placement Rule
*bakíyaq	*pakíaw	derived form

the derived forms will turn out to be phonetic 'misrepresentations'.

2.5.6. Vowel Lowering Rule

Tagalog has a P rule which lowers the vowel in the ultimate or in the penultimate syllable of a word; the rule called the Vowel Lowering Rule, is formalised as follows:

$$(31) \left[\begin{array}{l} -\text{consonantal} \\ +\text{syllabic} \\ +\text{high} \\ -\text{low} \\ \alpha\text{back} \\ \beta\text{round} \end{array} \right] \rightarrow \left[\begin{array}{l} -\text{high} \\ \alpha\text{back} \\ \beta\text{round} \end{array} \right] / \# \text{ C } ___ (\text{C}) + (\text{C } ___ (\text{C})) \#$$

whereby the disjunctive convention specifies that the vowel in the ultimate syllable should be lowered if it has the features [+high, +back, +round]; if the vowel in this position already has the feature [-low], then the vowel in the penultimate syllable should be lowered if its features are [+high, +back, +round].

The rule, in its full version, applies to the following underlying forms of Hokkien origin:

bi+hun	→	bíhon
lo+mi	→	lóme
baq+tsuy	→	bátsoy
yan+soy	→	yansóy
siyu+kuy	→	siyukoy

The rule also applies to Tagalog words of Hokkien origin where the vowels are identical as illustrated by the following derivations of the words hibe, kusot and mike:

kù+sùt	hē+bì	mT+kĩ	Hokkien form
ku+sut	he+bi	mi+ki	Detonalisation Rule
-	hi+bi	-	Vowel Raising Rule
ku sut	hi bi	mi ki	Morpheme Boundary Deletion Rule
ku sut	hi bi	mi ki	Derived TL-Tag. underlying form
ku+sut	hi+bi	mi+ki	MS condition-syllable structure
kú+sut	hí+bi	mí+ki	Stress Placement Rule
kú+sot	hí+be	mí+ke	Vowel Lowering Rule
kúsot	híbe	míke	Derived form

A Tagalog dialectal variant of hibe is híbi, and of mike²⁷ is míki in which cases the vowel lowering rule has not applied. This could imply that the rule, not being obligatory, is a minor rule that could well be on its way out of the phonological system of Tagalog. This seems to be the case than the reverse.

The surface or derived forms of such Tagalog words as *tikoy*, *ukoy*, and *tiñhoy* leave traces of the particular dialectal variant of Hokkien from which the Tagalog words came. In the investigator's dialect, the corresponding Hokkien forms of the loanwords above are $t\hat{i}+k\grave{e}$, $\bar{o}+k\grave{e}$, and $ti\grave{e}\eta+h\grave{e}$ respectively, which would have become **tiki*, **uki* and **tiñhi* in Tagalog after all proper TL and Tagalog P rules have been applied. As this is not the case, *tikoy*, *ukoy* and *tiñhoy* must have come from Hokkien $t\hat{i}+ku\grave{e}$, $\bar{o}+ku\grave{e}$ and $ti\grave{e}\eta+hu\grave{e}$, which²⁸ by the mechanism of the TL rule on glide insertion, should have become *ti+kuwe*, *o+kuwe* and *ti\grave{e}\eta+huwe* respectively. But again, this is not the case; the hypothesis here is that these three Hokkien words must have become *ti+kui*, *o+kui* and *ti\grave{e}\eta+hui* by analogy to forms like *bàq+cuì*, *cuí+kuì* and *iân+suì*. The TL glide substitution rule must then have applied to change word final *i* to *y* resulting in *-kuy*; the Tagalog P rule which lowers *u* to *o* is finally applied to *-kuy* resulting in *-koy*.²⁹ To summarise, the derivations of Hokkien $t\hat{i}+ku\grave{e}$, $\bar{o}+ku\grave{e}$ and $ti\grave{e}\eta+hu\grave{e}$ are given below:

$t\hat{i}+ku\grave{e}$	$\bar{o}+ku\grave{e}$	$ti\grave{e}\eta+hu\grave{e}$	Hokkien form
<i>ti+kue</i>	<i>o+kue</i>	<i>ti\grave{e}\eta+hue</i>	Detonalisation Rule
<i>ti+kui</i>	<i>o+kui</i>	<i>ti\grave{e}\eta+hui</i>	Analogical change
<i>ti+kui</i>	-	-	Denasalisation Rule
-	-	<i>te\grave{e}\eta+hui</i>	Cluster Simplification Rule
-	<i>u+kui</i>	<i>ti\grave{e}\eta+hui</i>	Vowel Raising Rule
<i>ti+kuy</i>	<i>u+kuy</i>	<i>ti\grave{e}\eta+huy</i>	Glide Substitution Rule
<i>ti kuy</i>	<i>u kuy</i>	<i>ti\grave{e} huy</i>	Morpheme Boundary Deletion Rule
<i>ti kuy</i>	<i>u kuy</i>	<i>ti\grave{e} huy</i>	Derived TL-Tag. underlying form
<i>ti+kuy</i>	<i>u+kuy</i>	<i>ti\grave{e}\eta+huy</i>	MS condition-syllable structure
$t\hat{i}+kuy$	$\acute{u}+kuy$	$ti\grave{e}\eta+h\acute{u}y$	Stress Placement Rule
$t\hat{i}+koy$	$\acute{u}+koy$	$ti\grave{e}\eta+h\acute{o}y$	Vowel Lowering Rule
<i>tíkoy</i>	<i>úkoy</i>	<i>tiñhóy</i>	Derived Tagalog form

In the derivation of such Tagalog words as *toge* 'bean sprouts', *tokwa* 'bean curd',³⁰ and *kelwaq* 'mustard', it is the unexpanded form of the vowel lowering rule that applies, that is, the vowel in the penultimate syllable is lowered. The derivations of these words are given below:

$ta\bar{u}+ku\acute{a}$	$ta\bar{u}+g\acute{e}$	$ka\hat{i}+lu\acute{a}q$	Hokkien form
<i>tau+kua</i>	-	-	Detonalisation Rule
<i>tau+kua</i>	-	-	Denasalisation Rule
<i>tu+kua</i>	<i>tug\acute{e}</i>	<i>ki+luaq</i>	Cluster Simplification Rule
<i>tu+kuwa</i>	-	<i>ki+luwaq</i>	Glide Insertion Rule
<i>tu kuwa</i>	<i>tu g\acute{e}</i>	<i>ki luwaq</i>	Morpheme Boundary Deletion Rule

tu kuwa	tu ge	ki luwaq	Derived TL-Tag. underlying form
tu+kuwa	tu+ge	ki+luwaq	MS condition-syllable structure
tu+kúwa	tú+ge	ki+lúwaq	Stress Placement Rule
to+kúwa	tó+ge	ke+lúwaq	Vowel lowering Rule
to+kwa	-	ke+lwaq	Vowel Deletion Rule
tó+kwa	tó+ge	ké+lwaq	2nd cycle-Stress Placement Rule
tókwa	tóge	kélwaq	Derived form

2.5.7. Ordering of Tagalog Phonological Rules

All the Tagalog P rules that have appeared in this section because of their relevant application to Hokkien loanwords can be classified into ordered and unordered rules. The classification is based solely on their application to Hokkien loanwords; in a fuller treatment of Tagalog phonology, the rules will most likely have to be re-classified.

2.5.7.1. Ordered Rules

The Tagalog rules that are ordered are presented below in their corresponding order of application.

2.5.7.1.1. Stress Placement Rule

The first rule to be applied is the stress placement rule. This is so because stress must be assigned before the form of a word is changed by other P rules. For example, the vowel deletion rule changes the following trisyllabic words into disyllabic words whose canonical forms do not conform to that stipulated in the stress placement rule, being of the form CCV+CV#: ³¹

siyopaw	→	syopaw
siyomay	→	syomay
siyukoy	→	syukoy
siyahu	→	syahu
suwahe	→	swahe

In view of the above, siyopaw and suwahe will have the following order of derivation with the stress placement rule having only one cyclical application:

siyopaw	suwahe	underlying form
siyópaw	suwáhe	Stress Placement Rule
syópaw	swáhe	Vowel Deletion Rule
šopaw	-	Palatalisation Rule
šopaw	swahe	Derived form

2.5.7.1.2. *Vowel Deletion Rule*

The vowel deletion rule is ordered after the stress placement rule and before the palatalisation rule. The application of the vowel deletion rule leads to the creation of an environment that will trigger the application of the palatalisation rule.

2.5.7.1.3. *Degemination Rule*

The degemination rule is applied after the stress placement rule. Justification for this ordering is given in Section 2.5.5.

2.5.7.2. *Unordered Rules*

The rest of the P rules, namely, the nasal assimilation rule and the vowel lowering rule are, in a sense, also ordered since they can be applied only after the stress placement rule has been applied. They are unordered rules because each is not dependent on any of the rest of rules for its application.

2.6. SUMMARY

The foregoing sections have described the sound changes that have affected Hokkien loanwords and the sound processes which they have undergone. Upon entering Tagalog as borrowed forms, Hokkien words are conceived of as undergoing a set of so-called trans-linguistic rules which are ordered. These rules, as mentioned earlier, are a form of acquisition rules synchronically present at the time when Tagalog borrowed the Hokkien loanwords. The following summarises in outline form the set of TL rules:

(1) Detonalisation Rule

[+tone] → ∅

(2) De-aspiration Rule

$$\left[\begin{array}{l} +\text{consonantal} \\ -\text{syllabic} \\ -\text{continuant} \\ +\text{aspirated} \end{array} \right] \rightarrow [-\text{aspirated}]$$

$$\left[\begin{array}{l} +\text{consonantal} \\ -\text{syllabic} \\ -\text{continuant} \\ +\text{strident} \\ +\text{anterior} \\ +\text{aspirated} \end{array} \right]$$

(3) Bi-segmentalisation Rule

$$\left[\begin{array}{l} +\text{consonantal} \\ -\text{syllabic} \\ -\text{continuant} \\ +\text{strident} \\ +\text{aspirated} \end{array} \right] / \alpha < ^+ \longrightarrow \alpha \left[\begin{array}{l} +\text{cons.} \\ -\text{syll.} \\ -\text{cont.} \\ -\text{stri.} \\ -\text{aspir.} \end{array} \right] \left[\begin{array}{l} + \text{ cons.} \\ - \text{ syll.} \\ + \text{ cont.} \\ + \text{ stri.} \end{array} \right]$$

(4) De-nasalisation Rule

$$\left[\begin{array}{l} -\text{consonantal} \\ +\text{syllabic} \\ +\text{nasal} \end{array} \right] / ___\# \rightarrow [-\text{nasal}]$$

(5) Nasal Segmentation Rule

$$\left[\begin{array}{l} -\text{consonantal} \\ +\text{syllabic} \\ +\text{nasal} \end{array} \right] \rightarrow \left[\begin{array}{l} -\text{consonantal} \\ +\text{syllabic} \\ -\text{nasal} \end{array} \right] \left[\begin{array}{l} +\text{consonantal} \\ -\text{syllabic} \\ +\text{nasal} \end{array} \right]$$

(7) Glottalisation Rule

$$\emptyset / \left[\begin{array}{l} -\text{consonantal} \\ +\text{syllabic} \end{array} \right] ___\# \rightarrow \left[\begin{array}{l} +\text{consonantal} \\ -\text{syllabic} \\ -\text{continuant} \\ -\text{anterior} \\ -\text{coronal} \\ +\text{glottal} \end{array} \right]$$

(8) Glide Insertion Rule

$$\emptyset / \left[\begin{array}{l} -\text{cons.} \\ +\text{syll.} \\ +\text{high} \\ \alpha\text{back} \\ \beta\text{round} \end{array} \right] ___\left[\begin{array}{l} [-\text{high} \\ -\alpha\text{back} \\ -\beta\text{round}] \\ [-\text{high} \\ \alpha\text{back} \\ -\text{round}] \\ [-\text{high} \\ \alpha\text{back} \\ \beta\text{round}] \end{array} \right] \left[\begin{array}{l} -\text{cons.} \\ -\text{syll.} \\ +\text{high} \\ \alpha\text{back} \\ \beta\text{round} \end{array} \right]$$

(9) Y-Glide Insertion Rule

$$[+\text{juncture}] / \text{V} ___ \text{V} \rightarrow \begin{bmatrix} -\text{consonantal} \\ -\text{syllabic} \\ +\text{high} \\ -\text{back} \\ -\text{round} \end{bmatrix}$$

(10) Glide Substitution Rule

$$\begin{bmatrix} -\text{consonantal} \\ +\text{syllabic} \\ +\text{high} \\ \alpha\text{back} \\ \beta\text{round} \end{bmatrix} / \left\{ \begin{array}{l} + ___ \text{V C}_o \\ \text{C}_o \text{V} ___ \# \end{array} \right\} \rightarrow \begin{bmatrix} -\text{consonantal} \\ -\text{syllabic} \\ +\text{high} \\ \alpha\text{back} \\ \beta\text{round} \end{bmatrix}$$

(11) Vowel Cluster Simplification Rule

$$\begin{bmatrix} -\text{consonantal} \\ +\text{syllabic} \end{bmatrix} / \# \text{C}_o ___ \text{V} + \rightarrow \emptyset$$

(12) Vowel Raising Rule

$$\begin{bmatrix} -\text{consonantal} \\ +\text{syllabic} \\ -\text{high} \\ -\text{low} \\ \alpha\text{back} \end{bmatrix} \rightarrow \begin{bmatrix} +\text{high} \\ \alpha\text{back} \end{bmatrix}$$

(13) Vowel Epenthesis Rule

$$\emptyset / \begin{bmatrix} -\text{consonantal} \\ +\text{syllabic} \\ \alpha\text{high} \\ \beta\text{back} \end{bmatrix} + \text{C} ___ \begin{bmatrix} +\text{cons.} \\ +\text{syll.} \\ +\text{nasal} \end{bmatrix} \rightarrow \begin{bmatrix} -\text{cons.} \\ +\text{syll.} \\ \alpha\text{high} \\ \beta\text{back} \end{bmatrix}$$

(14) De-syllabicisation Rule

$$\begin{bmatrix} +\text{consonantal} \\ +\text{nasal} \\ +\text{syllabic} \end{bmatrix} / \text{V} ___ \# \rightarrow [-\text{syllabic}]$$

(15) Metathesis Rule

$$\begin{array}{l} \text{SD: C}_o \quad \begin{bmatrix} -\text{consonantal} \\ +\text{syllabic} \end{bmatrix} \quad \begin{bmatrix} -\text{consonantal} \\ +\text{syllabic} \end{bmatrix} \quad + \quad \Rightarrow \\ \quad \quad \quad 1 \quad \quad \quad 2 \quad \quad \quad 3 \quad \quad \quad 4 \\ \text{SC: 1 3 2 4} \end{array}$$

(16) Morpheme Boundary Deletion Rule

$$[+\text{morpheme boundary}] \rightarrow \emptyset$$

By the mechanism of the trans-linguistic rules, original Hokkien forms become the derived trans-linguistic forms. The translinguistically derived forms are also the underlying or systematic phonemic forms which serve as the input to a set of relevant morpheme structure conditions and phonological rules of Tagalog. The MS conditions and the P rules are given in outline form below:

Morpheme Structure Conditions:

(1) Condition on Medial Consonants

$$N(C) \sim \left[\begin{array}{l} +\text{consonantal} \\ -\text{syllabic} \\ -\text{sonorant} \\ -\text{continuant} \\ +\text{glottal} \\ -\text{consonantal} \\ -\text{syllabic} \\ -\text{sonorant} \\ +\text{continuant} \\ +\text{glottal} \end{array} \right] / C V \text{ ____ } +$$

(2) Condition on Syllable Structure

$$P(C) + \left[\begin{array}{l} +\text{cons.} \\ -\text{syll.} \end{array} \right] \left[\begin{array}{l} -\text{cons.} \\ +\text{syll.} \end{array} \right] \left(\left[\begin{array}{l} +\text{cons.} \\ -\text{syll.} \end{array} \right] \right) + \left[\begin{array}{l} +\text{cons.} \\ -\text{syll.} \end{array} \right] \left[\begin{array}{l} -\text{cons.} \\ +\text{syll.} \end{array} \right] \left(\left[\begin{array}{l} +\text{cons.} \\ -\text{syll.} \end{array} \right] \right)$$

(3) Condition on Disyllabic Structure

$$P(C) + [+syllable] [+syllable]$$

Phonological Rules:

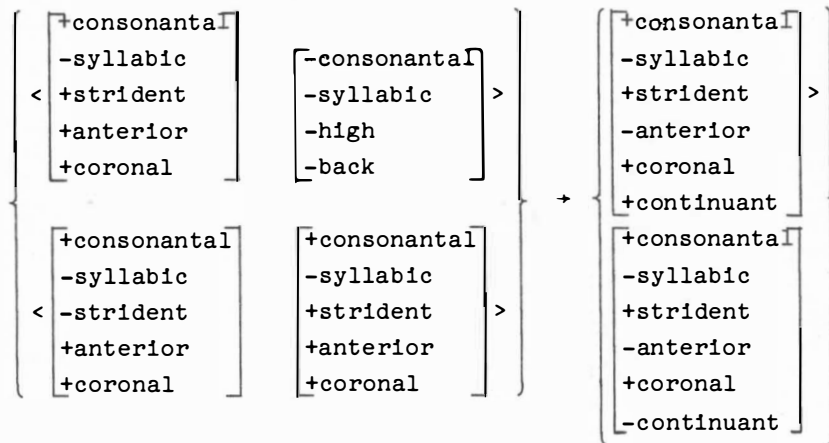
(1) Stress Placement Rule

$$[V] \rightarrow [+stress] / (C \text{ ____ }) + C \text{ ____ } (C) \#$$

(2) Vowel Deletion Rule

$$\left[\begin{array}{l} -\text{consonantal} \\ +\text{syllabic} \\ \alpha\text{back} \\ \beta\text{round} \end{array} \right] \rightarrow \phi \left[\begin{array}{l} -\text{consonantal} \\ -\text{syllabic} \\ \alpha\text{back} \\ \beta\text{round} \end{array} \right] / \text{ ____ }$$

(3) Palatalisation Rule



(4) Degemination Rule

$$[C] \rightarrow \emptyset / _ C'$$

(5) Vowel Lowering Rule

$$\left[\begin{array}{l} -\text{consonantal} \\ +\text{syllabic} \\ +\text{high} \\ -\text{low} \\ \alpha\text{back} \\ \beta\text{round} \end{array} \right] \rightarrow \left[\begin{array}{l} -\text{high} \\ \alpha\text{back} \\ \beta\text{round} \end{array} \right] / \#C _ (C) + (C _ C) \#$$

(6) Nasal Assimilation Rule

$$\left[\begin{array}{l} C \\ +\text{nasal} \end{array} \right] \rightarrow \left[\begin{array}{l} \alpha\text{anterior} \\ \beta\text{coronal} \end{array} \right] / _ \left[\begin{array}{l} -\text{sonorant} \\ \alpha\text{anterior} \\ \beta\text{coronal} \end{array} \right]$$

The output of the MS conditions and the P rules are the Tagalog derived surface of systematic phonetic representations. These surface representations, although often dissimilar to their original Hokkien counterparts, show traces of predictably regular sound changes.

N O T E S

1. The structuralists have been extremely prolific in the treatment of sound change. Among the more exemplary works are those done by Hoenigswald (1944, 1946, 1960) and Bloomfield (1933).
2. See Noam Chomsky (1965) for a detailed account.
3. The phonetic framework used here follows very closely that of Chomsky and Halle, Chapter 7 (1968).
4. The fact that there is no feature front to distinguish vowels does not mean that back vowels are not differentiated from front vowels. One would expect that if the vowels are distinguished by the features high and low, they should likewise be distinguished by the features front and back. However, Schane (1973:30) accounts for this seeming inconsistency thus: "Since, at most, two degrees (a + value and a - value) can be distinguished for a given single feature, in order to differentiate three degrees, such as high, mid, and low, one need to use two features conjointly, specifying values for both". In contrast, although there is such a thing as central vowels, Schane (1973:12) points out that they are usually treated as back vowels since they are perceptually similar to back unrounded ones.
5. See Robert King (1969).
6. Wilson (1972) in her study of Palauan verbs, favours the vowel features high, low, back for Palauan consonants mainly because anterior is a redundant feature, "unless it can be shown that consonants made either in the back or the front half of the mouth constitute a natural class". She chooses to use high in lieu of anterior for the purpose of

saving an extra feature. While I agree with Wilson's contention that it would be hard to prove that the anterior consonants constitute a natural class (Schane 1973:30 shares the same view), I cannot see the use of vowel features as feature specifications for true consonants. For instance, *high*, if used to specify the labials *p*, *b*, *m*, does not capture accurately the phonetic representation of this particular class, for they are certainly not produced in the higher part of the mouth. Similarly, if *anterior* cannot show how the consonants made in the front of the mouth constitute a natural class, neither can *high*, applied to consonants, indicate that they constitute a natural class. Furthermore, consonants and vowels constitute a language-universal dichotomy which has been shown empirically to be properly motivated in terms of the vocal tract and the constriction of the air passage in the mouth; thus, consonants are consonants because the air passage is constricted and vowels are vowels because the air passage is not. In this light, using different sets of features to describe consonants and vowels is capturing a universal phonological trait, and is, therefore, a consistent way of viewing this dichotomy. Wilson further assumes that "some vowels and some consonants constitute a natural class" (1972:19) so that certain features may be used in common. While this may be true, as for instance, the use of the vowel feature *back* as a specification for both the back vowels and the velars and the uvulars, the implied aim of Chomsky and Halle is to show that it is "natural" for consonants to have their own feature specifications and for vowels to have theirs. On the other hand, in the Jakobsonian framework (Jakobson and Halle 1956:28-32), vowels and consonants are both described in terms of *diffuse*, *compact* and *grave* which correspond to *high*, *low* and *back* respectively; the feature *anterior* of Chomsky and Halle corresponds to the feature *diffuse* while the feature *coronal* corresponds to *grave* with opposite value: non-*grave* consonants are coronal, *grave* consonants are non-coronal (Chomsky and Halle 1968:306-307). However, in processes of velarisation, pharyngealisation, and palatalisation, Chomsky and Halle concede that the vowel features may be used to "characterize subsidiary consonantal articulation"; thus, the features [+*high*, -*back*] characterise palatalised consonants, the features [+*high*, +*back*], pharyngealised consonants, and [+*low*, +*back*], velarised consonants (1968:305-306). In view of the foregoing reasons, I have kept the features *anterior*, *coronal* in my treatment of Tagalog and Hokkien Chinese phonological systems.

7. Since *length* is an inherent part of the feature *high* in the analysis of Tagalog stress, it is not treated as a separate feature; this will

make the phonological component simpler and more general, since it will save on the number of phonological rules of Tagalog, e.g. a vowel lengthening rule which automatically applies after the stress placement rule, will not have to be applied.

8. Gonzalez (1970:18) and Llamzon (1968:49) equate stress in Tagalog with accent. Gonzalez views accent in Tagalog as consisting of "a distinctive feature of prominence", acoustically correlated to longer duration, higher frequency and/or greater amplitude. Llamzon's assertion is similar to Gonzalez: accent in Tagalog is "realized by concomitantly higher pitch and greater energy content and longer duration in the accented syllable". In Schacter and Otones (1972:55), stress in Tagalog is "characterized by length prominence, pitch prominence or by both". This study adopts Gonzalez' acoustic approach and considers stress in Tagalog as having the distinctive features high and length but for reasons already given (see Note 6 above), only the feature high is retained in the underlying representation.

9. The rules that are posited in this chapter will try to account for the competence of the speaker, not his performance (see 2.1.1.). As such they only "provide a starting point for formulating and testing theories of performance" and do not make a "direct commitment vis-a-vis performance" (King 1969:12). They provide a principled (not ad hoc) basis for the speaker's choice of one set of rules over another and in this manner, approaches the linguistic goal of explanatory adequacy.

10. I owe this clarification to Dr. Curtis McFarland.

11. In the present analysis, only the distinctive features that have undergone value changes are repeated to the right of the arrow. It is understood that the other features are carried over without change in value.

12. However, there are two Tagalog words *bithay* (from Hokkien $bí+t^h aî$) and *puthaw* (from Hokkien $pò+t^h aú$) that take exception to this general rule. In this instance, a single segment, t^h becomes two segments: t , h with concomitant results of de-aspiration in the stop segment and the insertion of a juncture (+) between the two segments. *Bithay* and *puthaw* are most likely analogical creations of Sanskrit loanwords such as *budhi*, *likha*, *mukha*, *dukha* (see Francisco 1973).

13. Tagalog *ate*, from Hokkien $â+cì$, should have become **atsi* by the mechanism of this rule.

14. Dr Arsenio Manuel pointed out to me that in the rural areas, *sinelas*, *sitsaron* and *sampaka* are the forms used.

15. Harms uses the "alpha-environment" to specify that if 'the segment to the left of the arrow fits into the environment given to the right of the arrow, the value of alpha is "olus"; otherwise alpha is "minus" thus:

$$[\] \rightarrow [\alpha fi] / \alpha \langle ab \underline{\quad} \rangle$$

The difference in my adoption of this convention here lies only in the switch of the environment from right of the arrow to the left of the arrow. Admittedly, this convention is intended for segment changes within the same language system, but it has been demonstrated here that it can be employed in a situation where two language systems are involved since the primary principle behind its use remains intact.

16. Some counterexamples to this rule are Hokkien $t\acute{i}+k\grave{e} \rightarrow$ Tagalog *tikoy*, Hokkien $c^h\acute{i}+ta\check{u} \rightarrow$ Tagalog *sitaw*. There are very few counterexamples to invalidate the general rule on nasal segmentation.

17. Another Hokkien word which has not undergone this rule is $ta\bar{u}+h\check{u}$, Tagalog *tahó*, which reflects a phonological regularity in the sense that it has a CVCVC syllable structure but the choice of the vowel *a* rather than *u* in the first syllable appears to be due to a Tagalog dissimilation rule where a CoCu becomes a CaCo.

18. See King's proposal on major and minor rules (1969). I propose that there be three general types of rules: major rules, major-minor rules and minor rules for TL rules: the first to apply to all forms without exceptions, the second to forms whose application is not as widespread as the major ones nor as limited as the minor ones such as the nasal segmentation rule, and the third to forms within those covered by the major-minor ones such as vowel epenthesis rule.

19. While King uses the terms 'major' and 'minor' to refer to rules existing within one language system, I have adopted the terms here in relation to TL rules, which seems viable enough.

20. It will probably be better to call MS conditions "formative structure conditions" in the case of Tagalog loanwords of Hokkien origin since there is clearly a difference between the meaning-bearing morphemes of Hokkien and the non-meaning-bearing ones (formatives) of Tagalog; however, for purposes of greater comprehensibility, the term

'MS conditions' will be retained here. Also, the plus (+) sign which was used in the TL rules to signal morpheme boundary, is here used to signal formative boundary in Tagalog.

21. Furthermore, since this study is only a partial study of Tagalog phonology, it is not imperative to state what the segment structure rules of the language are.

22. The other two are 'if-then' and 'positive' conditions: the former is defined as 'a pair of matrices I (C) and T (C), ... where I (C) and T(C) are each incompletely specified matrices which have rows... and entries '+' and '-', or no entry (blank) ...'. The if-then condition has the following interpretation: for all the matrices M in U such that I(C) is a submatrix of M, C accepts M if T(C) is also a sub-matrix of M, and C rejects M if T(C) is distinct from M; if I(C) is distinct from M, then C accepts M regardless of what T(C) is; the latter is defined as a 'MS condition in which all matrices in U of which P(C) is a sub-matrix are accepted, all other matrices in U are rejected'.

23. That consonant clusters do occur in loanwords of Spanish origin is not relevant to Tagalog phonological rules for such loanwords have to be altogether classified under certain special sub-systems within the language (see Harms 1968:120).

24. Stress in English involves several rules since distinction is made among the three degrees of stress as well as weak stress; furthermore, stress placement depends to a large extent, on the grammatical categories of lexical items. For a thorough treatment of English stress, see Chomsky and Halle (1968:Chapter III).

25. To be sure, there is a small number of loanwords that does not follow the general stress placement rule such as Hokkien bīn+pǝ → Tagalog b́mpo, Hokkien taū+hǔ → Tagalog tahó, but irregularities are a natural fact of natural languages that must not hinder the formulation of generalisations whenever these are possible and applicable to an even greater number of regular forms. The suggested solution to irregular forms by Chomsky and Halle and a great many generativists is to enter the exceptions in the lexicon with a note that says [-Rule X].

26. Chomsky and Halle have a similar rule which they call "cluster simplification rule" and which applies to such words as attest, appear, assist, etc. (1968:43).

27. Tagalog *pihe* which comes from Hokkien $p\bar{e}q+h\acute{e}$ must have undergone the TL rule on vowel raising resulting in $*pi+hi$ and later, the Tagalog phonological rule on vowel lowering resulting in *pihe*.

28. See Wang (1969).

29. Tagalog *huwipe* comes from Hokkien $hu\grave{e}+p\check{e}$ (or $h\grave{e}+p\check{e}$, my dialect). On the analogy of words like $b\grave{a}q+cu\grave{i}$, Hokkien $hu\grave{e}$ becomes $hu\grave{i}$ but does not become $*ho\grave{y}$ because of its occurrence in a morpheme-initial position.

30. In the Tagalog word *toyo* 'soy sauce', the vowel in the penultimate syllable is very likely lowered not through the phonological rule on vowel lowering but through the process of vowel harmony as the following derivation can show:

$ta\bar{u}+i\acute{u}$	Hokkien form
$tau+iu$	Detonalisation Rule
$tu+iu$	Vowel Cluster Simplification Rule
$tu+yu$	Glide Substitution Rule
$tu\ yu$	Morpheme Boundary Deletion Rule
$tu\ yu$	Derived TL-Tag. underlying form
$tu+yu$	MS condition-syllable structure
$tu+yu$	Stress Placement Rule
$tu+yo$	Vowel Lowering Rule
$to+yo$	Vowel Harmony
<i>toyo</i>	Derived form

31. For purposes of convenience and generality, glides will be treated as consonants in the stress placement rule although in Section 2.1.3., they are treated as glides. Strict adherence to the Tagalog canonical form CVC+CVC presents problems where the glides *w* and *y* are concerned. What this probably implies is that another canonical form which can make room for the glides must be formulated.

CHAPTER 3
THE SEMANTICS OF HOKKIEN CHINESE LOANWORDS

3.0. INTRODUCTION

The excursus into the phonological aspect of Tagalog words of Hokkien Chinese origin in Chapter 2 has resulted in a theory of borrowing within the generative phonological framework. The present chapter concentrates on the semantics of these loanwords.

In most studies made on loanwords, the treatment of the semantic aspect has largely been confined to determining what semantic processes, e.g., loss, restriction or extension of the original meaning of a word, have occurred (McCarthy 1970; Sa'id 1967). Indeed, such a tendency can be justified in view of the pervading notion in linguistics that the study of loanwords is predominantly historical in dimension involving a comparison of the earlier and the later stages of the languages involved (Haugen 1950). This chapter deviates markedly from traditional studies in the sense that it subjects the Hokkien Chinese loanwords to techniques of formal semantic analysis rather than to historical treatment. Semantic changes, however, will not entirely be ignored in this chapter.

In the past two or three decades, the efforts of linguists and anthropologists¹ to pin the semantic system of a language down to formal analysis have been intensified. That such efforts are still continuing reflects the high degree of their success in this area. Foremost among the techniques used for formal semantic analysis is the well-received and much-experimented-with componential analysis; taxonomic analysis is equally popular and useful for the analysis of lexical domains in which the use of componential analysis is deemed inapplicable. These two techniques are here employed in the present study.

The literature on Chinese influence as gauged through the loanwords

has always been one wherein the latter were listed under major semantic categories or domains. Conclusions were drawn as to which semantic domain received the greatest influence. In subjecting the loanwords to formal semantic analysis within particularly chosen domains, it is likely that the study would gain an in-depth view of the nature of the borrowings. The domains of kinship and cookery are only two domains chosen for this exercise, the reason being that their participation in the domains is more homogeneous than others.

Section 3.1. concentrates on the domain of kinship terminology of Tagalog and compares certain aspects of Hokkien Chinese and Tagalog kinship systems. The domain of Hokkien loanwords on cookery is discussed in 3.2.; a taxonomic analysis was made of the terminology and a semantic formula for formalising Hokkien culinary loanwords is proposed. 3.3. gives a view of lexical borrowings in relation to their extent of lexical acculturation. 3.4. summarises the chapter.

3.1. DOMAIN OF KINSHIP

The domain of kinship² is one of two domains (see Section 3.2. for the domain of cookery) that is given extensive analysis in this chapter, although the number of Hokkien loanwords is rather small. Himes (1972: 44-48) lists a total of forty kin terms in Tagalog, nine of which are definitely of Hokkien origin.³ To subject just the loanwords to a componential analysis is not viable since this particular technique of semantic analysis is designed for the "essentially natural subsets" of a language (Bendix 1966:3) and the Hokkien loanwords on kinship are merely terms within the natural subset of Tagalog kinship. In view of this, the entire Tagalog kinship system is considered in the treatment of the Hokkien loanwords on kinship. In addition, certain relevant aspects of the Hokkien kinship system are brought in by way of providing bases for a comparative study of the two kinship systems. It is assumed that a comparative study of the kinship systems of both Tagalog and Hokkien Chinese cultures, together with their respective terminologies, will yield differences in the two cultures that can provide insights into a rationale behind the presence of certain Hokkien loanwords as opposed to the absence of others in the borrowing language.

3.1.1. Componential Analysis Applied to Kinship

In this section, a simple definition of the term 'componential analysis' will be given.⁴ The practitioners of componential analysis define it "as an analytical technique by which terms at one taxonomic level in any lexical domain are arranged in their relation to each other according to definitions consisting of a fixed number of components"

(Himes 1972:86). Componential analysis is most applicable to such domains as kinship in which "the various semantic dimensions crosscut one another in such a way that all, or at least, a high proportion, of the possible combinations of components combine with one another to define a term" (Burling 1970:39-40). For instance, Burmese kinship terminology can be defined in terms of seven semantic dimensions: (1) consanguinity, (2) generation, (3) lineality, (4) sex of kinsman, (5) relative age, (6) sex of speaker, and (7) degree of collateral removal (Burling 1965:109-111). Thus, the Burmese kinship terms *gap^héi* 'father' and *gaméi* 'mother' share three semantic dimensions, i.e. consanguineal, one generation removed from EGO and lineal; they are opposed only in the dimension of sex where the former has the component 'male' and the latter, the component 'female'.

The immediate goals of a componential analysis of kinship terminology is a "set of symbolic notations capable of defining the various kin terms by specific combinations of the contrastive components" (Pospisil 1965:188)⁵, and "a statement of the semantic relationship (usually in a diagrammatic form) among the terms and of the structural principles of the terminological system of a language" (Wallace and Atkins 1960:60).

3.1.2. Componential Analysis Applied to Tagalog Kinship Terminology

A sizable number of studies on the Tagalog kinship system⁶ include several componential analyses of the terminology, the most extensive of which is Himes' 'Kinship, Disease, Property, and Time in the Tagalog Area, Philippines: A Study in Ethnoscience' (1972). A review of Himes' study at this point is essential as a background to the investigation of the presence of certain Hokkien loanwords in the domain of kinship.

Himes made a componential analysis of the Tagalog kinship terminology used in Marilao, Bulacan, particularly in the following areas: Poblacion, or the town proper, Tabing Ilog, "a contiguous barrio" and Loma de Gato, "a more remote farming barrio".⁷ The analysis yielded the following seven semantic dimensions:

1. Consanguinity, which encompasses three kinds of relationship: consanguineal, affinal and ritual.
2. Generation which applies to seven generations: that of Ego's, the two above him and the four below him.
3. Degree of proximity to Ego.
4. Relative age which encompasses two components: 'relatively older' and 'relatively younger'.
5. Birth order of Ego.
6. Sex, which encompasses the components of 'male' and 'female'.

7. Generation of linking kinsman which encompasses two components: 'a kinsman linked to Ego through someone of his own generation' and 'a kinsman linked to him through an inferior generation'.

The following paradigm of the terminology reproduced from Himes' study shows the semantic relationships among the terms. The letter symbols are explained by the accompanying "Componential Analysis of the Kin Terms in Marilao", also here reproduced from Himes.⁸

COMPONENTIAL ANALYSIS OF THE KIN TERMS RECALLED IN MARILAO
(from Himes)

A. THE COMPONENTS

A : Consanguinity:	a ₁ consanguineal
	a ₂ affinal
	a ₃ ritual
B : Generation :	b ₁ two generations above Ego
	b ₂ one generation above Ego
	b ₃ Ego's generation
	b ₄ one generation below Ego
	b ₅ two generations below Ego and beyond
C : Degree :	c ₁ direct (lineal, single-link affinal, participating ritual)
	c ₂ close (first degree collateral, double-link affinal, non-participating active ritual)
	c ₃ distant (second degree collateral and beyond, triple-link affinal and beyond, non-participating passive ritual)
D : Relative age :	d ₁ elder (referent or linking kinsman older than Ego or referent older than linking kinsman)
	d ₂ younger (referent or linking kinsman younger than Ego or referent younger than linking kinsman)
E : Birth order:	e ₁ first
	e ₂ second
	e ₃ third
	e ₄ fourth
F : Sex of referent :	f ₁ male
	f ₂ female
G : Generation of linking kinsman :	g ₁ Ego's generation
	g ₂ one generation below Ego

B. COMPONENTIAL DEFINITIONS

1.	tatay	a ₁	b ₂	c ₁			f ₁
2.	nanay	a ₁	b ₂	c ₁			f ₂
3.	anák	a ₁	b ₄	c ₁			
4.	lolo	a ₁	b ₁	c ₁₋₃			f ₁
5.	lola	a ₁	b ₁	c ₁₋₃			f ₂
6.	apó	a ₁	b ₅	c ₁₋₃			
7.	kaka	a ₁	b ₂	c ₂₋₃	d ₁		
8.	tíyo	a ₁	b ₂	c ₂₋₃	d ₂		f ₁
9.	tíya	a ₁	b ₂	c ₂₋₃	d ₂		f ₂
10.	pamangkín	a ₁	b ₄	c ₂₋₃			
11.	kapatíd	a ₁	b ₃	c ₂	d ₂		
12.	kuya	a ₁	b ₃	c ₂	d ₁	e ₁	f ₁
13.	ate	a ₁	b ₃	c ₂	d ₁	e ₁	f ₂
14.	diko	a ₁	b ₃	c ₂	d ₁	e ₂	f ₁
15.	dítsé	a ₁	b ₃	c ₂	d ₁	e ₂	f ₂
16.	sangkó	a ₁	b ₃	c ₂	d ₁	e ₃	f ₁
17.	sansé	a ₁	b ₃	c ₂	d ₁	e ₃	f ₂
18.	dete	a ₁	b ₃	c ₂	d ₁	e ₄	f ₂
19.	pinsan	a ₁	b ₃	c ₃			
20.	asawa	a ₂	b ₃	c ₁			
21.	biyenán	a ₂	b ₂	c ₂			
22.	manugang	a ₂	b ₄₋₅	c ₂			
23.	siyaho	a ₂	b ₃	c ₂	d ₁		f ₁
24.	insó	a ₂	b ₃	c ₂	d ₁		f ₁
25.	bayaw	a ₂	b ₃	c ₂	d ₂		f ₁
26.	hipag	a ₂	b ₃	c ₂	d ₂		f ₂
27.	bilás	a ₂	b ₃	c ₃			g ₁
28.	balae	a ₂	b ₃	c ₃			g ₂
29.	ninong	a ₃	b ₂	c ₁			f ₁
30.	ninang	a ₃	b ₂	c ₁			f ₂
31.	ináanák	a ₃	b ₄	c ₁			
32.	kumpadre	a ₃	b ₃	c ₂			f ₁
33.	kumadre	a ₃	b ₃	c ₂			f ₂
34.	kinákapatíd	a ₃	b ₃	c ₃			

3.1.2.1. Hokkien Loanwords in the Domain of Tagalog Kinship

A strict count of the number of Hokkien loanwords in this domain yields only nine terms, and these are: *ingkóng*, *kúya*, *áte*, *díko*, *dítse*, *sangkó*, *sansé*, *insó*, and *siyáho*. Himes (1972:29) lists *impó* 'grand-mother' as being of Chinese origin, but this is doubtful for two

reasons: (1) the Hokkien counterpart for *ingköng* is *â+mà*,⁹ and (2) its origin had already been traced to Dempwolf's **e(m)pu* 'forefather, grandson' (Mohring 1974:27).¹⁰ Other evidence (see Chapter IV) will show that the word has a Hokkien-related morpheme but is not a direct loan.

Déte 'fourth older sister' must be an analogical creation since the Hokkien form for this gloss is *sì+cì*,¹¹ which is not anywhere near *déte*. The *-te* in *dete* must have resulted from an analogy to *áte*; *de-* seems close to the first syllable in *dítse* and *díko* except that the vowel has undergone vowel lowering. How *déte* came to have its meaning of 'fourth older sister' remains a source of etymological mystery. While *impó* has been ruled out in this study as being of Hokkien origin, *déte* is not for the reason given above.

All but two of the loanwords constitute part of the consanguineal terminology; *siyáho* and *insó* are affinal terms. Of the consanguineal terms, *ingkóng* is the only term that is substitutable by other kin terms all referring to the same kin type: *lolo* and *papo*¹² (Himes 1972: 44). As a matter of fact, *lolo* seems to be a more commonly used term than *ingkóng*. In connection with the use of *ingkóng*, no law of borrowing can be deduced except for the obvious observation that borrowing tends to take place where there is a heavy influence of the donor language.

Unlike *ingkóng*, the whole sub-set of kinship terminology referring to Ego's elder siblings is not substitutable by any other set. They are used as both referential and address terminologies. The affinal terms *siyáho* and *insó* are used as terms of address, while their respective counterparts *bayaw* and *hipag* are used referentially. The Hokkien loanwords are here used to fill in a function that cannot be fulfilled by the existing Tagalog kinship terminology; also, unlike *ingkóng*, they have no comparable substitutes.

3.1.2.2. Componential Analysis as Index to Linguistic Acculturation

Linguistic acculturation refers to the process by which linguistic borrowings are integrated into the overall linguistic structure of the borrowing or receiving language. The degree of linguistic acculturation of loanwords can be measured in terms of the ability of the loanwords to participate in regular morphological processes, particularly that of derivation and inflection, of the receiving language (Lopex 1965; Sa'id 1967). Other means of measuring linguistic acculturation have been attempted by Dozier (1964), who correlated the Yaqui Indians' willingness to bring in Spanish linguistic borrowings with the fact that the Indians

were not forced to acculturate by their conquerors, and by Lindenfeld (1971), who provided semantic reasons to account for the Yaqui Indians' grammatical borrowing from Spanish.

In the componential analysis of Tagalog kinship terminology, birth order has been shown to be one of the semantic dimensions. The presence of the sub-set of seven Hokkien loanwords on Ego's elder siblings within the domain of Tagalog kinship has necessitated the inclusion of the dimension of birth order consisting of four components: first, second, third and fourth in order of birth. This finding has relevance to the Tagalog's cognitive process or cognition of his own kinship system, since it affects the way he conceptualises the structural relationships of the system; this is further borne out by Himes 1972:92, who determined the psychological validity of this component through a sorting test. The implication of all this is that componential analysis can be used as an additional technique to measure the degree of linguistic acculturation or integration of loanwords. Determining the degree or extent of linguistic acculturation can lead to a typology of loanwords or of linguistic borrowings and vice versa (see Section 3.3.); thus, *ingóng* can be viewed as not having the same degree of linguistic acculturation as *kúya*, *áte*, *díko*, *dítse*, *sangkó*, *sansé* and *déte* since it is substitutable by other kin terms whereas the others are not.

In the case of the affinals *siyaho* and *inso*, componential analysis cannot help determine the degree of linguistic acculturation, as the dimensions that occur in these two terms also recur in others as a glance at Himes' componential definitions will show. There is no doubt though that these terms have become integrated into the kinship terminology as reflected by their participation in a componential analysis of such terminology. This is all that can be said about the affinal loanwords; further conclusions about them will be given in a later section.

3.1.3. Hokkien Kinship System

The entire Chinese kinship system is a complex one involving a terminological structure that is equally complex.¹³ The Hokkien kinship system partakes of this complexity, although there are evident differences in terminology. This being the case, the discussion on the Hokkien kinship system in this section can neither be extensive nor exhaustive; only the salient structural principles of the system are given below.

1. LINEAGE. The Hokkien kinship system is patrilineal rather than matrilineal. Persons whose relationship or kinship can be traced to their fathers are considered kinsmen in the true sense of the word; agnatic relatives are the ones that really 'count'. If a woman remains

unmarried, she is still considered as a member of the sib defined by Feng (1937:142) as "a group of people possessing a common sib name (patronym), descended from a common male ancestor, no matter how remote and characterised by a feeling of relationship". Once she is married, she is considered as belonging to her husband's family and her membership in her father's agnatic line becomes merely marginal (Amyot 1973: 107); she now belongs to a non-sib group, that is, a group of relatives whose sib name is different from the one she carried before she got married.

The basic patrilineal system is reflected in the kinship terminology: on the grandparental generation, a distinction is made between *guā+kòng* literally meaning '*grandfather who is outside the patriline*', and *laī+kòng* literally meaning '*grandfather who is inside the patriline*', and between *guā+mà* '*grandma who is outside*' and *laī+mà* '*grandma who is inside*'. *laī+kòng* and *laī+mà* refer to paternal grandparents, *guā+kòng* and *guā+mà*, maternal grandparents. Similarly, grandchildren are referred to reciprocally as either *laī+sùn* '*grandchildren who are within the patriline*' and *guā+sùn* '*grandchildren who are outside of the patriline*'; the former are the children of Ego's sons while the latter are the children of Ego's daughters (see Figures 1 and 2).

The dichotomy between kinsmen on the father's side and those on the mother's side is further reflected in the bifurcation of kinship terminology. Figure 3 gives a clear illustration of the distinction in terminology. Ego uses a different set of kinship terms when referring to or addressing his uncles and aunts on his father's side: *â+pè* for '*father's elder brother*', *â+cièk* for '*father's younger brother*', and *â+kō* for '*father's elder or younger sister*'. To address or refer to his uncles and aunts on his mother's side, Ego uses the following terms: *â+kū* for '*mother's elder or younger brother*', and *â+í* for '*mother's elder or younger sister*'.

The emphasis on patriliney is further evident in the terminology used to distinguish between father's elder and younger brothers, e.g., *â+pè* versus *â+cièk*. On the other hand, no such distinction is made for mother's elder and younger brothers, as both of them are known to Ego by the same kin term: *â+kū*. This is clear evidence that Ego's father's male siblings are more important than Ego's mother's male siblings in the sense that the former are members of the same sib as Ego, that is, they all have the same patronym and therefore, are 'true' kinsmen.

The terminology used to refer to Ego's kinsmen on the same generational level likewise reflects the distinction between sib and non-sib members. Ego's cousins, descended through females, regardless of the degree of proximity, are referred to as *piào* '*outside*', and therefore,

FIGURE 1
EGO'S PARENTS' PARENT REFERENTIAL TERMINOLOGY

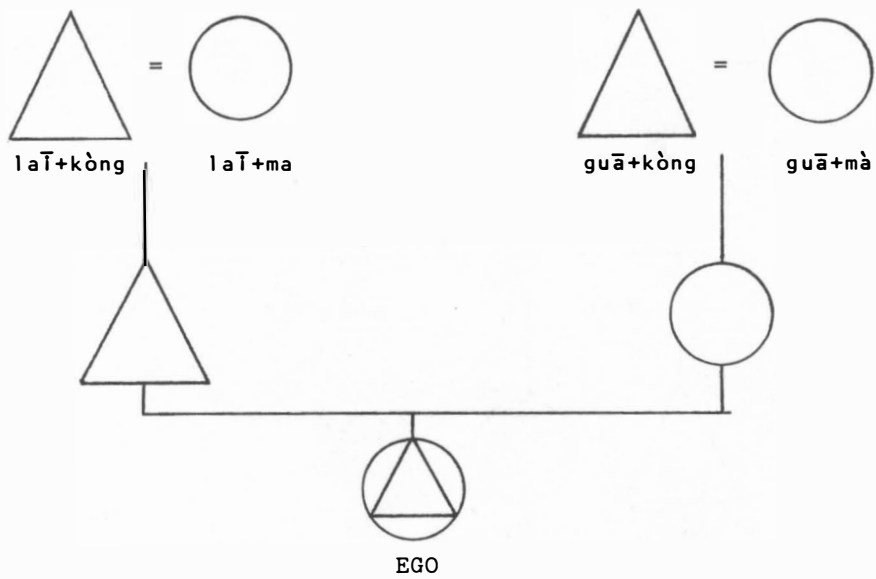
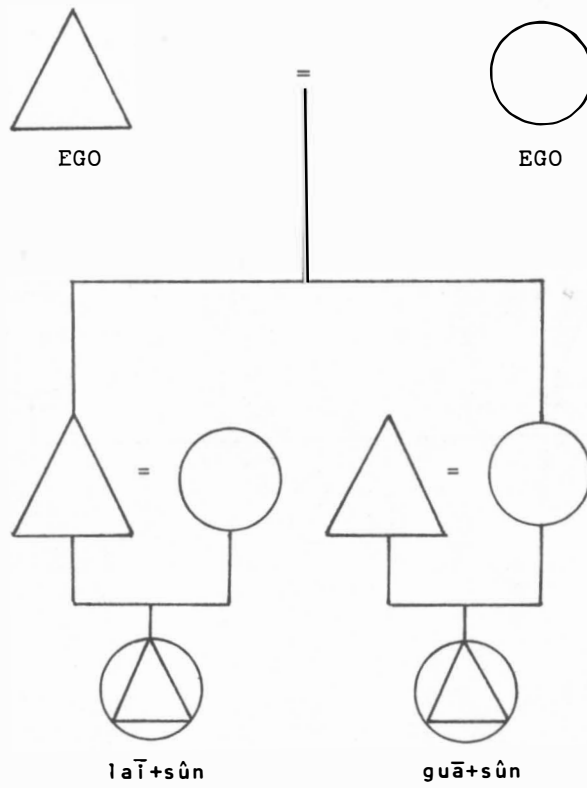


FIGURE 2
EGO'S CHILDREN'S CHILDREN TERMINOLOGY



carry different patronyms from Ego, whereas Ego's cousins descended through males, regardless of the degree of proximity, are referred to as *kè+pàk*, and, therefore, share the same patronym (see Figure 4).

2. SEX. Closely interrelated to lineage is sex. Greater importance is given to the males of a family since it is through them that the sib name is perpetuated. This is reflected in the kinship terminology on the parental generation, wherein a distinction is made between the elder and the younger male siblings of the father, but not between identical siblings of the mother (Figure 3); thus, *â+pè* refers to '*father's elder brother*', and *â+cièk* '*father's younger brother*'; Ego's uncles on the mother's side are all *â+kū* to Ego. Furthermore, the terminology used for addressing and referring to both parents' female siblings do not make a distinction between the elder and the younger ones; the bifurcation of terminology is only to distinguish Ego's aunt on the father's side, e.g. *â+kō*, from Ego's aunt on the mother's side, e.g. *â+í*.

3. SENIORITY OR BIRTH ORDER. Seniority or birth order implies "an order of respect and authority" (Amyot 1973:107). It also implies an imposition of certain responsibilities and obligations on the part of the elder members of the family. It is both the responsibility and the obligation of the eldest son to support his younger siblings in the event of the father's death. In return, he is given due respect by all those younger than he is; all important decisions are made by him, and he has the final word on all matters that concern the household and its members. In the case of the absence of an elder son, then it is the elder daughter that fulfills the role imposed on her by virtue of her order of birth within the nuclear family.

The emphasis on seniority or birth order is reflected in the terminology by the prefixation of the numeral modifiers, *dī* '*second*', *sâ* '*third*', *sī* '*fourth*', *gō* '*fifth*', *lák* '*sixth*', *c^hìt* '*seventh*', etc. to the nuclear terms in Table 6. The first in order of birth is simply indicated by the nuclear term plus the particle *ǎ* as in *kò+ǎ* '*eldest brother*', *kū+ǎ* '*eldest uncle on mother's side*' or the prefixation of the particle *ǎ* to the nuclear terms as in *â+cì* '*eldest sister*', *â+kō* '*eldest aunt on father's side*', *â+í* '*eldest aunt on mother's side*'.

FIGURE 3
 EGO'S PARENTS' SIBLINGS TERMINOLOGY

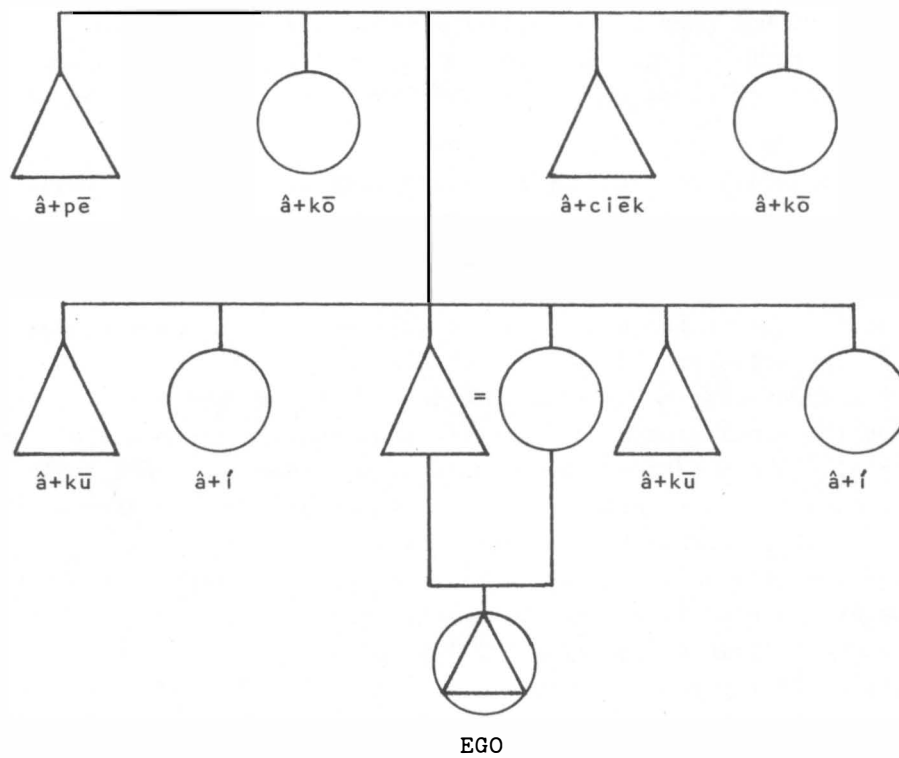


FIGURE 4

EGO'S PARENTS' SIBLINGS' CHILDREN TERMINOLOGY

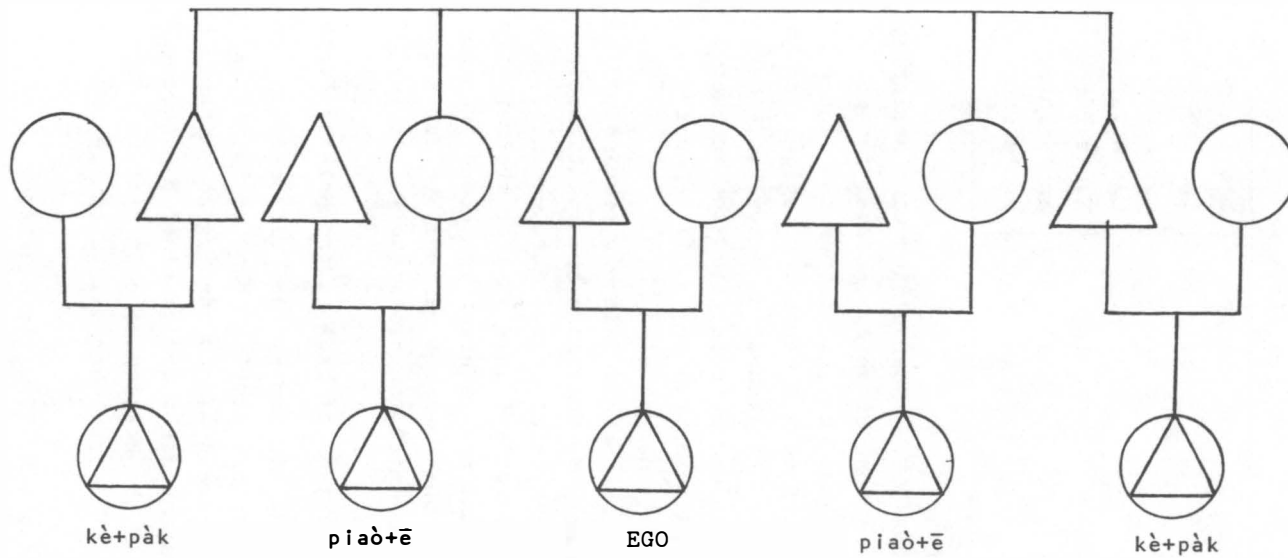


TABLE 6
HOKKIEN NUCLEAR TERMS FOR EGO'S AND EGO'S PARENTS GENERATIONS

Nuclear Term	English Gloss	Kin Type
kò	'brother'	Ego's elder male sibling
cì	'sister'	Ego's elder female sibling
kū	'uncle'	Ego's mother's male sibling
pèq	'uncle'	Ego's father's elder male sibling
cièk	'uncle'	Ego's father's younger male sibling
kō	'aunt'	Ego's father's female sibling
í	'aunt'	Ego's mother's female sibling

4. GENERATION. Interrelated with seniority is generation. Members of the generations above Ego address members of Ego's generation by their first names, but the latter must address and refer to the former by the appropriate kin terms (as outlined in Figure 3). Because aunts and uncles are one generation above Ego, they are considered as Ego's senior kinsmen and must be given the respect due them. Since Ego is considered as being senior to his nephews and nieces, he can address the latter by their names only.

All told, the Hokkien kinship terminology is so succinctly structured that it is easy to determine the relationship of the referent to Ego through the kin terms used. For instance, in the term $d\bar{i}+p\bar{e}q$, $p\bar{e}q$ can only refer to Ego's father's elder brother with the prefix $d\bar{i}$ 'second' indicating that the referent is second in order of birth, or, in the term $pi\bar{a}\bar{o}+\bar{e}$, the referent can only be Ego's cousins, regardless of degree of proximity, on his mother's side.

3.1.4. Comparison of Tagalog and Hokkien Kinship Terminologies

The Tagalog kinship system, reflected in its terminology, is much less intricate and complex than the Hokkien kinship system. In this section, the areas within the Tagalog kinship system wherein Hokkien loanwords are present are examined by comparing them with identical areas within the Hokkien kinship system. Certain conclusions about the nature of lexical borrowings can be made.

3.1.4.1. Ego's Siblings Terminology

As stated in an earlier section, Tagalog has seven Hokkien loanwords which refer to the relationship between Ego and his elder siblings. This relationship is diagrammed in Figure 5, which also shows an

identical relationship between Ego and his elder siblings within the Hokkien kinship system. The only difference is the kin term *déte* in Tagalog, which has a different equivalent in Hokkien. Hokkien kin terms are written in capital letters; those of Tagalog are written in lower case.

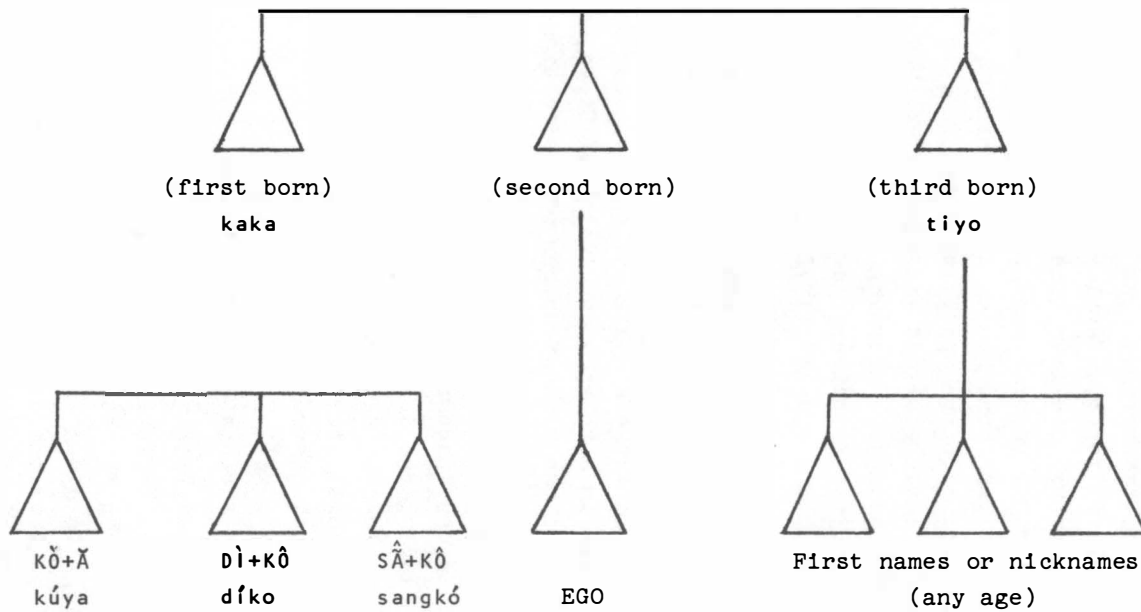
Hokkien kin terms on this level can extend to as many elder siblings as there actually are in the nuclear family. It is a curious thing that Tagalog should borrow the kin terms that extend only to the third elder sibling, with the fourth term resulting from the process of analogical creation. Why this should be so can only be conjectured: there probably was no need to borrow kin terms beyond the fourth-numbered sibling if Filipino families were small in size; a likelier possibility may be the infrequency of occurrence of Hokkien kin terms referring to the fourth-numbered siblings and those beyond which could then have let the Tagalogs to create their own term based on existing ones, e.g., *déte*.

Within a more traditional Tagalog system, the use of the elder sibling loanwords is extended to first cousins who are the offsprings of one's parents' elder siblings, regardless of their own age relative to Ego (Himes 1972:64). This follows closely the Hokkien kinship system and terminology as the diagram in Figure 6, reproduced from Himes, but superposed with Hokkien terminology, indicates. *Kaka* is the term Ego uses when he addresses his father's elder brother, while *tiyo* is used for his father's younger brother. Ego uses the terms *kúya*, *díko*, or *sangkó* when he addresses his cousins who are the children of his *kaka*. However, as Himes points out, this practice is becoming less and less frequent; the same thing likewise can be said of its practice among Hokkien speakers in the Philippines.

One can theorise that cultural considerations led to the borrowing of the sub-set of Hokkien kin terms on elder siblings. It is a basic trait among the Tagalogs to give due respect and deference to senior kinsmen, and since the Hokkien kinship terminology offers a means of expressing this cultural trait, it is a natural consequence that Tagalog should borrow the appropriate kin terms. It does not seem to be the case, therefore, that the Hokkien loanwords were motivated by a "tolerance for Chinese nationals in the Central Plain" (Himes 1972:15), nor by the fact that loanwords 'happen' to be there because of heavy Chinese influence.¹⁴ It is the thesis here that cultural considerations override such things as the proposed explanations. In relation to this there is some negative evidence to support this thesis, and that is, the cultural differences brought about by the underlying principle of lineage present in both kinship systems. In the previous section, it

FIGURE 6

HOKKIEN AND TAGALOG FIRST COUSIN ADDRESS TERMINOLOGY (TRADITIONAL SYSTEM)



was emphasised that the Hokkien kinship system distinguishes the patrilineal from the matrilineal line of descent (see Figures 1-3) manifested in the bifurcation of kinship terminology used for Ego's father's relatives as opposed to Ego's mother's relatives. On the other hand, the Tagalog society is strictly multilinear,¹⁵ with equal importance given to relatives on both father's and mother's sides, and a distinction in terminology, therefore, need not be made. This, being the case, there was no necessity for the Tagalog system to borrow the Hokkien kin terms for Ego's parents' siblings; the Tagalog kin terms *tíyo* 'uncle' and *tíya* 'aunt' refer to both parents' siblings without further distinction.¹⁶

In the Hokkien loanwords on elder siblings, the dimension of sex crosscuts that of birth order, thus *áte*, *dítse*, *sansé*, *déte* all denote Ego's elder female siblings and *kúya*, *díko* and *sangkó* denote Ego's elder male siblings. According to the Himes' study of the entire Tagalog kinship terminology, "sex distinctions are very common for senior kinsmen and equals" (1972:61). In trying to establish the rationale for the presence of these loanwords as against that of others, e.g. the kin terms for father's elder siblings and mother's elder siblings, the following question can be asked: What was the Tagalog kinship system like before the entrance of these loanwords? What peculiarities did the kinship system have that led to these borrowings? The clue lies in a related conclusion of Himes, namely, that Ego's generation has the highest number of distinctions and that "the terminology exhibits a generational bias, but it stresses the distinctiveness of the nuclear family" (1972:84). While it may be so that Himes' conclusions were made after an analysis of the Tagalog kinship terminology including the loanwords, it is safe to say that the greatest factor that led to the borrowing of the kin terms for elder siblings was the Tagalogs' view of the nuclear family as the most important unit within its social structure.

3.1.4.2. *Ego's Elder Siblings' Spouses Terminology*

The Tagalog affinal kin terms of Hokkien origin, namely, *siyáho* and *insó*, are used strictly for addressing Ego's elder sister's husband and brother's wife respectively. The relationship reflected in this terminology is given in Figure 7, together with the Hokkien kin terms. It is clear from the diagram that the Hokkien kin term used to address a sister's husband is *kò+ǎ*, and that *ciá+hū*, from whence came Tagalog *siyáhu*, is used as a referential term (see Figure 8). Although the referent remains the same, the function has been differentiated. It is clear that the principle of selective borrowing (Lindenfeld 1971:17) is

at work here: the Tagalog kinship system needs a term of address for Ego's eldest sister's husband, but because the Hokkien equivalent yields kò+ǎ from whence came Tagalog kúya, which is already being used for Ego's eldest male sibling, a different kin term had to be borrowed. This reflects also the importance of the extended family, where the kinship terminology must likewise remain sacrosanct and invariable. Tagalog uses a different set of kin terms -hipag and bayaw - to refer to Ego's brother's wife and sister's husband respectively. These kin terms, however, refer to variable kin types as hipag can also refer to 'spouse's sister', or 'parents' siblings' son's wife', and bayaw to 'spouse's brother' or 'parent's siblings' daughter's husband'. On the other hand, insó and siyáho are used to address kinsmen belonging to invariable kin types.

While it is true that a componential analysis of Tagalog kinship terminology assigns siyáho and insó to the affinal component, their referents are still members of the Tagalog immediate family,¹⁷ a psychological reality which can explain why these two Hokkien kin terms in particular, rather than others, have been borrowed into the language. The implication of this is that although a componential analysis of terminology which includes loanwords may at times help to determine the nature and kind of borrowing (see Section 3.1.2.2.), at other times, it is of no value since it cannot capture the psychological perception of the use of the terms as illustrated by the case of siyáho and insó.¹⁸

3.1.4.3. Ego's Parents' Parents

In the Hokkien kinship system described earlier, a distinction was made between maternal and paternal grandparents as reflected in the referential terminology (see Figure 1). However, in addressing grandparents on both parents' sides, Ego uses the same set of kin terms: ân+kông 'grandfather' and â+mà 'grandmother' (Figure 9). Obviously, Tagalog has borrowed only the Hokkien kin term for 'grandfather', using it as both an address and a reference term.

The Tagalog kin term ingkóng is undoubtedly of Hokkien origin, and comes from Hokkien ín+án+kông 'his grandfather'; it then had to conform to the Tagalog MS condition on disyllabic structure resulting in the deletion of the middle morpheme,¹⁹ and finally, the P rule on nasal assimilation.

As to why Tagalog ingkóng should originate from Hokkien ín+án+kông, and Tagalog insó from Hokkien ín+á+sò 'his eldest brother's wife', one can only conjecture: the kin terms must have resulted from a socio-linguistic context which involves a younger kinsman addressing an older

FIGURE 7

HOKKIEN AND TAGALOG EGO'S SIBLINGS' SPOUSES ADDRESS TERMINOLOGY

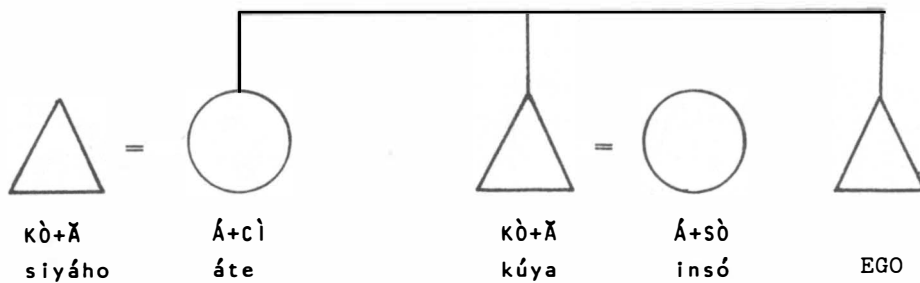


FIGURE 8

HOKKIEN AND TAGALOG EGO'S SIBLINGS' SPOUSES REFERENTIAL TERMINOLOGY

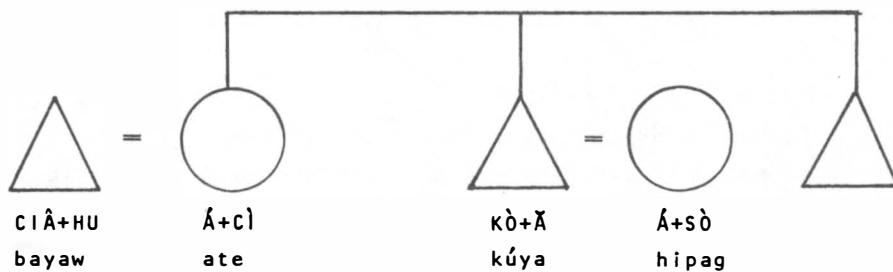
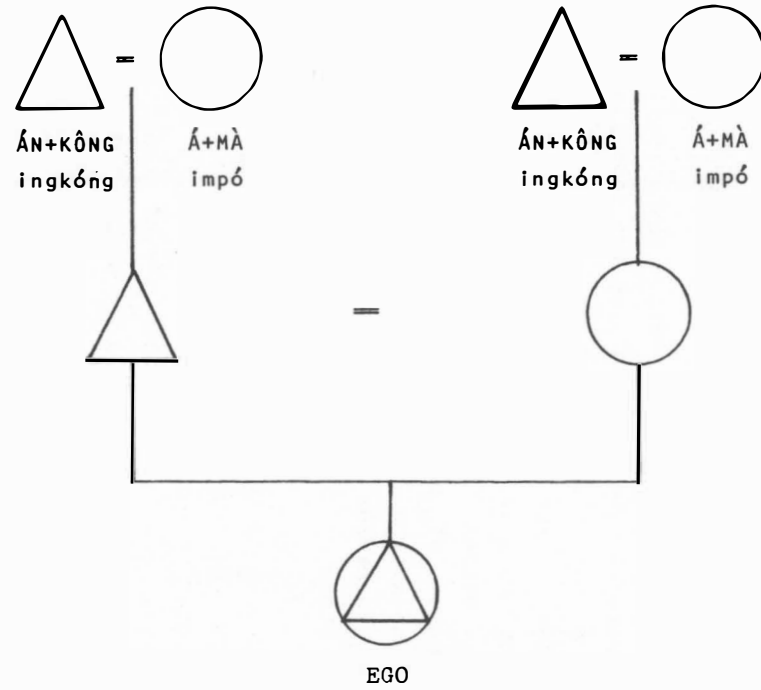


FIGURE 9

HOKKIEN AND TAGALOG EGO'S PARENTS' PARENTS ADDRESS TERMINOLOGY



kinsman, a situation parallel to one in which someone younger would use *sila* instead of *ikaw* when addressing someone older as in '*sino ho sila?*' A situation like this calls for an euphemistic kind of language which does not imply social distance but rather respect and deference due to senior kinsmen.

Anthropologists have often studied Tagalog kinship terminology in order to get a picture of the structure of its kinship system (Stoodley 1957; Murray 1973; Evangelista 1973). The foregoing demonstrates that the study of loanwords that form part of a kinship terminology, specifically, their nature and their kind, can provide further evidence for the anthropologists' findings.

3.2. DOMAIN OF COOKERY

Unlike the number of Hokkien loanwords on kinship, the number of loanwords in the domain of cookery constitutes a rather sizable one. This number includes items whose origins are unquestionably Hokkien; it does not include terms which have been extended to cover other types of food such as *lumpiya ubod* and *lumpiya shanghai* from the original term *lumpiya*.

Because of the presence of the large number of Hokkien loanwords in this domain, a semantic analysis can be made solely on the basis of these loanwords, although the argument that the loanwords on cookery, like those on kinship, constitute part of an essentially natural subset of Tagalog cookery can be brought forth. However, the assumption in this study is that the entire Tagalog cookery, a conglomerate of various cultural borrowings, predominantly Spanish and Chinese, can be subjected to more systematic analysis if one were to start with its cultural constituents. The kind of semantic analysis that is here applied to the loanwords on cookery uses taxonomic analysis.

3.2.1. Taxonomic Analysis Versus Componential Analysis

No less than the anthropologist Lounsbury (1964:1086-1087) has admitted that the structures of certain semantic fields render them more susceptible to certain kinds of semantic analyses than others. For instance, kinship systems are described as having "something a bit special about them such that their structures are in large part that of the "paradigm", which in essence belongs to componential analysis". To Lounsbury, the more typical type of semantic structure is the taxonomy.

Taxonomic analysis is commonly used in zoology and botany for the classification of flora and fauna. It classifies sets of contrasting

categories hierarchically into successive levels or taxa, "with the categories at any one level being included in a category at the next higher level" (Frake 1964:196). More than two lower levels or taxa can belong to the next highest level or taxon (Bendix 1966:5). Taxonomies are said to be bi-dimensional: a horizontal one of discrimination and a vertical one of generalisation.

The rationale for the use of taxonomic analysis in the semantic analysis of loanwords in the domain of cookery is evident in Lounsbury's comparison of this analysis and componential analysis (1964:1086). In a componential analysis, "the features of any dimension combine with all those of any other dimension", hence there is no hierarchical ordering of dimensions since all "orders are possible". In a taxonomy, the features of any dimension "combine with only one feature from any other dimension", hence "there is but one possible hierarchy". It must be remembered, nonetheless, that the classification into taxonomic levels constitutes a crucial stage in componential analysis.

Since this section is interested in arriving at a typology that can indicate the hierarchical relationship of each of the loanwords, rather than the components that enter into it, it discards componential analysis as a possible semantic analysis. In relation to this, taxonomic analysis offers a more efficient and convenient way of determining which category or categories within the hierarchy have the greatest number of loanwords; this can further be used as an indicator of the nature and the kind of loanwords that have been borrowed into the domain of cookery. In principle, then, the technique is used as a means of refining the statements that can be made about the nature of the loanwords that have already been isolated under this domain.

Furthermore, because this section is not interested in establishing the psychological or cognitive reality of the users of these loanwords, it does not consider componential analysis as relevant in the present analysis. Whether componential analysis can be used to gauge the psychological validity of the speakers is a much-debated theme among anthropologists,²⁰ but it is not within the purview of this study to go into it.

3.2.2. Taxonomy of Hokkien Loanwords on Cookery

Figure 10 is a diagram of the taxonomic structure of the Hokkien loanwords on cookery. It contains nineteen categories which appear on five distinct levels of inclusiveness. However, there are "several, more abstract categories which are superordinate to the nineteen categories" (Pospisil 1965:195). The categories are presented below in a manner that can best capture the structural relationship that

FIGURE 10
TAXONOMY OF REPRESENTATIVE TAGALOG COOKERY TERMS OF HOKKIEN ORIGIN

C O O K E R Y									
F O O D								I N S T R U M E N T S	
R A W						C O O K E D (see insert)		s i y a n s e	
M E A T				VEGETABLES	SOY BEAN PRODUCT	RICE PRODUCT	FLOUR PRODUCT		
PORK CUTS	BEEF CUTS	FISH & SEAFOOD	FOWLS	p e t s a y	t o k u w a	b i h o n	m i s u w a		
t i t o	g o t o	t u w a b a k	u l i k b a						

I N S E R T

C O O K E D									
FOOD PREPARATION	T Y P E O F F O O D					M A N N E R O F C O O K I N G			
	M E A T	VEGETABLE	SOY BEAN PRODUCT	RICE PRODUCT	FLOUR PRODUCT	FRIED	BOILED STEAMED	STEWED	SOUPY
t o y o	g o t o	p e t s a y	t a h o	b i h o n	m i s w a	u k o y	s i y o p a w	h u m b a	m a m i

exists between them.

Meat is a superordinate level that covers the loanwords on uncooked meat cuts coming from four categories: pork cuts, an example of which is tito '*pig's tripe*', beef cuts, an example of which is goto '*ox tripe*', fowls, an example of which is ulikba '*white-feathered or light-skinned fowl with dark meat*', and fish and sea food, an example of which is tuwabak '*big-eyed herring*'.

Vegetables, which covers all loanwords on uncooked vegetables, is a category on the same level as meat: there is no further distinction made within this category. Examples are petsay '*Chinese cabbage*', and kintsay '*celery*'.

Soy bean products, like vegetables, is a category by itself. It covers all loanwords on uncooked bean products such as tokuwa '*soybean curd*' and tahuri '*fermented salted soybean curd*'.

Flour products cover all loanwords on uncooked flour products; it likewise constitutes a category by itself. Examples are miki '*thick flour noodles*' and misuwa '*thin flour noodles*'.

Rice constitutes a category by itself. It covers all loanwords on uncooked rice products such as bihon '*rice noodles*'.

The categories above, totalling eight, are subsumed under the level of raw. The following categories fall under the level of cooked.

Manner of cooking is a superordinate level that includes four categories: fried, an example of which is ukoy '*fried flour cake consisting of grated squash, carrots or toge with shrimps*', boiled and steamed, an example of which is siyopaw '*steamed rice cake with meat and condiments inside*', stewed, an example of which is humba '*highly spiced dish of pork or chicken*' cooked at low temperature, and soupy, an example of which is mami '*dish of noodles cooked in soup style*'.

Type of food includes all the categories subsumed under raw: meat, vegetables, soy bean products, fish and sea food, rice products and flour products. It must be pointed out here that while these five are contrasting categories directly superordinated by the level raw, they are interposed by the level type of food, which is the category directly superordinated by the level cooked. One may find this appearance of the same linguistic forms at different levels of contrast confusing, but it is a common phenomenon in certain linguistic systems, such as in the diagnosis of diseases among the Subanuns as well as in their botanical and kinship terminologies (Frake 1964:197). However, the categories that are included in type of food can be further distinguished by the presence of certain modifiers such as toge guisado or kintsay guisado (see Section 3.2.4.). The same thing cannot be said of these categories appearing under raw.

Preparation of food is a whole category by itself. It includes all the loanwords whose referents are used in the preparation of food such as spices, seasoning and other food preservatives. Examples are *angkak* 'red-coloured grains of rice used as colouring for food' and *kelwa* 'powdered mustard'.

The categories manner of cooking, type of food and preparation of food are not contrasting categories but are complementing categories, since it is possible that a lexical item may belong to two of the above-named categories, for example, *biko* 'rice cake cooked by steaming' or that two lexical items from two categories may be combined, such as *upo guisado*.²¹

Instruments contrasts with food on level two and constitutes the sole category on the vertical dimension. It includes all the loanwords that refer to cooking utensils and other devices. There are only five loanwords belonging to this category: *siyanse*, *lansong*, *bithay*, *pohiya* and *bilao*.

3.2.3. Lexical Content of Hokkien Loanwords on Cookery

A recent study (Thorp 1972) made on the lexical content of the lexical entries in Panganiban's *Talahuluganang Pilipino-Ingles* (1966) reveals 42 per cent are of foreign origin while the remaining 58 per cent are Tagalog in origin. Of the 42 per cent of foreign words, Spanish words have the highest percentage - 33 per cent - followed by Chinese - 3 per cent - and Malay - 4 per cent; the rest are spread out among English, Sanskrit and Arabic.

It is not so much in the percentages of foreign loans that this section is interested; rather, it is in the technique used to arrive at certain conclusions regarding the lexical content of Tagalog. This technique is here replicated, but with a different objective, and that is, to determine the lexical content of the Hokkien loanwords on cookery.

As implied earlier, the studies on loanwords in Tagalog have, so far, merely 'skimmed the surface' since classification of loanwords was usually made on the bases of broad, major, semantic areas, and in-depth studies of each semantic domain were never, in a sense, done systematically.

The taxonomic analysis of the Hokkien loanwords on cookery in the previous section was made with the view of setting up the categories necessary for an in-depth analysis of loanwords in this domain resulting in a total of nineteen categories. Next, the Hokkien loanwords were classified and inserted in their proper slots. What remains to be done in this section is to determine the percentage of the total number of

loanwords in each taxonomic category. In the process of doing this, a decision was made to mention the five categories appearing under the higher categories of both raw and cooked only once, which meant cutting the total number down to fourteen.

Table 7 gives a breakdown of the total percentages of loanwords within each culinary category. The categories are given below in order of their rank:

1. Vegetables; boiled and steamed
2. Food preparation
3. Soy bean products; stewed
4. Instruments
5. Pork cuts, beef cuts; fish and other sea food
6. Fried; soupy
7. Flour products; rice products
8. Fowls.

What conclusions can one draw on the basis of this? First, it seems that of all the raw materials that the Tagalog speakers were introduced to, the greatest variety came from the category of vegetables. This means that these vegetables were either brought into the country by the Hokkiens or were found locally but the culinary potentialities of which were unknown to the natives. Boiled and steamed describes a method of cooking common among Hokkien speakers, but previously uncommon among Tagalogs; it is therefore not an unexpected phenomenon that the Tagalogs should have borrowed heavily in this category. Second, the Hokkien speakers introduced varied ways of food preparation to the Tagalogs whose own ways of food preparation were probably less varied. This finding concurs with Thorp's that "it is more likely for a group to accept new ways of preparing raw materials, rather than accept new raw materials or new names for things that have already been identified" (1972:29). Third, the use of soy bean for food production is commonly identified with the Chinese, and by extension, with the Hokkien people; next to boiled and steamed as a manner of cooking, stewed is also popular among the Hokkien people. Loanwords that fall under the categories of rice products and fowls are the fewest in number. This can be viewed as conforming to the actual cultural facts that rice is the staple crop of the Tagalogs and that fowls had long provided a source of food among the people. This being the case, the Tagalog speakers had already in their possession the culinary words appropriate for describing referents in the above-named categories.

If the loanwords are viewed from a different perspective, that is, if they are distributed among higher-level categories, different conclusions can be drawn, as shown in Table 8.

TABLE 7
PERCENTAGE OF THE TOTAL NUMBER OF HOKKIEN LOANWORDS IN
EACH CULINARY CATEGORY

Culinary Category	N	No. of loanwords	Percentage
1. Pork cuts	63	4	6.3%
2. Beef cuts	63	4	6.3%
3. Fowls	63	1	1.6%
4. Fish and sea food	63	4	6.3%
5. Vegetables	63	8	12.7%
6. Flour products	63	2	3.2%
7. Soy bean products	63	6	9.5%
8. Rice products	63	2	3.2%
9. Fried	63	3	4.8%
10. Boiled and steamed	63	8	12.7%
11. Stewed	63	6	9.5%
12. Soupy	63	3	4.8%
13. Food preparation	63	7	11.1%
14. Instruments	63	5	8.0%
TOTAL		63	100.0%

TABLE 8
PERCENTAGE OF THE TOTAL NUMBER OF HOKKIEN LOANWORDS DISTRIBUTED
AMONG THE HIGHER-LEVEL CATEGORIES

Culinary Category	N	No. of loanwords	Percentage
1. Meat	63	13	20.7%
2. Legumes	63	8	12.7%
3. Soy bean products	63	6	9.5%
4. Flour and rice products	63	4	6.3%
5. Manner of cooking	63	20	31.7%
6. Food preparation	63	7	11.1%
7. Instruments	63	5	8.0%
TOTAL		63	100.0%

The superordinate level of meat contains a higher number of loanwords than the category vegetables. This fact does not invalidate the conclusion in the previous paragraph, but it does indicate that the loanwords under the category meat constitute a rather sizable and significant number, a generalisation which was missed when the category was broken down into four-level categories. However, this could mean that the Tagalogs acquired from the Hokkien speakers the habit of eating a great many pork and beef cuts as well as certain kinds of fish and sea food, which they were not eating heretofore; with this habit, of course, came the loanwords. To be sure, pigs and chickens had been domesticated even before the coming of the Chinese, as witnessed by the presence of native Tagalog terms such as *pata* 'pig's knuckles', *ulo ng baboy* 'head of pig', *kalamnan* 'jowl of pig' and other varieties of meat as *balun-balunan* 'gizzard', *puso* 'heart', *atay* 'liver', *baga* 'lungs' and others. For beef cuts, most of the terms used are Spanish: *punta y pecho* 'bricket', *cadera* 'ribs', *tapadera* 'rump', *solmillo* 'tenderloin' and others which might possibly point to the fact that the eating of beef became common among the Tagalogs as a result of the coming of the Spaniards. It can still be said that of the loanwords that fall under the major category of raw, a great number belong to the categories of meat and vegetables. Although flour and rice products are lumped together under one category, the combined percentages are still small as to be insignificant. There will be no discussion on the category manner of cooking, which constitutes the highest percentage, since a fairer comparison is between categories covering one to four and categories subsumed under manner of cooking, as contained in Table 7. Table 8 is the result of an analysis made on the basis of categories that are on the same level.

On an even higher level of categorisation, the distribution of percentages yielded the following order of ranking as seen in Table 9.

1. Raw
2. Cooked
3. Instruments

TABLE 9
PERCENTAGE OF THE TOTAL NUMBER OF HOKKIEN LOANWORDS DISTRIBUTED
AMONG THE MAJOR CATEGORIES OF RAW, COOKED AND INSTRUMENTS

Major Categories	N	No. of loanwords	Percentage
1. Raw	63	31	49.2%
2. Cooked	63	37	42.8%
3. Instruments	63	5	8.0%
TOTAL		63	100.0%

This indicates that the bulk of Hokkien contribution to the domain of Tagalog cookery is in terms of the raw, rather than of the cooked, as the percentage of the category raw is greater than the percentages of the rest of the categories combined. The implication here is that the Tagalogs had a lot of untapped raw materials and contact with the Hokkien speakers, whose eating habits and food preparation were decidedly more highly developed, made them aware of this. The category cooked, although second in rank, is not significantly lower than the category raw as the category instruments is to cooked. The high percentage of loanwords in the category cooked implies the Tagalogs' simple ways of cooking and food preparation, which must have led them to freely adopt newer modes of cooking and food preparation. This fact is independently attested to by the presence of numerous Spanish-style dishes and means of preparing food. The low percentage of loanwords under the category instruments can only be conjectured: that the Tagalogs' interest lay in newer ways of preparing raw materials rather than in the instruments used for such preparation, or that they must have had utensils adequate for the preparation of the new kinds of cookery.

3.2.4. Extended Use of Hokkien Loanwords on Cookery

So far the discussion on the Hokkien loanwords in the domain of cookery, has concentrated only on those forms whose original meanings have been kept more or less intact. Cases of semantic shifts are few, and wherever present, are minor (see Section 3.2.5.).

The loanwords in this domain can be used either in isolation or in combination with other native Tagalog words or with other foreign borrowings to refer to concoctions different from those designated by the original. The results of the latter are invariably classified under the category cooked, never under that of raw.

In this section, a formal semantic analysis of the loanwords used in isolation, and in combination with other forms, is proposed. The terms used are first clarified in the following sections.

3.2.4.1. *Terminology Used*

3.2.4.1.1. *Nuclear Terms*

Nuclear forms are forms that occupy a central position and can be equated with the notion of noun head (Bloomfield 1933:199). They can either stand alone or can stand in a relation of attribution, where the first element is the nuclear form and the second is the modifier following the Tagalog noun head + modifier construction, e.g., *dalagang maganda*: such a construction is called a composite form. The nuclear

forms in these contexts are Hokkien loanwords. Such loanwords as *petsay*, *goto*, *humba*, etc. can occur in isolation; in the Tagalog culinary terms such as *kintsay guisado* or *lumpiya ubod*, the first element, the nuclear form, is a Hokkien loanword, and the second element, the modifier, is a non-Hokkien word.

3.2.4.1.2. *Secondary Forms*

A Hokkien loanword can also be used as a secondary form in a composite form where the nuclear form is of Tagalog or other foreign origin, and where the modifier is a Hokkien loanword, e.g., *arroz caldo con goto*, *Baguio onion with tokuwa*, *eggs with misuwa*, etc. Although the loanwords do not, strictly speaking, modify the nuclear terms, the label modifier is used for terminological simplicity.

3.2.4.2. *Proposed Formal Analysis*

The following formal analysis is proposed for composite culinary labels within the domain of Tagalog cookery utilising Hokkien loanwords either as nuclear or secondary forms. In composite forms where the Hokkien loanword is a secondary form, the conjunction symbol (.) is used to indicate that the terms conjoined by . is the product; where the loanword is a nuclear form, no conjunction symbol is used, except to connect two categories enclosed in parentheses (). X symbolises a nuclear form of Hokkien origin; Y, a nuclear form of other origin. X and Y are further specified for the following categories whenever applicable:

p	=	pork
be	=	beef
f	=	fish and other sea food
fo	=	fowls
r	=	rice products
fl	=	flour products
b	=	soy bean products
fr	=	fresh
fd	=	fried
s	=	soupy
st	=	stewed
bs	=	boiled and steamed

Categories are enclosed in parentheses () and follow X; sub-categories are enclosed in parentheses within parentheses (()). M stands for modifier and is further specified as X or Y. Thus, the following culinary terms will have the following corresponding formulas:

1. petsay: X(L)

Read: X is the nuclear form of Hokkien origin and belongs to the category vegetables

2. toge guisado: X(L) M(Y(fr))

Read: X is a nuclear form of Hokkien origin belonging to the category of vegetables, modified by a non-Hokkien modifier.

3. milkfish en tocho: Y. M(X(b))

Read: Y is a nuclear form of non-Hokkien origin modified by a secondary form of Hokkien origin belonging to the category of soy bean products

4. pesang dalag: X(bd . f) M(Y)

Read: X is a nuclear form of Hokkien origin belonging to the categories of boiled and fish and M is a modifier of non-Hokkien origin.

Tables 10 and 11 below give the formal analyses of some Tagalog culinary labels taken from *Philippine Cookery and Household Hints* (Alvarez 1973) and *Recipes of the Philippines* (Perez 1973). Number 4, pancit molo in Table 10 gives an anomalous combination since pancit which is always fried combines with mami which is a soupy dish; both terms are of Hokkien origin. Other anomalous uses of the loanwords are evident in pancit molo (number 1), pesang manok (number 16) and humbang manok (number 20). A formal semantic analysis of these terms has yielded anomalous combinations which have been normalised by the borrowing language through the process of semantic shifts. This means that the meanings identified with the original Hokkien words have undergone semantic changes, e.g. pesa which means 'boiled fish' from Hokkien pē+sáq 'boiled fish' now simply means 'boiled' in the combination pesang manok.

3.2.5. Semantic Shifts of Hokkien Loanwords on Cookery

Semantic shift or semantic change (Bloomfield, 1933:425) refers to the process by which the meaning of a loanword is shifted from its original meaning to something that is similar or closely related to the original. It occurs randomly and no systematic pattern can be evolved from it. Some attempts had been made in the classification of semantic shifts based on the "logical relations of successive meanings" such as narrowing, e.g. Old English mete 'food' becoming meat 'edible flesh'; widening, e.g. Middle English bridde 'young birdling' becoming bird; metaphor, e.g. Primitive Germanic [*bitraz] 'biting' becoming bitter 'harsh of taste'; metonymy, e.g. Old French ceace 'jaw' becoming cheek; synecdoche, e.g. Primitive Germanic [*tu:naz] 'fence' becoming town; hyperbole, e.g. pre-French [*kwalljan] 'to torment' becoming Old English

TABLE 10
 FORMAL SEMANTIC ANALYSIS OF SOME TAGALOG COOKERY WITH
 HOKKIEN LOANWORDS AS NUCLEAR FORMS

Culinary Labels	Semantic Formulas
1. *Pancit Molo	X(fr) M(Y(s))
2. Pancit Guisado	X(fr) M(Y(f))
3. *Pancit Luglug	X(fr) M(Y(bd))
4. *Pancit Mami	X(fr) M(X(s))
5. Panict Langlang	X(fr) M(X)
6. Pancit Bihon	X(fr) M(X(r))
7. Pancit Malabon	X(fr) M(Y)
8. Pancit Marilao	X(fr) M(Y)
9. Kinchay Guisado	X(1) M(Y(fr))
10. Togue Guisado	X(1) M(Y(fr))
11. Upo Dinengdeng	X(1) M(Y(st))
12. Upo Guisado	X(1) M(Y(fr))
13. Lumpia Ubod	X(st) M(Y(fr(1)))
14. Lumpia Labong	X(st) M(Y(fr(1)))
15. Lumpia Shanghai	X(bl.f) M(Y(f))
16. **Pesang Dalag	X(bl.f) M(Y(f))
17. *Pesang Manok	X(bd.f) M(Y(fo))
18. Sugpo Sinuam	Y(f) M(X(s))
19. Halaan Sinuam	Y(f) M(X(s))
20. Hipon Sinuam	Y(f) M(X(s))
21. Humba Estofado	X(st.p) M(Y)
22. *Humbang Manok	X(st.p) M(Y(fo))

* anomalous label

** redundant label

TABLE 11
 FORMAL SEMANTIC ANALYSIS OF SOME TAGALOG COOKERY WITH
 HOKKIEN LOANWORDS AS SECONDARY FORMS

Culinary Labels	Semantic Formulas
1. Aroz caldo con Goto	Y . M(X(be))
2. Baguio onions with Tokuwa	Y . M(X(b))
3. Chicken with Sotanghon	Y . M(X(b))
4. Fish Balls with Petsay	Y . M(X(1))
5. Meat Balls with Sotanghon	Y . M(X(b))
6. Eggs with Misua	Y . M(X(fl))
7. Kilawin Pork with Tokwa	Y . M(X(b))
8. Milkfish en Tocho	Y . M(X(b))
9. Patola-Misua Soup	Y . M(X(fl))
10. Steam Fish with Tawsi	Y . M(X(b))

cwellan 'to kill'; degeneration, e.g. Old English *crafa* 'boy, servant' becoming knave; and elevation, e.g., Old English *cniht* 'boy, servant' becoming knight (Bloomfield 1933:426-427).

Not many Hokkien loanwords on cookery have undergone semantic shift. Those that have undergone this process can all be classified under widening. The list appears below:

1. *pancit* which comes from Hokkien $p\check{a}n+\bar{e}+s\acute{f}t$ (see Chapter 2) does not mean a noodle dish; literally, it means '*something that is conveniently cooked*' and since noodles is a dish that requires very little preparation, *pancit* has somehow acquired this name. *Pancit* is cooked by frying the noodles; in Tagalog, it does not only mean fried noodles but also noodles cooked in a soupy style as in *pancit mami* or a non-noodle but soupy dish as in *pancit molo*.

2. *humba* in Hokkien cookery refers to a pork dish, but in Tagalog cookery, the term has been extended to cover a chicken dish.

3. *pesa* in Hokkien simply means '*plain boiled*' and its usage is restricted to the cooking of fish, so that the complete term in Hokkien is $p\acute{e}q+s\grave{a}q+h\acute{f}$, the last morpheme meaning '*fish*'. However, Tagalog adopted only the first two morphemes. If the term is used in isolation, it has the same meaning as the original, but *pesa* is also extended to cover chicken as in *pesang manok* '*chicken boiled in water*' in which case the term has been widened to mean '*cooking by boiling*'.

4. *lumpiya* in Hokkien refers to a kind of dish in which vegetables like carrots, cabbages, string beans, and *tokuwa* are sliced into thin pieces, mixed and stewed until cooked. This concoction is then wrapped in thin flour wrappers. In Tagalog cookery, the term is not restricted to the ingredient mentioned but other kinds of ingredients like *ubod* '*pith of coconut trunk*' and *labong* '*bamboo shoots*' are used as substitutes. The term has been widened to mean anything that is wrapped in flour wrappers, or wrappers made from eggs, e.g. *lumpiya ubod* and *lumpiya labong*.

5. *ukoy* comes from Hokkien $\bar{o}+ku\grave{e}$ '*cake made from gabi*'. In Tagalog, cookery, flour is used as a substitute for *gabi*, with the main ingredient being a species of small shrimps; shrimps are not an ingredient in the original Hokkien dish. Tagalog *ukoy* is made by deep-frying the mixture of flour and shrimps, whereas the Hokkien $\bar{o}+ku\grave{e}$ is made by steaming the mixed ingredients, which can then be eaten as is or after it has been deep-fried.

6. *batsoy* in Hokkien refers to a dish with loin of pork as its main ingredient; in Tagalog cookery, the ingredients range from kidney, to pancreas, to liver and to loin of pork.

7. *suam* in Hokkien has the literal meaning '*cook the broth from rice porridge (lugaw)*'. The term has been extended in Tagalog cookery to describe a dish of either *sugpo* '*prawns*' as in *sugpo sinuam*, or *hipon* '*shrimps*' as in *hipon sinuam* cooked in a soupy style with rice added. In Hokkien cookery, the term *àm* is used strictly to describe the broth from rice porridge; the same term is also borrowed into Tagalog with the same meaning.

8. *taho* in both Hokkien and Tagalog cookery means '*soy bean curd*'; however, while the Hokkiens use the term *taū+hũ* to refer to soy bean curd that is uncooked, the Tagalogs use the term *tahó* to refer to soy bean curd that is cooked and is eaten with brown syrup. The Hokkien *taū+hũ*, when cooked, is always a salty, never a sweet dish, and the Hokkien term for the Tagalog *tahó* is *taū+huê*.

3.3. HOKKIEN BORROWINGS AND LEXICAL ACCULTURATION

Lexical acculturation here refers to the process whereby the impact of a culture is registered through the lexical items that have been transmitted from a donor culture to a receiving culture. Salzmänn (1954:137-139) theorises that lexical acculturation can be determined qualitatively by the kinds of borrowings present in the receiving language; these borrowings belong to four major classes: (1) loanwords (including loanblends), (2) loan translations (calques), (3) semantic extensions, and (4) circumlocutory denomination. Numbers 1-3 are self-explanatory and will not be further defined in this section. Semantic extensions are better known as loan shifts (Haugen 1950:215). Circumlocutory denominations refer to metaphorical usages and new formations. To show the applicability of gauging lexical acculturation through this classification, Salzmänn indicates that "Kutenai avails itself primarily of 4 and less of 3, whereas 1 and 2 are relatively scarcely employed; Copainala Zoque uses 1 extensively; Chipewyan avails itself primarily of 3; Arapaho depends largely on 4".

Inasfar as Tagalog borrowings of Hokkien origin are concerned, most of them fall under the classification of loanwords, although loan-blends are not anywhere apparent in Tagalog; this means that most of the Hokkien borrowings are so very like the original in shape and meaning that detecting them proved to be rather easy. A sizable number, however, fall under the classification of semantic extensions.

A classification of this sort has certain implications. First, in terms of a typology of loanwords, the method can be used to classify the different borrowings from different donor languages, which in turn can be used as bases for measuring qualitatively the cultural impact of the donor languages. Thus, for example, Tagalog borrowings of Spanish,

Sanskrit, Malay, and English origins, in addition to Hokkien and other Chinese languages, can be typed according to the major classifications; a comparison of the various borrowings based on these classifications can next be made which can lead to conclusions and generalisations regarding the cultural impact of each of the donor languages. The second implication here, then, is that the major classifications can determine the extent of the cultural impact. It seems logical to say that borrowings classified under loanwords reflect a greater extent of cultural impact than borrowings classified under loan translations in the sense that both the cultural item and its corresponding linguistic form remain intact in the receiving language. A good example of this is the typical German attitude towards borrowed cultural items - when a cultural item is borrowed, its corresponding linguistic form is not, e.g. English '*telephone*' is translated into German as *Fernsprecher* (Sturtevant 1917:111), Greek words for '*acid*' and '*material*' (English '*oxygen*') translated into German *Sauerstoff*, English '*hydrogen*' as German *Wasserstoff* (Lehmann 1966:213). In relation to this observation, it is safe to say that the cultural influences exerted by Hokkien culture on Tagalog culture met with little or no resistance by the latter insofar as the cultural items together with their corresponding linguistic labels are concerned.

3.3.1. The Semantic Domains of Hokkien Loanwords

Having established that lexical acculturation of the Hokkien borrowings in Tagalog was predominantly in terms of loanwords, it now remains for this section to determine in what semantic domains or fields the loanwords cluster.

Thorp (1972) made a classification of the Tagalog words of foreign origins found in Panganiban's dictionary (1966), resulting in a total of sixteen categories. In this section, Thorp's sixteen categories are adopted for the purpose stated in the previous paragraph.

Thorp divides the category *man* into visible and invisible; under visible, his sub-categories are:

- (1) anatomy,
- (2) adornment, dress, scent,
- (3) disease, medicine,
- (4) physical qualities, and
- (5) physical activities;

and invisible, the sub-categories are:

- (1) mind, conscience, soul, personality,
- (2) qualities, and
- (3) activities.

His second category animals is divided into the following sub-categories:

- (1) kinds (unslaughtered),
- (2) anatomy,
- (3) action,
- (4) qualities, and
- (5) herding, hunting, fishing.

The third category is plants, sub-categorised into:

- (1) kinds of unpicked, unharvested plants,
- (2) anatomy,
- (3) qualities,
- (4) activities, and
- (5) farming, gathering, gardening.

The fourth category is food with the following sub-categories:

- (1) harvested and slaughtered food,
- (2) prepared dishes and qualities,
- (3) kitchen utensils, storage containers and
- (4) fire.

The category food devices has been added under food in this section.

The fifth category is kinship and age, followed by social organisation as the sixth category with the sub-categories:

- (1) titles and honorifics,
- (2) social power, class, government, and
- (3) military organisation.

Crafts and occupations constitutes the seventh category with:

- (1) housing,
- (2) boat,
- (3) transportation and communication, and
- (4) general as sub-categories.

Sub-category 5 farming, gathering and gardening under the category plants is here shifted under crafts and occupations. The other sub-categories, except general, are replaced by goldsmithing, carpentry, shoe making and fishing.

The eighth category is trade and commerce, the ninth is fine arts, the tenth is games and gambling and the eleventh is religion.

The twelfth category is natural phenomena, the thirteenth is material objects, the fourteenth is numerals, the fifteenth is measurements and the sixteenth is sounds.

In the present treatment, the sub-category of housing under crafts and occupations is shifted to the category of man-visible, sub-categorised as shelter and relevant instruments; the total number of categories is here reduced to fifteen since Thorp's category material objects covers loanwords which are well taken care of by other categories.

The loanwords are again categorised according to their respective semantic fields and percentages are taken of each category. This task, although already done by Thorp, is deemed necessary to be done again because Thorp bases his list on Panganiban's *Talahuluganang Pilipino-Ingles* (1966) which includes questionable items of Hokkien origin such as pikot '*ambushed, besieged*', punglo '*ammunition, bullet*', sinamong '*large China jar*', and many others; besides, the list includes items whose origins are those of Chinese languages other than Hokkien, e.g. tsapsoy '*chopsuey*' (Cantonese), tsawmin '*fried noodles*' (Mandarin), hototay '*dish of Chicken breast, carrots, peas, poach egg float, and full bodied broth*' (Cantonese). Furthermore, many of Panganiban's words of Chinese origin are not loanwords in the strict sense of the word but are loan creations, e.g. pakaw '*hook or clasp for earrings*', singkaw '*hitching a beast of burden*', sakwa '*wooden clogs*'. In view of this, the present list, being a list of only the Hokkien loanwords in Tagalog, is proportionately smaller, numbering only one hundred sixty three. An important observation, however, must be noted: in spite of the small number of Hokkien loanwords in Tagalog, their importance lies in the fact that they are very much a part of the mainstream of Tagalog culture.

Table 12 gives the percentages of Hokkien loanwords in each semantic field. A cursory glance at the table indicates that the category food has the highest percentage of loanwords; the others ranked as follows:

2. Crafts and Occupations
3. Man-Visible
4. Man-Invisible
5. Kinship and Age
6. Animals
7. Games and Gambling
8. Trade and Commerce
9. Social Organisation

Hokkien loanwords in the categories of plants, sound numerals, and measurements are practically nil. Thorp's study indicates that the single largest number of loanwords in these categories are Spanish in origin, although indigenous Tagalog terms in these domains far outnumber those of Spanish. It is interesting to note that Malay contribution to the domain of numerals is quite sizable - 23%. One can surmise that the reason why Hokkien loanwords are not present in these domains is that of the adequacy of the linguistic labels the Tagalogs already possessed for items within the domains concerned when the Hokkiens came. One would expect, however, the presence of numerous loanwords in the categories of numerals and measurements, since the

TABLE 12
PERCENTAGE OF HOKKIEN LOANWORDS IN EACH SEMANTIC AND
SUB-SEMANTIC FIELD

Semantic Field	N	No. of Items	Percentage
1. Man-Visible			
A. Anatomy	163	1	.6
B. Adornment, Dress, Scent	163	9	5.5
C. Disease, Medicine	163	4	2.5
D. Physical Qualities	163	0	-
E. Physical Activities	163	0	-
F. Shelter & Relevant Articles	163	7	4.2
	Sub-total	21	12.8
2. Man-Invisible			
A. Mind, Conscience, Soul	163	2	1.2
B. Qualities	163	9	5.5
C. Activities	163	6	3.7
D. Expressions	163	3	1.9
	Sub-total	20	12.3
3. Animals			
A. Kinds (unslaughtered)	163	8	4.9
B. Anatomy	163	0	-
C. Actions	163	0	-
D. Qualities	163	1	.6
	Sub-total	9	5.5
4. Plants			
A. Kinds of unpicked, unharvested plants	163	0	-
B. Anatomy	163	0	-
C. Qualities	163	1	.6
D. Activities	163	0	-
	Sub-total	1	.6
5. Food			
A. Harvested & Slaughtered	163	19	11.7
B. Prepared Dishes & their Qualities	163	39	24.0
C. Kitchen Utensils	163	5	3.0
D. Fire	163	0	-
E. Food Devices	163	2	1.2
	Sub-total	65	39.9
6. Kinship and Age	163	10	6.1
7. Social Organisation			
A. Titles and Honorifics	163	0	-
B. Social Power, Class, Government	163	0	-
C. Military Government	163	1	.6
	Sub-total	1	.6

TABLE 12 (cont.)

8. Crafts and Occupations			
A. Fishing	163	2	1.2
B. Farming	163	2	1.2
C. Shoemaking	163	3	1.9
D. Carpentry	163	4	2.5
E. Goldsmithing	163	11	6.8
F. General	163	4	2.5
	Sub-total	26	16.1
9. Trade and Commerce	163	2	1.2
10. Fine Arts	163	0	-
11. Games and Gambling	163	5	3.0
12. Religion	163	3	1.9
13. Numerals	163	0	-
14. Measurements	163	0	-
15. Sounds	163	0	-
TOTAL	163	100	100.0%

immediate contact situation between the Tagalogs and the Hokkiens was a trading situation. The Hokkiens were mainly traders who likewise possessed a highly-developed system of counting and measurement. That this is not so can be explained by the possibility that the Tagalogs were already equally adept at numbering and measuring things even long before the coming of the Spaniards as evidenced by their number words of Original Austronesian.²²

In the category of food, prepared dishes and their qualities have a significantly higher percentage of loanwords than harvested and slaughtered food; this may be an inconsistency in relation to the figures presented in the section on the domain of cookery, but such an inconsistency can be explained. Thorp's categories are such that harvested and slaughtered food can only include plants and animals; a lot of the items classified under raw²³ in Section 3.2. are not classifiable under harvested and slaughtered food, and a decision had to be made to put them under prepared dishes.

Under the category of crafts and occupations, the sub-category of goldsmithing has the highest number of loanwords. There is no doubt that the Hokkiens are a very skillful people in the art of goldsmithing. While it may be true that gold was already found in the islands and not brought in as a cultural item by the Hokkiens (Agoncillo 1950:74), still

it was the latter who developed the craft, creating objects and other trinkets made of gold that must have delighted the native Tagalogs. It is safe to say that goldsmithing became professionalised with the advent of the Hokkiens, and the sizable number of loanwords in this domain points to this fact.

In the category of man-visible, the sub-category of adornment, dress, scent, etc. has the highest percentage among all the other categories. This can be said to reflect the fact that the Tagalogs are a very meticulous people with regards to their personal appearance and are fastidious with their manner of dressing.

3.3.2. Semantic Extensions

The Tagalog words of Hokkien origin which have undergone semantic extensions are few in number. Nevertheless, the task of determining how a word entered as Chinese in both Manuel and Panganiban could possibly come to possess the meaning it now has in Tagalog is a tedious and painstaking one. Again, the criteria used are phonological and semantic in nature. If the shape of the word professes a correspondence to the phonological rules set up in Chapter 2, and if the meaning has a close relationship to the original Hokkien word, then the word is very likely a borrowed form. For instance, Panganiban lists Tagalog *takaw* 'greedy' as being Chinese. Assuming that the Chinese language here is Hokkien and that *takaw* comes from Hokkien *tuā+kaù* literally 'big dog', it is not possible that *takaw* could have come from *tuā+kaù* since on the basis of phonological rules, the morpheme *tuā* would become Tagalog *tuwa*, and not *ta* although Tagalog *-kaw* is the appropriate corresponding phonetic representation of Hokkien *kaù*; on the basis of semantic considerations, the Hokkien origin does not seem viable for the correct corresponding Hokkien usage is *tuā+cuá* literally 'big snake', idiomatically 'greedy'.

Since semantic extensions often happen in an arbitrary and random manner, there is no way of systematising them. Therefore, the Hokkien borrowings which have undergone semantic extensions are simply listed below. The Hokkien meaning is given first; the Tagalog meaning, which is the semantic extension, is given next.

1. *hiya* - Hok. *hiáq* 'forehead'; Tag. 'shame'
2. *kiya* - Hok. *kiá* 'to walk'; Tag. 'characteristic gait or posture'
3. *kuyo* - Hok. *kô+ióq* 'to apply medicine on skin'; Tag. 'a kind of Chinese plaster applied on boils'
4. *lawlaw* - Hok. *laù* 'old'; Tag. 'loose, dangling downward'.

Understandably, if something is used and re-used until it becomes an 'old' thing, it becomes loose.

5. samyo - Hok. sám+iôq+hùn 'to sprinkle medicinal powder'; Tag. 'fragrance, pleasant or agreeable smell'

6. sanglay - Hok. sâng+laĩ 'to bring or deliver goods'; Tag. 'Chinese trader'

7. selang - Hok. sē+láng 'Western people, Caucasian'; Tag. 'delicacy, fastidiousness'

Westerners impress the Chinese as a fastidious group of people, hence the idea of fastidiousness identified with the term.

8. siyoktong - Hok. sí+hòk+tóng 'a brand name meaning four luck factory'; Tag. 'rice wine'

The term comes from the brand name of a kind of rice wine manufactured locally; it has been extended to cover all kinds of rice wine.

9. suwitik - Hok. siū+tièk 'enemy'; Tag. 'artful, sly, cunning'

10. tiyak - Hok. tai+tiak 'perhaps, probably'; Tag. 'sure, certain'

11. tiho - Hok. tê+hò 'the best'; Tag. 'bar of gold'

Very likely, the meaning of this term resulted when Hokkien traders referred to bars of gold used in trade as being the best.

12. tuwatsat - Hok. tuā+c^hát 'big thief'; Tag. 'to fool, to deceive'

13. katang - Hok. kâq+tāng 'to carry something heavy'; Tag. 'support, stand'

3.4. SUMMARY

In the foregoing sections, attempts at formal semantic analyses of Tagalog loanwords of Hokkien origin in the domains of kinship and cookery yielded certain significant findings of a cross-cultural nature.

Examining the Hokkien loanwords on kinship vis-a-vis the componential analysis previously made of entire Tagalog kinship terminology revealed the the kin terms used by Ego to address and to refer to his elder siblings, i.e. kúya, áte, díko, dítese, sangkó, sansé and dete resulted from the inherent importance of the nuclear family within the Tagalog kinship structure. In a manner of speaking, a certain circularity surrounds this sub-set of kin terms; their presence in the Tagalog kinship terminology led to the addition of the dimension of birth order in the componential analysis that was made; in turn, it was through a componential analysis that this particular dimension was uncovered. In the case of the affinal kin terms, insó and siyáho, the borrowings did not lead to a creation of a new semantic dimension; as a matter of fact, componential analysis was viewed as not having any value since it could not capture the psychological perception of the user of these terms.²⁴ The affinal terms were borrowed because they were necessary as structural indicators of the relationship inherent

in them, i.e. they were used as address terminology for Ego's elder siblings' spouses of both sexes. In view of all this, the Hokkien loanwords on kinship, with the exception of the consanguineal kin term *ingóng*, were borrowed because they could fill in certain structural gaps within the Tagalog kinship system, a conclusion contrary to the usual notion that their existence was due to a great tolerance for the Chinese.

Applying taxonomic analysis to the analysis of the Hokkien loanwords on cookery yielded superordinate and subordinate levels which could show the hierarchical relationships of the lowest-level categories to the highest-level ones. On the horizontal level, the analysis resulted in the categories under which the loanwords on cookery could be classified. Percentages of loanwords under each category on three different levels were taken. Based on these, generalisations on the nature of loanwords in this domain were made; such generalisations bear out the impressions one usually has about Chinese (Hokkien) influences on Tagalog cookery.

The findings revealed that on the highest superordinate level, the greatest bulk of Hokkien loanwords came from the category of raw, closely followed by that of cooked; the category of instruments had the lowest percentage. Under the level of raw, the category meat had the highest percentage, followed closely by that of vegetables, and next, by that of soybean products; the percentage of flour and rice products is significantly lower than those of the former three categories. Under the level of manner of cooking, the category boiled and steamed had the highest percentage, which again bore out the fact that this was a way of cooking commonly identified with the Hokkien people which was readily accepted by the Tagalogs.

Finally, under the domain of cookery a formal semantic analysis of the Hokkien loanwords which occur in isolation and with other non-Hokkien words was proposed. Such a formal analysis was based on the use of Hokkien loanwords as either nuclear forms or as secondary forms and has proven to be viable in the analysis of actual Tagalog cookery. Perhaps, the greatest value of such an analysis lies in its ability to distinguish what is anomalous and what is redundant in Tagalog culinary labels. The use of the analysis can also be extended to other foreign loanwords in Tagalog cookery, particularly those of Spanish origin.

The rest of Chapter 3 propounds the theory that Hokkien borrowings in Tagalog have a high degree of lexical acculturation, since most of the borrowed items fall under the category of loanwords, with none under the category of loan translations or calques, and a handful under

semantic extensions. Using Thorp's categories with certain revisions, the entire group of loanwords were again classified under their respective categories and the results indicated that the category food had the highest percentage, which justifies well enough the separate section devoted to the domain of cookery in this chapter.

N O T E S

1. The more notable works on this topic in linguistics are the following: Weinreich (1966), Katz and Fodor (1963), Chafe (1970). In Anthropology: Lounsbury (1956), Goodenough (1956), Conklin (1955), and Frake (1961).
2. The Tagalog kin terms of Hokkien origin being analysed here are those that Himes recorded as being used in Marilao, Bulacan (see Section 3.1.2.).
3. Himes notes that *impó* is Chinese (1967).
4. For a detailed description of the procedure involved in componential analysis, see Wallace and Atkins (1960).
5. An example is provided by Himes (1967).
6. See Bartlett Stoodley (1957), Fox (1961).
7. In an earlier study (1967), Himes had collected data on kinship terminology in the Greater Manila Area (Region I), in Bataan, Northern Cavite, Western Rizal, Eastern and Northern Bulacan, and Northern Neuva Ecija (Region II), Batangas, Southern Laguna, and Southwestern Batangas (Region III) and found that Region II has a "marked Chinese influence" (1967:128).
8. Himes defines *ba₁ae* componentially as g_2 (one generation below Ego) which is incorrect; the proper componential definition is g_1 (Ego's generation).

9. Manuel's list includes imá which is closer to the Hokkien form although its meaning is 'mother' rather than 'grandmother'.

10. In concluding that impó is Chinese, Himes has this to say:

Most individuals exhibit a high degree of consistency in pairing these terms. Thus a man who refers to his grandfather by the Chinese term ingkóng refers to his grandmother by the Chinese term impó. Lolo and lola tend to co-occur, as do tiyo and tiya, mama and nana, ama and iná, tatay and nanay and inang and tatang.

Elsewhere, he makes a similar observation (1967):

The age grading among elder siblings found throughout this area and the preference for the grandparent terms ingkóng and impó suggest a marked Chinese influence.

While there is some logical basis to Himes' thinking, one must not forget that impó is not a direct loan like ingkóng although it is a word that may be related to Chinese (Hokkien). In Hokkien, pó is used to refer to old ladies as in laũ+pó 'old woman' but it is not used to refer to 'grandmother'.

11. Manuel lists sitse as a Tagalog borrowing; it is doubtful though that it is a part of a Tagalog speaker's active vocabulary.

12. To determine this, Himes used a so-called cognitive saliency test described as follows:

a term which is recalled by a large number of informants is considered more salient than one which is recalled by only a few informants. Thus, the higher the frequency, the more salient a term is. If two terms are recalled an equal number of times, then the one which is recalled sooner in the list of terms is considered more salient than the one which is mentioned later. (1972:73)

13. There is a dearth of literature written on it, but an extensive treatment is given by Han-Yi Feng (1937).

14. Frank Lynch, S.J., through personal communication.

15. Ruelos (1969) accounts for the non-differentiation of "relatives on the maternal side" from those on the paternal side through a non-distinction of sex (p.25). It is obvious, however, that the underlying principle that accounts for this is multilineality rather than a non-distinction of sex.

16. Himes points out that in a more traditional system, kaka 'uncle' is used for 'parents' elder male siblings'.

17. Immediate family here refers to members of the nuclear family and the extended families.
18. The finding here is parallel to Himes' regarding componential analysis in which "the components enjoy a degree of psychological validity" (*italics mine*). An alternative analysis was proposed by Himes called "colloquial analysis" which "approaches more closely the goal of psychological validity than does the componential analysis".
19. The same rules must have applied to Tagalog *insó* which comes from Hokkien *ín+á+sò* '*his eldest brother's wife*'.
20. Burling questions the psychological validity of componential analysis (1964:20-28) while Wallace favours it (1965:229-248).
21. An alternative analysis would be to treat meat, vegetables, fish and other sea food, soy bean products, rice products and flour products as belonging to the level of raw only, and a combination such as *upo guisado* can be treated as coming from a raw category together with a cooked category. However, my intuition is that when the form *upo guisado* is used, one does not think of *upo* as being raw and becoming cooked through the addition of *guisado*. *Guisado* is used to indicate the manner in which the *upo* was cooked as against some other manner of cooking such as *fried* or *sinuam*.
22. Words like *isa*, *dalawa*, *tatlo*, etc. are all of Original Austro-nesian origin.
23. Lexical items like *tahó*, *tahuri*, *tokuwa*, *totso*, *sotanghon*, etc.
24. The result of Himes' study indicates that componential analysis does not in every instance captures the speaker's psychological perception.



CHAPTER 4

CONCLUSION

4.0. INTRODUCTION

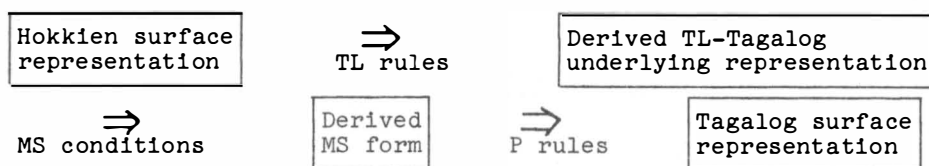
This study, which focuses on the Hokkien borrowings in Tagalog, has come up with certain significant findings. This final chapter summarises the findings in Section 4.1., reviews in detail Manuel's *Chinese Elements in the Tagalog Language* in the light of the foregoing findings in Section 4.2. and proposes areas for future research in Section 4.3.

4.1. REVIEW OF FINDINGS

Hokkien borrowings in Tagalog may be subsumed under the category of direct loans or loanwords; they provide the data for the phonological and the semantic analyses in Chapters 2 and 3 respectively.

Examining and analysing the direct loans of Hokkien in Tagalog in phonological terms has led to two main 'discoveries': (1) the emergence of a set of trans-linguistic rules which apply to the original word as they enter the recipient language, and (2) the feasibility of applying the generative phonology framework to a description of direct loans.

Every Hokkien Chinese word that enters into the Tagalog language has to undergo a set of trans-linguistic rules, a set of Tagalog morpheme structure conditions and a set of Tagalog phonological rules. The first and the last each consists of ordered rules while the second consists of unordered conditions. The following is a diagrammatic view of what happens to a Hokkien loanword as it moves from one language system to another:



A Hokkien word, upon its entrance as a loanword into Tagalog, undergoes a series of TL rules resulting in the derived trans-linguistic form which is at the same time the Tagalog underlying representation. The Tagalog underlying representation has to conform to certain MS conditions resulting in a derived morpheme structure form which has to still undergo the relevant Tagalog phonological rules before it emerges as a Tagalog surface representation.

A few comments in relation to the theoretical construct is in order. The ordering of TL rules provides independent motivation for the ordering of P rules, and even for that of transformational rules in a syntactic component of a transformational generative grammar. Indeed, the notion of rule-ordering as part and parcel of the language acquisition device is not to be ignored in a theory of language borrowing.

A theory of borrowing has its linguistic implications. It could lead to a typology of borrowings wherein the latter can be classified and categorised on the bases of the number and the complexity of the TL as well as the P rules of a language they have undergone. Such a typology would very likely reflect the degree of complexity of a donor language as opposed to a borrowing language or vice versa. This seems to be the case in relation to Hokkien forms borrowed into Tagalog; the number of TL rules applicable to single forms outnumbers the number of P rules of Tagalog as a glance at any word derivation will show. Furthermore, the complexity or non-complexity of the phonological structure of any language is likewise reflected in the TL and the P rules; again, the case of Hokkien versus Tagalog can attest to this.

Another implication of the theory is comparative in nature: loanwords of different kinds, that is, coming from different language systems, can be studied - again using TL and P rules as bases. In relation to this, questions of the following sort are bound to arise: Is there a pattern evolving from a comparative study of TL and P rules that has applied on the different kinds of loanwords to warrant Sapir's concept of overall 'drift' (1921)? Can a comparative study of loanwords in these terms reveal a universal set of TL and P rules, thereby providing additional empirical evidence to discount or to 'count' what has been claimed as language universals? Will the present existing typology of languages find independent motivation from a comparative study of

the borrowings in the respective languages?

In relation to point No. 2, sound changes could be formally stated in rules that can capture the general phonological phenomena in Tagalog and the trans-linguistic sound processes. More important still, the model could provide valid and logical explanations for seemingly irregular forms, that is, forms which manifest an apparent deviation from regular sound correspondences.

It is also evident from the foregoing findings that the use of distinctive features and binary notation has simplified phonological generalisations extensively, a claim constantly made by generativists. For instance, in the Tagalog P rule on vowel lowering, the phonological process of vowel lowering is simply and generally captured through a change of feature values from + to - for the feature high. The rule, in this manner, becomes much more linguistically significant, a fact borne out by the other TL and P rules.

The Hokkien loanwords on kinship and cookery, being more homogeneous than others, were subjected to more common techniques of semantic analysis: componential and taxonomic analyses. While the Hokkien loanwords in the domain of kinship constitute only nine out of a total of forty kin terms, they are nevertheless of extreme significance since their presence helps to fill in certain structural gaps within the Tagalog kinship system. Looking at the loanwords on kinship in terms of componential analyses previously made revealed certain important cultural facts: that Tagalog culture places great store by kin terms that reflect its emphasis on respect and deference to relatives older than Ego; in conjunction with this, the view that the nuclear family is the most important unit within the kinship system has resulted in the borrowing of Hokkien kin terms that can capture the structural relationships within the nuclear family. The semantic dimension of birth order which covers the kin terms *kúya* 'appellation given to Ego's elder brother', *díko* 'appellation given to Ego's second elder brother', *sangkó* 'appellation given to Ego's third elder brother', *áte* 'appellation given to Ego's elder sister', *dítse* 'appellation given to Ego's second elder sister', *sansé* 'appellation given to Ego's third elder sister' appears as a result of these borrowings. The implication of this is that componential analysis can be used as an additional technique in determining the degree of linguistic acculturation or integration of loanwords.

The presence of the affinal kin terms of Hokkien origin, namely, *slyáho* 'address term for Ego's elder sister's husband' and *insó* 'address term for Ego's elder brother's wife' are functionally different from their Hokkien equivalents: in the latter, they are used as referential

terms while in the former, they are used as address terms. This phenomenon demonstrates the principle of selective borrowing since what the Tagalog kinship system needs is a pair of kin terms for addressing Ego's elder siblings' spouses, not for referring to them. The latter function is already adequately taken care of by the Tagalog bayaw '*referential term for Ego's elder sister's husband*' and hipag '*referential term for Ego's elder brother's wife*'.

Analysing the loanwords on kinship has finally demonstrated that borrowings took place not because there simply was a tolerance for the Chinese nor because the Chinese influence was so heavy that borrowing was inevitable. The Tagalogs borrowed from the Chinese because of a real need to cover up the terminological gaps in the Tagalog kinship terminology.

A taxonomic analysis of the Hokkien loanwords on cookery revealed that a great number were concentrated on the category of raw, although the loanwords under the category of cooked constitute also a high percentage; the category instruments had the smallest number of loanwords. From these facts, one can conclude that (1) contact with the Hokkien people made the Tagalogs aware of the presence of untapped raw materials that could be used as food, (2) the Tagalogs had simple ways of cooking before the coming of the Hokkien people which eventually introduced newer and more complex methods of cooking to the Tagalogs, and (3) the Tagalogs were more interested in ways of preparing and cooking the raw materials in their midst rather than in the utensils used for the preparation of such materials.

On a lower level of taxonomic analysis, the following categories had a higher ranking than others: meat, vegetables and soy bean products indicating that the Tagalogs borrowed heavily in these areas. The category boiled and steamed ranked highest under the level of manner of cooking, a finding which confirms the general impression that such manner of cooking is very common among the Hokkien people.

4.2. MANUEL'S "CHINESE ELEMENTS IN THE TAGALOG LANGUAGE" REVISITED

For a non-native speaker of Chinese like Manuel to come up with a preliminary treatment of the Chinese borrowings in the Tagalog language is truly admirable and commendable. This study is indebted to him for a good number of loanwords (his Wordlist I) which was used as data for the phonological analysis in Chapter 2.

To arrive at his wordlist I, which consisted of 381 words constituting direct loans or loanwords, Manuel was guided by the following considerations:

1. phonetic correspondences
2. semantic relationships
3. the exclusion of a Chinese word from Original Indonesian or Original Austronesian
4. the exclusion of a Chinese word in Malay
5. the inclusion of a Chinese word in Philippine languages which are sure to come in contact with outside influences
6. the exclusion of a Chinese word from Philippine languages which, because of their isolation, could not have had contact with foreign influences
7. the etymologies found in the Chinese words.

These seven steps which Manuel followed point to the thoroughness with which he went about gathering and checking his data. It appears that the presence of steps three to six is premised on the theory that the Chinese words in this list are relatively recent since (1) they do not appear in Original Indonesian or Original Austronesian, hypothetical constructs supposedly of pre-historic vintage, (2) they appear in Philippine languages which came in contact with foreign elements implying that such languages must have been deeply ensconced before historic times, and (3) they do not appear in Malay and other 'isolated' Philippine languages with the same implication as that of No. 2.

Although Manuel points out that phonetic correspondences help him to establish the 'Chineseness' of a word, he does not systematically present these correspondences in formal terms. He would occasionally state a sound law: "the unvoiced velar in Chinese has a tendency to become voiced in Tagalog" (1948:20) in reference to the Tagalog word *gapang*, but these are rare and therefore gives one the impression that in phonological terms, his work is bereft of a certain degree of 'scientificness'.

It is obvious that Manuel's difficulty or reluctance at establishing sound laws is due to the fact that he tries to trace the words in this list to several Chinese languages, namely, Cantonese, Fukien (Hokkien), Mandarin, which are all late developments of ancient Chinese, and even to archaic Chinese as in Tag. *bingi* 'deaf' from archaic Chinese *beng* (*blind*), *-hi* (*ear*) 'deaf'. (Manuel encloses literal meanings in parenthesis and idiomatic meanings in single quotation marks.) Certainly, to wield phonetic laws for several languages is a tedious task and would require familiarity with the phonological system of each individual language, but this is the very heart of the comparative method and any linguistic task that is comparative in nature cannot and must not ignore it. In relation to ascribing certain loanwords to archaic Chinese, one fundamental problem arises: archaic Chinese is

older than ancient Chinese, the parent of such modern Chinese languages as Mandarin, Cantonese and Fukien, and therefore is not likely to be used at all during the period when the direct loans entered the Tagalog language. How valid, then, are these loanwords?

To illustrate the importance of phonetic sound laws, some examples will here be given, and since the investigator is not familiar with the sound systems of Mandarin, Cantonese, and archaic Chinese, only those from Hokkien will be given. Manuel gives Tagalog *hingal* 'gasp, pant' as coming from Hok. *hieng* (*chest, breast*), -hàh 'breast cavity'. In Hokkien, the lateral *l* does not occur in final position as the Hokkien etymology can show. The first syllable of the word follows the sound rule established in Chapter 2 of this study, but the final syllable does not follow any rule, yet Manuel gives no explanation for the appearance of final *l* if *hingal* is indeed Hokkien in origin. Also in Hokkien, the nasals *m*, *n*, and *ŋ* occur in final position, and since these sounds also occur in the same position in Tagalog, they should not as a rule undergo value changes as *ŋ* becomes *n* in Tagalog as in *hikan* 'term used for calling a pig' which Manuel ascribes to Hok. *ti* (*pig, hog*), -kang 'male hog or pig', or as *n* becoming *ŋ* as in Tag. *himbing* 'sound or deep sleep' from Hok. *him* (*happiness, joy, pleasure*) and *bin* (*sleep*), 'sound sleep', or as *m* becoming *ŋ* as in Tagalog *hunghang* 'fool, simpleton, foolish, crazy' from Hok. *hoŋ* (*fictitious, false dream*), -ham 'exaggeration, hyperbole, boasting'. If Tagalog *kiri* 'coquettish, sensual, lascivious woman' is supposed to come from Hok. *ki* (*prostitute*), -lǐ (*female*) 'prostitute, harlot, strumpet' as Manuel would have it, the correspondence of Hokkien *l* is Tagalog *r*, and yet, if these loanwords are recent borrowings and therefore, should retain very close phonetic similarities to their Hokkien counterparts, *kiri* would have to be ruled out. Examples of this sort are many and tend to discredit somewhat Manuel's Wordlist I, which should be accepted with some reservations.

It is apparent that Manuel places great emphasis on the etymologies that Chinese offers: "After sifting the suspected words through this linguistic filter (Steps 1-6) doubts were finally resolved by the etymological explanation which Chinese has to offer" (1948:9). In the context of this statement, supposedly loanwords that do not follow strictly the phonetic correspondences, are verified as authentic if the etymologies can explain the Chinese origins. Indeed, in his conclusion, Manuel advocates for a special place for etymology in Austronesian linguistics saying that:

In Indonesian and Austronesian linguistics two fundamental approaches have so far been utilized to advantage and stressed; these are phonetics and semantics, or phonetic correspondences and semantic relationships.... They are fundamental - but fundamental only initially in my opinion. (1948:123)

An example of a word whose etymology does not sound convincing is Tagalog *lansa* 'fishy, smelly, putrid odor or taste' from Hokkien *lân* (putrified matter, pus), *-c^hŋ* (abscess, wound, ulcer, purulent wound). Other examples which are equally unconvincing are: Tag. *layon* 'purpose, aim, object, intention, aspiration' from Hok. *lai* (come, for the purpose of) and *óŋ* (come and go) 'mutual relation'; Tag. *liham* 'letter, written message, correspondence, missive' from Hok. *lai* (interior, within), *-hâm* 'inscripcion interior de la tablilla gentilica'; Tag. *saging* 'banana' from Hok. *giêng* (name of a fruit), *-cio* (banana) 'banana' which has undergone metathesis according to Manuel; Tag. *sumbong* 'complaint, report' from Hok. *siong* (lawsuit, complain; to accuse), *-bún* (to hear) 'to hear one's complaint'.

It was stressed in Chapter 2 that a Hokkien word may have two kinds of meanings: the literal and the idiomatic meaning; the literal meaning is inherent in the individual morpheme while the idiomatic meaning results from a combination of morphemes. The meanings of the Hokkien loanwords that enter the Tagalog language are the idiomatic ones, not the literal ones. Thus, a Hokkien word like *suā+hé* 'a species of small shrimps' consists of two morphemes: *suā* 'sandy' and *hé* 'shrimp' but it is the meaning of 'a species of small shrimps' that the Tagalog word *swahe* acquires. In view of this, some of Manuel's entries have etymologies where the combination of certain Chinese morphemes are very unlikely. For instance, Tag. *tatay* 'father' cannot be of Chinese origin since the morphemes *ta* (big, large, higher, elder), *-tai* (generation) 'older generation' are never used in this combination to mean 'father'; neither can Tag. *impok* 'save especially money' come from Hok. *ìm* (guard, protect, envelope, cover) and *po* (precious, valuable; money). No idiomatic meaning for *ìm+po* is provided by Manuel.

At other times, Manuel gives etymologies from two different languages for one single loanword, as in Tag. *suklay* 'comb' which he designates as coming from Cantonese *so* (comb) and Fukien *loaya* (comb) with both morphemes meaning 'comb'. The result is an etymology that is evidently contrived, and cases of these are even more apparent in his Wordlist II. It is logical to see etymologies of words coming from one and the same source language but not from two different languages since a contact situation that leads to borrowings is between a receiving language and a single source or donor language.

Manuel's Wordlists II and III are not very different from each other although he refers to the former as "Tagalog and Original Austronesian Wordbases Found in Chinese", and to the latter "Chinese Monosyllabic Words as Possible Sources of Tagalog and Austronesian Roots". In both lists, he attempts to show the Chinese content and in these lists, as

well as in Wordlist I, he seems to be more pre-occupied with etymological evidence than with phonetic evidence. Again, in these lists, there is no attempt to establish regular sound correspondences between the Chinese languages and Tagalog. In failing to do this, Manuel's lists missed a great many Tagalog word with a possible Hokkien base. The present study has succeeded in locating more words that exhibit a possible Hokkien base than those listed in Manuel because regular reflexes of Original Austronesian sounds in Hokkien were initially established.

Manuel's concern with etymologies in Wordlist II again leads him to establish absurd origins as in Tagalog *kimbot* 'movement of any orifice, such as the anus, etc.' from Hok. *im* (*vagina*), -but (*the female organ of generation*), Tag. *ipon* 'collect, gather, heap, pile' from Hok. *he* (*put, place, deposit*), -pun (*put or empty capital on something*), Tag. *timbang* 'weight, balanced' from Hok. *tìm* (*to lift a thing to test or calculate its weight*), -tâng (*heavy, weighty*). The etymologies he establishes for his Wordlist III, however, are within the confines of logic and acceptability, and appear to be less contrived than Wordlists I and II since his concern is to show how a syllable in a Tagalog word can be traced to a single Chinese morpheme.

On the basis of the data he presents, Manuel cannot seem to make a conclusion one way or the other regarding the relationship of Chinese to Tagalog and Original Austronesian. His Wordlist II leads him to suspect that Tagalog and Original Austronesian had a "very primitive, if not an original connection with Chinese" (1948:70); later, tendencies of the Austronesian languages towards reduplication of the root constitute "one of the infallible clues...that may lead to the establishment of a direct or collateral kinship between the Austronesian original tongue and prehistoric Chinese" (1948:92). Further on, on the basis of his theory that affixes in Tagalog take the place of tones as in the case of Tagalog *magbili* and *bumili* he suspects that "either Tagalog drew from Chinese, or Tagalog and Chinese drew at one time or another from some primitive language" (1948:96). Finally, in his conclusion, he states: "I do not want to imply here that the Original Austronesian language branched out directly from the Chinese, although that possibility is not remote" (1948:120) and then "the available evidence on hand points to the likelihood that Original Austronesian grew from some Sinitic speech or from a language family which was monosyllabic" (1948:122).

Apart from his inability to make a final statement regarding the question of Chinese-Tagalog-Original Austronesian relationship, Manuel's other conclusions, similar to those arrived at independently in this study, namely, the limitations of the comparative method, are sound. Although Manuel realises that Original Austronesian is not as old as

the true, real parent of the Austronesian languages should be, he could not offer any approximate date for Original Austronesian. One other conclusion which Manuel makes and which this study concurs is that Dempwolff's Original Austronesian is only a later development of some earlier language, and as such, therefore, very likely contains elements which should not be part of a language construct called Original Austronesian.

Semantic analysis of the loanwords has been totally disregarded by Manuel. The closest thing to a semantic analysis is the categorisation of the 381 loanwords into twenty five semantic domains; percentages are provided to indicate which domain has the biggest number of loanwords. The first ten domains are given in the order of their rank:

1. food and culinary terms	20%
2. action words	16.3%
3. terms for abstract ideas or qualities	10.8%
4. goldsmithing and blacksmithing terms	9.2%
5. kinship and social relationship	6%
6. names of tools, implements, devices	4.5%
7. zoological terms	3.7%
8. trade, commerce, economy	2.6%
9. agriculture	2.4%
10. gambling and games	2.4%

In view of the criticisms raised against the words in Wordlist I, a revision is expedient; this means that the total number of loanwords will not be 381, and concomitantly, the percentage of the words in each semantic domain will be lower. A cursory examination of the words in each domain shows that action words and terms for abstract ideas or qualities may not be as numerous as Manuel claims.

Assigning percentages to semantic domains does not capture certain cross-cultural insights as well as the techniques of componential and taxonomic analysis do. The results of the findings in Chapter 3 of this study indicate that similar techniques of semantic analysis should be applied to the Chinese loanwords in the other semantic domains.

4.3. IMPLICATIONS FOR FUTURE RESEARCH

The lexicon of Tagalog, as any Tagalog dictionary shows, is a conglomeration of borrowings from various foreign tongues of which Spanish constitute the highest percentage (see Chapter 3, Section 3.2.3.). To be sure, most of the borrowings have already been treated by scholars in the past, but none of them has ever utilised the generative phonology framework, it being a recent development in the field of linguistics. Since this framework has been shown to be feasible in this study,

suggestion is here being made that it be used in the study of other loanwords so that a typology of loanwords classified and categorised according to the number of TL and P rules that they have undergone can be made.

Another implication of this study for future research lies in the direction of distinguishing the linguistic borrowings from other languages into direct loans, hybrids or loanblends, calques, loan creations, etc. Such a task would provide invaluable information to dictionary makers whose works would be enhanced if entries are specified for the kind of borrowing that is involved.

Semantic analyses such as the ones utilised in Chapter 3 should also be applied to other loanwords in the domains of kinship and cookery for purposes of (1) determining the use of componential analysis in the domain of kinship as a means of gauging a speaker's psychological validity, (2) validating the use of componential analysis as a tool to gauge linguistic acculturation, something which gave positive results in the present study, and (3) indicating, on a comparative basis, through the use of taxonomic analysis which culinary categories reflect which donor language so that conclusions of a multicultural nature could be made.

Himes (1972) came up with an alternate semantic analysis which he calls "colloquial analysis" (1972:117) for kinship terminology. Under such an analysis, kinsmen are not perceived with a rationalising process, that is "Father" is "not perceived as a male, consanguineal, lineal, C⁺¹ (one generation above Ego) kinsman" but simply as "father". The speaker may be aware of the "characteristics comparable with the components of an analysis, but he does not review them, one by one, on assigning the referent to a kin class". An area for future research could utilise the colloquial analysis in the domain of cookery to see if the speaker perceives any characteristic differences when he uses culinary terms of one single linguistic origin or of two or more linguistic origins. For instance, a Tagalog speaker may perceive the term *syopaw* as distinctly Chinese, but may not perceive *pesa* in the same way. Interesting conclusions in relation to the notion of lexical acculturation will undoubtedly arise from such a study.

In Philippine linguistics, an area for future research would be the search for Hokkien loanwords in other Philippine languages. Another possible area for future research would be the loanwords from other Chinese languages in the Philippine languages, including Tagalog. This would hopefully result in ferreting out other Chinese sources besides that of Hokkien.

For the Philippine languages in possession of Hokkien loanwords, sound changes may be formalised in generative phonological rules within the context of the same theoretical phonological construct outlined in Chapter 2. What would likely remain constant would be the TL rules, that is, the same TL rules on detonalisation, de-aspiration, morpheme boundary deletion and all the rest would be applicable since the loanwords come from the same linguistic system as Hokkien and since the recipient languages are all related to Tagalog. The MS conditions and the P rules are sure to vary from language to language but after these have been noted, the possibility of a common theoretical construct of loanwords, a la Constantino's common grammar for the Philippine languages (1965) may result.

APPENDIX A
TAXONOMIC CLASSIFICATION OF HOKKIEN LOANWORDS ON COOKERY

- | | |
|--|---|
| <ul style="list-style-type: none"> 1. Cookery 1.1.1. Raw 1.1.1.1. Meat 1.1.1.1.1. Pork cuts <ul style="list-style-type: none"> a. tito b. kasim c. paykot d. liyempo 1.1.1.1.2. Beef cuts <ul style="list-style-type: none"> a. goto b. kinse c. kamto 1.1.1.1.3. Fowls <ul style="list-style-type: none"> a. ulikba 1.1.1.1.4. Fish and other seafood <ul style="list-style-type: none"> a. swahe b. tuwabak c. tuwakang d. pehe 1.1.1.2. Vegetables <ul style="list-style-type: none"> a. sitaw b. upo c. utaw d. toge e. yansoy | <ul style="list-style-type: none"> f. kutsay g. kintsay h. petsay 1.1.1.3. Soy Bean Products <ul style="list-style-type: none"> a. tokwa b. tahuri c. tawpe d. swatanghon e. totso 1.1.1.4. Rice Products <ul style="list-style-type: none"> a. bihon b. bilu-bilo 1.1.1.5. Flour Products <ul style="list-style-type: none"> a. miswa b. miki 1.1.2. Cooked <ul style="list-style-type: none"> 1.1.2.1. Manner of Cooking <ul style="list-style-type: none"> 1.1.2.1.1. Fried <ul style="list-style-type: none"> a. ukoy b. bitso c. pansit 1.1.2.1.2. Boiled and Steamed <ul style="list-style-type: none"> a. tikoy b. biko c. siyomay |
|--|---|

- d. siyopaw
 - e. pesa
 - f. batutay
 - g. tiim
 - h. taho
- 1.1.2.1.3. Stewed
- a. lome
 - b. humba
 - c. kiyamlo
 - d. padpo
- 1.1.2.1.4. Soupy
- a. mami
 - b. suam
 - c. am
 - d. batsoy
- 1.1.2.2. Type of Food
- 1.1.2.2.1. Meat
- 1.1.2.2.1.1. Port Cuts
- a. tito
 - b. kasim
 - c. paykot
 - d. liyempo
- 1.1.2.2.1.2. Beef Cuts
- a. goto
 - b. kinse
 - c. kamto
- 1.1.2.2.1.3. Fowls
- a. ulikba
- 1.1.2.2.1.4. Fish and other seafood
- a. swahe
 - b. hibe
 - c. tuwabak
 - d. tuwakang
 - e. pehe
- 1.1.2.2.2. Vegetables
- a. sitaw
 - b. upo
 - c. utaw
 - d. toge
 - e. yansoy
 - f. kutsay
 - g. kintsay
 - h. petsay
- 1.1.2.2.3. Soy Bean Products
- a. taho
 - b. tahuri
 - c. tokwa
 - d. swatanghon
 - e. totso
 - f. tawpe
- 1.1.2.2.4. Rice Products
- a. bihon
 - b. bilu-bilo
- 1.1.2.2.5. Flour Products
- a. miswa
 - b. miki
- 1.1.2.3. Food Preparation
- a. toyo
 - b. tawsi
 - c. heko
 - d. kelwa
 - e. angkak
 - f. sangke
 - g. hibe
- 1.2. Instruments
- a. siyanse
 - b. bithay
 - c. bilao
 - d. puhiya
 - e. lansong

APPENDIX B
 CLASSIFICATION OF HOKKIEN LOANWORDS BY LEXICAL CATEGORIES

1. Man-Visible

A. Anatomy

sungki

c^hùn+k^hì 'protruding tooth'; (c^hùn 伸 'protruding',
 k^hì 牙 'tooth')
 sunkíq 'buck tooth'

B. Adornment, Dress, Scent

bimpo

bĩn+pǒ 'face towel'; (bĩn 面 'face', pǒ 布 'towel')
 bimpó 'face towel'

bakiya

bāk+k^híáq 'wooden clogs'; (bāk 木 'wood', k^híáq 屐
 'clogs, slippers')
 bakyáq 'wooden clogs'

híkaw

hĩ+kaû 'earrings'; (hĩ 耳 'ear', kaû 鉤 'to hook, hook')
 híkaw 'earrings'

husi

hó+sē 'quality cotton'; (hò 富 'rich, good', sē 絲 (烈)
 'cotton yarn')
 húsi 'cloth woven from silk thread or fibers'

lawlaw

laù+laũ 'sloppy'; (laù 老 'old')
 lawláu 'dangling downward, loose'

sakiya

c^hâ+k^híáq 'wooden clogs'; (c^hâ 柴 'wood', k^híáq 屐
 'clogs, slippers')
 sakyáq 'wooden clogs'

sansoy

sâ+suī 'dress fringes'; (sâ 衫 'dress', suī 垂 'fringes')
 sansóy 'a covering made of palm leaves or fibre fitted and
 sewed together used by farmers for protection against rain'

tiho

té+hò 'the best'; (té 第- 'prefix for ordinal numbers',
 hò 好 'good')
 tiho 'bars of gold'

tutsang

t^haū+cǎŋ 'braid'; (t^haú 頭 'head', cǎŋ 髮 'queue, tail
 worn on the head, pigtail')

tutsaŋ 'short hair on woman's head, queue'

C. Disease, Medicine

apiyan

â+p^hiǎn 'opium'; (鴉片 'same')
 apyań 'opium'

kuyo

kō+ióq 'medical plaster'; (kō 膏 'ointment', ióq 藥
 'medicine')

kúyoq 'kind of Chinese plaster applied to boils'

pinse

pièn+sē 'borax'; (硼砂 'same')
 pinsé 'borax'

singkak

sîn+k^hàk 'medicine with bitter taste for diarrhoea'; (sîn
 身 'body', k^hàk 殼 'husk, shell')

sĩŋkák 'drug of bitter taste, for diarrhoea, indigestion, etc.'

D. Shelter and Relevant Instruments

huwipe

huè+pě 'torch'; (huè 火 'fire', pě 把 'bundle')
 hwípe 'torch'

katang

kâq+tāŋ 'to carry something heavy'; (kâq 'to carry', tāŋ
 'heavy')

kátaŋ 'support, stand'

puntaw

pùn+taù 'dust pan'; (pūn 糞 'dung, manure', tàù 斗 'pan')
 puntáw 'dustpan'

susi

só+sí 'key'; (sò 鎖 'lock', sí 匙 'key')
 súsiq 'key'

tanglaw

tiên+laú 'light'; (tiên 灯 'lamp', laú 楼 'tower')
 taŋláw 'light'

tinghoy

tiên+huè 'wick lamp'; (tiên 灯 'lamp', huè 火 'fire')
 tiŋhóy 'wick lamp in glass filled with oil'

tingsim

tiên+sîm 'lamp wick'; (灯 心 'same')
 tiŋsim (timsim) 'lampwick'

2. Man-Invisible

A. Mind, Conscience, Soul, Personality

huwana

huân+à 'term used to refer to Filipinos by Hokkien speakers';
 (huân 番 'foreign', à 仔 'son')
 hwaná 'same'

sanglay

sǎŋ+laĩ (?) 'to bring or deliver goods'; (sǎŋ 送 'to send',
 laĩ 来 'over')
 siên+lì+lán+laí (?) 'businessman comes'; (siên+lì 商
 'business', lán 人 'people', laí 来 'come')
 saŋláy 'Chinese trader'

B. Qualities

gian

giǎn 'to like, to desire something'; (艱 'same')
 gyan 'developed fondness or propensity for an activity'

gunggong

gōŋ+gōŋ 'stupid'; (蠢 'same')
 guŋgóŋ 'stupid'

hiya

hiáq* 'forehead'
 hiyaq 'shame, embarrassment, timidity'

kiya

kiá 'to walk'; (行 'same')
 kiya 'peculiar or characteristic gait or posture'

selang

sē+lán 'Westerners' (?); (sē 西 'West', lán 人 'people')
 sélan 'delicacy, fastidiousness'

samlang

â+câm+lán 'dirty person'; (â+câm 肮脏 'dirty',
 lán 人 'people')
 samlán 'dirty, unsanitary'

singki
 sîŋ+k^hèq 'newcomer'; (sîŋ 新 'new', k^hèq 客 'visitor')
 siŋkíq 'greenhorn, beginner'

suwitik
 siū+tièk 'enemy'; (siū 仇 'revenge', tièk 敵 'enemy')
 switik 'artful, sly, cunning'

tuwatsat
 tuā+c^hát 'thief'; (tuā 大 'big', c^hát 賊 'thief')
 twatsat 'fool, deceive'

C. Activities

bantiti
 bânt^hî+t^hî 'very slow'; (bân 慢 'slow', t^hî+t^hî*
 'intensifier')
 bantitiq 'delay'

kiyaw-kiyaw
 kiaù+kiaù+k^haũ 'useless, incessant talking';
 (kiaù+kiaù* 'incessant', k^haũ 哭 'to cry')
 kyaw-kyaw 'useless fretting or flurry'

kuwekong
 kuê+kôŋ 'pimp' 'rooster'; (kuê 鷄 'fowl, hen, cock';
 kôŋ 公 'male')
 kwekong 'pimp'

paslang
 p^hàq+sí+lán 'to kill'; (p^hàq 打 'to hit, to beat',
 sí 死 'dead', lán 人 'people, person')
 paslán 'to kill'

pusiyaw
 pūt+siaũ 'unfilial, disobedient to parents'; (pūt 不
 'not', siaũ 肖 'filial')
 pusyáw 'paleness, discolouration'; discredit, dishonour'

suwat
 cuát 'to cut off'; (色 色 'same')
 swat 'to be rebuffed'

D. Expressions

buwisit
 bō+uî+sít 'unlucky'; (bō 無 'no', uî 衣 'clothes',
 sít 食 'food')
 bwisit 'unlucky'

suya
 suē+à 'unlucky'; (suē 衰 'to lose good fortune', à*
 'enclitic suffix')
 suyaq 'disgust, surfeit'

tiyak

taî+ia̍k* 'perhaps, probably' (?); (大 'big';
'appointment'), tièk+k^hàk 'certainly' (?): (的確
'certain')
tyak 'sure, certain'

3. Animals

A. Kinds of (unslaughtered)

guya

gū+à 'young cow, carabao'; (gú 牛 'cow', à 仔 'son')
guyaq 'young of carabao'

kiti

kê+tî 'chick'; (kê 鷄 'hen, fowl, cock', tî 弟 'young,
tender')
kití 'chick'

kuling

kô+liēn+ciaù 'singing bird'; (kô 歌 'song', liēn 玲
'to tweet', ciaù 鳥 'bird')
kuliŋ 'a kind of bird'

lawin

laū+iên 'hawk'; (laū 老 'old', iēn 鷹 'hawk')
lāwin 'hawk'

suwahe

suā+hé 'small species of shrimps'; (suā 沙 'sand',
hé 蝦 'shrimp')
swáhe 'species of small shrimps'

tanga

t^hǎŋ+à 'worm'; t^hǎŋ 蟲 'worm', à 仔 'son, small')
taŋá 'potato bug or worm'

tuwabak

tuā+bâk+hí 'big-eyed herring'; (tuā 大 'big', bâk 目
'eye, hí 魚 'fish')
tuwabák 'big-eyed herring'

tuwakang

tuā+kâŋ+hí 'big dilis'; (tuā 大 'big', kân 江 'river',
hí 魚 'fish')
twakaŋ 'adult dilis'

B. Anatomy

C. Actions

- D. Qualities
 sabsab
 sàp+sàp* 'term used to describe improper way of eating, like a pig'
 sabsáb 'manner of eating peculiar to hogs and dogs'
- E. Herding
4. Plants
- A. Kinds of Unpicked, Unharvested Plants
- B. Anatomy
- C. Qualities
 samiyo
 sàm+ióq 'to sprinkle medicine'; (sàm 散 'to sprinkle',
 ióq 藥 'medicine')
 samyóq 'fragrance, pleasant or agreeable smell'
- D. Activities
5. Food
- A. Harvested and Slaughtered
- dikiyam
 dî+kiám 'salted, preserved plums', (dî 李 'plum',
 kiám 鹹 'salted')
 dikiyam 'salted, preserved plums'
- bataw
 pà+taũ 'climbing plant with edible pods'; (巴豆 'same')
 bátaw 'same'
- ginging
 giēŋ+gièŋ* 'a kind of sweet, fleshy fruit'
 giŋgiŋ 'shrub with sweet fleshy fruit'
- goto
 gū+tô 'ox or cow's tripe'; (gū 牛 'cow, ox', tô 肚
 'stomach, insides')
 góto 'ox or cow's tripe'
- kamto
 kám+tô 'entrails of sow or ox'; (膾 肚 'same')
 kámto 'meat-lie part taken from entrails of sow, ox, used
 as ingredient in kare-kare'
- kasim
 kàq+sĩm+bàq 'back portion of pig'; (kàq 甲 'back',
 sĩm 心 'center', bàq 肉 'meat')
 kasim 'back portion of pig'

kinse

kièn+cì 'foreshank of cow used in soup'; (腿股 'same')
 kinse 'foreshank of cow used in soup'

kintsay

k^hin+c^haĩ 'celery'; (k^hin 芹 'name of plant', c^haĩ 菜 'vegetable')

kintsay 'celery'

kutsay

k^hû+c^haĩ 'green leek used as food flavouring'; (k^hû 葱 'name of plant'; c^haĩ 菜 'vegetable')

kutsáy 'green leek used as food flavouring'

liyempo

liám+tò+bàq 'stomach portion of pig'; (liám+tò* 'stomach',
 bàq 肉 'meat')

lyémpo 'barbecue hunk of pork similar to lechon'

paykot

paĩ+kùt 'spare ribs'; (paĩ 排 'rows', kùt 骨 'bone')

paykot 'spare ribs'

petsay

pēq+c^haĩ 'Chinese cabbage'; (pēq 白 'white', c^haĩ 菜 'vegetable')

petsáy 'Chinese cabbage'

sitaw

c^hĩ+taũ 'species of string beans'; (c^hĩ 青 'green',
 taũ 豆 'bean')

sitaw 'species of string beans'

tito

tĩ+tò 'pigs's tripe'; (tĩ 猪 'pig', tò 月肚 'stomach,
 insides')

títóq 'pigs's tripe'

toge

taũ+gé 'bean sprouts'; (taũ 豇 'bean', gé 芽 'sprout')

tóge 'bean sprouts'

ulikba

ō+lièk+bàq 'white-feathered or light-skinned fowl with dark
 meat'; (ō 黑 'black', lièk 綠 'green', bàq 肉 'meat')

ulikbàq 'same'

upo

ō+pú 'gourd'; (ō 葫 'name of plant', pú 瓢 'gourd')

úpo 'gourd'

utaw

ō+taũ 'soy bean'; (ò 黑, 'black', taũ 豆 'bean')

útaw 'soy bean'

yansoy

iān+suî* 'coriander'

yansóy 'coriander'

B. Prepared Dishes and their Qualities

am

àm 'rice broth'; (泔 'same')

am 'rice broth'

angkak

âŋ+k^hâk 'reddish leaves for fermentation purpose'; (红 'red', k^hâk 壳 'shell, husk')

angkáak 'reddish leaves for fermentation purpose'

batsoy

bàq+cuì 'soup dish with loin of pork as main ingredient';
(bàq 肉 'meat', cuì 水 'water')

bátsoy 'chopped and sauteed entrails of pig with soup'

bihon

bî+hùn 'white rice noodles'; (bì 米 'rice', hùn 粉 'flour')

bíhon 'white rice noodles'

biko

bí+kō 'sweetened rice cake'; (bì 米 'rice', kō 糕 'cake')

bíko 'sweetened rice cake'

bilu-bilo

bí+lū 'sticky rice'; (bì 米 'rice', lū 糯 'sticky')

bilú-biló 'kneaded rice flour balls used in guinataan'

bitso

bít+cò 'fried cake made of rice flour'; (bì 米 'rice', cò 糰 'balls')

bitso 'fried cake made of rice flour'

heko

hé+kō 'dark sauce from salted shrimps', (hé 蝦 'shrimp',

kō 膏 'fat, sauce')

héko 'dark sauce from salted shrimps'

hopiya

hō+pià 'sweet mungo-bean cake'; (hò 好 'good', pià 餅 'cake, pastry')

hópyaq 'sweet mungo-bean cake'

humba

hôn+bàq 'highly spiced dish of pork'; (hôn 卤 (火) 'saucy',
bàq 肉 'meat')

humbá 'highly spiced dish of pork or chicken'

keluwa

kaî+luáq 'powdered mustard'; (kaî 芥 'a kind of plant',
luáq 辣 'spicy hot')
kélwaq 'powdered mustard'

hibe

hē+bì 'dried, salted shrimps'; (蝦 米 'same')
híbe 'same'

kiyamlo

kiâm+lò 'stewed dish' (?); (kiâm 鹹 'salted', lò 鹵
'stewed')
kyámlo (kimlo) 'Chinese dish of eggs or noodles'

langlang

lán+lán 'Chinese'; (làn 咱 'we, our'; lán 人 'people')
lanlán 'term used to describe a way of noodle preparation
literally meaning Chinese'

lome

ló+mī 'noodle dish with pork and chicken cooked in cream
style'; (ló 鹵 'stew', mī 麵 'noodle')
lóme 'same'

lumpiya

lún+piã 'dish of sliced vegetables like carrots, cabbage,
string beans and tokwa, mixed and stewed and wrapped in
doughy wrappers'; (lún 春 (潤) 'spring', piã 餅 'cake,
pastry')
lumpyáq 'rolled dumpling'

mami

màq+mī 'noodle dish with pork and chicken cooked in soupy
style'; (màq 肉 'meat', mī 麵 'noodle')
mámi (máme) 'same'

miki

mī+kī 'kind of noodle, cooked or uncooked'; (mī 麵 'noodle',
kī 支 'classifier')
míki (mīke) 'same'

misuwa

mī+suã 'kind of fine noodle made from flour'; (mī 麵
'noodle', suã 線 'thread')
miswa 'same'

padpo

pàt+pò 'term used to describe certain Chinese dishes';
(pàt 八 'eight', pò 寶 'precious')
padpó 'dish of mixed vegetables and nuts with thick sauce'

pansit

piǎn+ē+sít 'dish that is conveniently cooked, i.e. noodle dish'; (piǎn 便 'ready', ē* sít 食 'food')
pansít 'noodle dish'

pеса

péq+sàq+hí 'plain boiled fish'; (péq 白 'white, plain',
sàq 燙 'boiled', hí 魚 'fish')
pesaq 'plain boiled fish'

pihe

péq+hé 'a kind of shrimps'; (péq 白 'white', hé 蝦 'shrimps')
pihé 'fresh, preserved, or salted crabs, fish or shrimps'

sangke

sâ+kì 'Chinese anise'; (sâ 三 'three', kì 紀 'century')
sankéq 'Chinese anise used as spice'

siyoktong

sì+hòk+tóng '4 luck factory'; (四福堂 'same')
syokton 'rice wine'

siyomay

siō+maī 'steamed dumpling'; (siō 燒 'hot', maī 賣 'to sell')
syomay 'steamed dumpling'

siyopaw

siō+paū 'steamed rice cake with meat and condiments';
(siō 燒 'hot', paū 包 'dumpling')
syopaw 'same'

suwatanghon

suā+tân+hùn 'small, white, crinkly rice noodles, opaque when raw, translucent when cooked'; (suā+tân 山東 'Shantung',
hùn 粉 'flour')
swátanghon (sótanhón) 'same'

suam

cú+àm 'to cook rice broth'; (cú 煮 'to cook', àm 泔 'rice broth')
súam 'sauteed fish or meat with garlic and ginger then brothed in rice water'

taho

taū+hû 'bean curd'; (taū 豆 'bean', hú 腐 'curd')
tahó 'delicatsesse of soybeans meal and syrup'

tahuri

taū+hû 'bean curd'; (taū 豆 'bean', hú 腐 'curd')
táhuré 'fermented salted soybean curd'

tawpe

taū+p^hé 'thin membraneous preparation made from beans used for wrapping foods'; (taū 豆 'bean', p^hé 皮 'skin')
tawpe 'same'

tawsi

taū+sī 'beans preserved in soy sauce'; (taū 豆 'bean', sī 豉 'preserved')
tawsi 'same'

tiim

tīm 'to steam'; (蒸 'same')
tiqím 'steamed dish'

tikoy

tī+kuè 'sweetened rice cake'; (tī 甜 'sweet', kuè 糕 'cake')
tíkoy 'same'

tokuwa

taū+kuâ 'hardened bean curd'; (taū 豆 'bean'; kuâ 干 'dried')
tókwa 'same'

totso

taū+iū+c^hò+hí 'fish cooked in soy sauce and vinegar';
(taū+iú 豆油 'soy sauce', c^hò 醋 'vinegar', hí 魚 'fish')
totso 'sauted fish with tahure'

toyo

taū+iú 'soy sauce'; (taū 豆 'bean', iú 油 'oil')
tóyoq 'same'

ukoy

ō+kuè 'cake made from gabi and taro'; (ō 芋 'gabi, taro', kuè 糕 'cake')
úkoy 'flour cake of shrimps and vegetables'

C. Kitchen Utensils

bilao

bí+laū 'device for winnowing rice'; (bì 米 'rice', laū 漏 'passage')

bilaqo 'round shallow winnowing basket-tray made of bamboo splits'

bithay

bít+h^ai 'rice sifter'; (bì 米 'rice', t^haî 篩 'to sift')
bitháy 'flat sieve or sifter basket made of fine bamboo splits'

lansong

lāŋ+sŋ 'cooking apparatus made of bamboo split fixed in a tin ring used for steaming'; (lāŋ 籠 'steamer', sŋ 蒸 'device made of bamboo')

lansón 'same'

pohiya

pú+hiâ 'ladle made of gourd or wood'; (瓢 勺 'same')

pohyá 'same'

siyansi

ciân+sí 'frying spoon'; (ciân 煎, 'to fry', sí 匙 'spoon')

syansé 'same'

D. Fire

E. Food Devices

kaliya

kâ+liiǎq* 'a very large round bamboo wicker-work tray'

kalyaq 'meshed crate or pannier for carrying vegetables and fruits'

kapin

ká+pìn 'standing screen made of bamboo'; (ká 架 'frame',

pìn 屏 'partition')

kápin 'flat framework or trellis-like frame made of bamboo used for drying fish'

6. Kinship and Age

ate

á+cì 'appellation for elder sister'; (á 妯 'prefix to title of relations', cì 姐 'elder sister')

áte 'same'

dete (by analogical creation)

ditse

dī+cì 'appellation for second elder sister'; (dī 二 'second',

cì 姐 'elder sister')

ditsé 'same'

kuya

kò+ǎ 'appellation for elder brother'; (kò 哥 'elder brother',

ǎ 丩 'suffix to nouns')

kúya 'same'

diko

dī+kò 'appellation for second elder brother'; (dī 二 'second',

kò 哥 'elder brother')

diko 'same'

ingkong

án+kôn 'grandfather'; (亞公 'same')

in̄kón 'same'

inso

á+sò 'address term for elder brother's wife'; (亞嫂 'same')

insó 'same'

sanse

sâ+cì 'appellation for third elder sister'; (sâ 三 'third',
cì 姐 'elder sister')

sansé 'same'

sangko

sâ+kô 'appellation for third elder brother'; (sâ 三 'third',
kô 哥 'elder brother')

san̄kó 'same'

siyaho

ciâ+hū 'referential term for elder sister's husband'; (ciâ 姐 'elder sister', hū 夫 'husband')

syáho 'address term for elder sister's husband'

7. Social Organisation

A. Titles and Honorifics

B. Social Power, Class Government

C. Military Organisation

hukbo

hòk+bū 'service'; (服務 'same')

hukbó 'army'

8. Crafts and Occupations

A. Fishing

santso

c^hân+có 'small junk'; (c^hân 舢 'raft', có 槽 'junk')

santso 'fishing raft made of bamboo with a large fishing net'

taykong

taĩ+kō̄n 'captain of small junk'; (taĩ 大 'big', kō̄n 工 'job')

taykón 'overseer of fishing trip'

B. Farming

hungkoy

hùn+kuĩ* 'pressing machine'

hunkóy 'a mechanical man-operated device used in winnowing
threshed rice'

lithaw

lé+t^háú 'plough'; (lé 犁 'plough', t^háú 頭 'head')

litháw 'a kind of crude agricultural implement for plowing'

C. Shoemaking

ditsoy

díq+c^huī 'slit open' (?); (díq 裂 'slit open', c^huī 口 'mouth')

ditsoy 'shoemaker's welting awl provide with a curved and grooved end'

teham

tè+hám 'joined sole' (?); (tè 底 'sole', hám* 'to join')

teham 'a running cut on the outer sole of a shoe into which the stitches are made and covered'

lete

laī+tè 'inner sole'; (laī 內 'inside', tè 底 'sole')

lete 'same'

D. Carpentry

baktaw

bàk+t^háú+cín 'an ink line used by stretching it right over a plank and touching it with the nail so as to make a line'; (bàk 墨 'ink', t^háú 頭 'head', cín 繩 'chalk line')

baktaw 'carpenter's linemaker'

kusot

kù+sùt 'sawdust'; (kù 鋸 'to saw', sùt 屑 'dust')

kúso't 'same'

puthaw

pò+t^háú 'small axe with a short handle'; (pò 斧 'axe', t^háú 頭 'head')

puthaw 'same'

ubak

ō+bák 'black ink'; (ō 黑 'black', bák 墨 'ink')

úbak 'same'

E. Goldsmithing

gintsam

gín+câm 'chisel used by smiths for cutting large pieces of bars of gold'; (gín 銀 'silver', câm 斬 'to cut')

gintsám 'same'

kutiyam

kù+tiām 'sawing board'; (kù 鋸 'to saw', tiām 砧 'board')

kutyam 'anvil-like block of iron provided with graduated grooves or cavities on the surface or sides, sued by smiths for shaping or rounding rings'

lebuwa

lĕ+buà 'articles powdered or broken down small'; (lĕ* 'to file'; buà 磨 'to grind')

lebwa 'metal dust, powder or left-over after the day's work on the working table of a smith'

liyankoy

liān+kuī 'small working board attached to the tokoy for supporting filing or sawing job'; (liān 鏈 'chain', kuī 櫃 'chest')

liyankoy 'same'

siyato

siā+tô 'a kind of knife' (?); (siǎ 射 'to throw', tô 刀 'knife')

syato 'two-or-three-edged finishing tool for smoothening scratches left by a course file'

suwapan

suâ+pàn 'device provided with holes of graduated diameters used in gauging metal thread or wires used by goldsmiths'; (suâ 線 'thread', pàn 板 'board')

swapan 'same'

tanso

tán+ĕ+sòq 'copper wire'; (tán 銅 'copper', ĕ*, sòq 索 'wire')

tansóq 'copper'

tiyam

tiam 'board, anvil'; (砧 'board')

tiyam 'same'

tokoy

tòq+kuī 'goldsmith's working table'; (tòq 桌 'table', kuī 櫃 'safe, chest')

tokoy 'same'

tsambuwa

câm+buà 'articles powdered or broken down small'; (câm 斬 'to cut, chop', buà 磨 'to grind')

tsambwá 'pieces, carvings, shavings or dust of gold or silver left on the smith's table'

tuwa

t^huàq 'drawer'; (屉 'drawer')

tuwa 'drawer for keeping tools or objects being made by smiths'

G. General

katay

kā+î+t^hai 'to butcher, to cut, especially with reference to meat cuts'; (kā 共 'along with', î* 'enclitic', t^hai 殺 'to kill, to butcher')

katáy 'butchering, cutting to pieces'

kuwatsoy

k^huâq+c^huĩ 'pick axe'; (k^huâq 闊 'broad', c^huĩ 嘴 'mouth')

kwatsoy 'broad-bladed pick used in quarrying'

punkí

pũn+kî 'hod or basket with handles for mortar'; (pũn 箕 'waste, dung', kî 箕 'container')

punkí 'receptacle for carrying sand, stone, lime used by masons'

wayukak

oã+iú+k^hàk 'pottery for making bowls'; (oã 碗 'bowl', iú 甕 'pot', k^hàk 殼 'husk, shell')

wayukak 'container made of bronze for holding borax and water for welding'

9. Trade and Commerce

pakiyaw

pák+kiaù 'to submit by bundles'; (pák 縛 'bundle', kiaù 繳 'submit')

pakyáw 'wholesale buying'

suki

cù+k^hèq 'important customer'; (cù 主 'important', k^hèq 客 'customer')

súkiq 'long-standing customer or client'

10. Fine Arts

11. Games and Gambling

huweteng

huê+tĭ 'number-pairing game'; (huê 花 'flower', tĭ 擋 'space')

hweten 'same'

kang

kǎŋ 'uniform design in mah-jong'; (摸 'same')

kaŋ 'same'

kuwaho

kuà+ó* 'a kind of card game'

kwaho 'gambling game using playing cards'

pong

põŋ* 'term used in mah-jong'

poŋ 'same'

tong

tõŋ 'percentage cut of a gambling taken from winners'

toŋ 'same'

12. Religion

sotsuwa

c^hõ+cuà 'coarse paper'; (c^hõ 粗 'course', cuà 紙 'paper')

sutswá medicinal/straw paper often used in making suob when driving evil spirits'

siyukoy

cuí+kuì 'mermaid'; (cuí 水 'water', kuì 鬼 'ghost')

siyúkoy 'same'

wisit

ū+uî+sít 'lucky'; (ū 有 'to have', uî 衣 'clothes',

sít 'food')

wisit 'mascot for good luck'

13. Numerals

14. Measurements

15. Sounds

* no Mandarin correlate

(?) doubtful

BIBLIOGRAPHY

AGONCILLO, Teodoro A.

- 1950 'Ang bisang Intsik sa wikang Tagalog, Wikang Pambansa.'
Publications of the Institute of National Language, 72-80.

ALVAREZ, Herminia Villacorta

- 1973 *Philippine Cookery and Household Hints*. Manila: Labrador
Publishing Co.

AMYOT, Jacques, S.J.

- 1973 *The Manila Chinese*. Quezon City: Ateneo de Manila University
Press.

BENDIX, Edward

- 1966 *Componential Analysis of General Vocabulary: The Semantic
Structure of a Set of Verbs in English, Hindu and Japanese.*
International Journal of American Linguistics. Indiana
University Research Center in Anthropology: Folklore and
Linguistics Publication.

BENEDICT, Paul K.

- 1967 'Austro-Thai Studies: 3. Austro-Thai and Chinese.'
Behavior Science Notes 4:275-335.

BEYER, H. Otley

- 1948 'Early History of Philippine Relations with Foreign Countries,
Especially China.' In: Arsenio Manuel, *Chinese Elements in
the Tagalog Language*, ix-xxv. Manila: Filipiniana
Publications.

BEYER, H. Otley and Jaime C. de VEYRA

- 1947 *Philippine Saga: A Pictorial History of the Archipelago Since Time Began.* Manila: Capitol Publishing House, Inc.

BLOOMFIELD, Leonard

- 1933 *Language.* New York: Henry Holt.

BRANDSTETTER, Renward

- 1916 *An Introduction to Indonesian Linguistics*, translated by C.O. Blagden. London: The Royal Asiatic Society.

BURLING, Robbins

- 1964 'Cognition and Componential Analysis: God's Truth or Hocus-pocus?' *American Anthropologist* 66:20-28.
- 1965 'Burmese Kinship Terminology.' *American Anthropologist Special Publication on Formal Semantic Analysis* 67:107-117.
- 1970 *Man's Many Voices: Language in its Cultural Context.* New York: Holt, Rinehart and Winston.

CHAFE, Wallace

- 1970 *Meaning and the Structure of Language.* Chicago: University of Chicago Press.

CHOMSKY, Noam

- 1965 *Aspects of the Theory of Syntax.* Cambridge, Mass.: MIT Press.

CHOMSKY, Noam and Morris HALLE

- 1968 *The Sound Pattern of English.* New York: Harper and Row.

CONKLIN, Harold C.

- 1955 'Hanunó color categories.' *Southwestern Journal of Anthropology* 2:339-344.

COSTA, Horacio de la

- n.d. *Chinese Values in Philippine Cultural Development.* Pagkakaisa Reprint Series No. 3.

DEMPWOLFF, Otto

- 1938 *Vergleichende Lautlehre des austronesischen Wortschatzes, Part 3: Austronesisches Wörterverzeichnis.* Berlin: Dietrich Reimer.

DOUGLAS, Carstairs

- 1899 *Chinese-English Dictionary of the Vernacular or Spoken Language of Amoy.* London: Publishing Office of the Presbyterian Church of England. With Thomas Barclay, *Supplement to Dictionary of the Vernacular or Spoken Language of Amoy*, 1923. Shanghai: The Commerical Press Limited, 1970.

DOZIER, Edward P.

- 1964 'Two Examples of Linguistic Acculturation: The Yaqui of Sonora and Arizona and the Tewa of New Mexico. In: Dell Hymes, ed. *Language in Culture and Society*, 511-520. New York: Harper and Row.

EVANGELISTA, Alfredo E.

- 1973 'Tempered Intemperance: Tuba-drinking in a Tagalog Community.' *Philippine Sociological Review Special Issue on Kinship* 21:5-28.

FENG, Han-Yi

- 1937 'The Chinese Kinship System.' *Harvard Journal of Asiatic Studies* 2:141-275.

FORREST, R.A.D.

- 1965 '*The Chinese Language.*' London: Faber and Faber. (2nd revised edn.)

FOX, Robert

- 1961 'Filipino Family and Kinship.' *Philippine Quarterly* 2:6-9.

FRAKE, Charles

- 1964 'The Diagnosis of Disease among the Subanons of Mindanao.' In: Dell Hymes, ed. *Language in Culture and Society*, 192-214. New York: Harper and Row.

FRANCISCO, Juan

- 1960 'Sanskrit Loanwords in the Philippine Language.' *Decca Adjar Library Bulletin* 24:153-172. Reprinted in Andrew Gonzalez et al, eds. *Readings in Philippine Linguistics*, 678-736, 1973. Manila: Linguistic Society of the Philippines.

GONZALEZ, Andrew

- 1970 'Acoustic Correlates of Accent, Rhythm, and Intonation in Tagalog.' *Phonetica* 22:11-44.

GOODENOUGH, Ward

- 1956 'Componential Analysis and the Study of Meaning.' *Language* 32:195-216.

Halle, Morris

- 1964 'Phonology in Generative Grammar.' In: Jerry A. Fodor and Jerrold J. Katz, eds, *The Structure of Language*, 334-352. Englewood Cliffs, N.J.: Prentice-Hall.

HARMS, Robert T.

- 1968 *Introduction to Phonological Theory*. Englewood Cliffs, N.J.: Prentice-Hall.

HAUGEN, Einar

- 1950 'The Analysis of Linguistic Borrowing.' *Language* 26:210-231.

HIDALGO, Araceli C.

- 1972 The semantics of Ivatan predicative stems. M.A. thesis, Ateneo de Manila University.

HIMES, Ronald

- 1967 'Cognitive Mapping in the Tagalog Area (II).' *Institute of Philippine Culture Papers* 5:125-168.
- 1972 Kinship, disease, property, and time in the Tagalog area, Philippines: A study in ethnosience. Ph.D. dissertation, University of Hawaii.

HOENIGSWALD, Henry M.

- 1944 'Internal Reconstruction.' *Studies in Linguistics* 2:78-87.

HOENIGSWALD, Henry M.

1946 'Sound Change and Linguistic Structure.' *Language* 22:138-143.

1960 *Language Change and Linguistic Reconstruction*. Chicago: University of Chicago Press.

HOWARD, Irwin

1972 *A Directional Theory of Rule Application in Phonology. Working Papers in Linguistics, 4/7*. University of Hawaii.

JAKOBSON, Roman and Morris HALLE

1956 *Fundamentals of Language*. The Hague: Mouton.

JAKOBSON, Roman, C. Gunnar M. FANT and Morris HALLE

1967 *Preliminaries to Speech Analysis: The Distinctive Features and their Correlates*. Cambridge, Mass.: MIT Press. (1st edn 1951)

KALGREN, Bernhard

1949 *The Chinese Language: An Essay on its Nature and History*. New York: Ronald Press.

KATZ, Jerrold J. and Jerry A. Fodor

1963 'The Structure of a Semantic Theory.' *Language* 30:170-210.

KING, Robert D.

1969 *Historical Linguistics and Generative Grammar*. Englewood Cliffs, N.J.: Prentice-Hall.

KIPARSKY, Paul

1968 'Linguistic Universals and Linguistic Change.' In: Emmon Bach and Robert T. Harms, eds, *Universals in Linguistic Theory*, 171-202. New York: Holt, Rinehart and Winston.

KISSEBERTH, Charles W.

1970 'On the Functional Unity of Phonological Rules.' *Linguistic Inquiry* 1:291-306.

LEHMANN, Winfred P.

- 1962 *Historical Linguistics: An Introduction*. Calcutta: Oxford and IBH./New York: Holt, Rinehart and Winston.

LINDENFELD, Jacqueline

- 1971 'Semantic Categorization as a Deterrent to Grammatical Borrowing: A Yaqui Example.' *International Journal of American Linguistics* 37:6-14.

LLAMZON, Teodoro A.

- 1968 *Modern Tagalog: A Functional-structural Description*. Ph.D. thesis, Department of Language and Linguistics, Ateneo de Manila University. Published 1976, The Hague: Mouton.

LLAMZON, Teodoro A. and John Thorp

- 1972 'Review of Jose Villa Panganiban's *Talahuluganang Pilipino-Ingles*.' *Philippine Journal of Linguistics* 3:130-139.

LOPEZ, Cecilio

- 1965 'The Spanish Overlay in Tagalog.' In: G.B. Milner and Eugénie J.A. Henderson, eds, *Indo-Pacific Linguistic Studies*, Part I:467-504. Amsterdam: North-Holland. Also *Lingua* 14:467-504.
- 1967 'Origins of the Philippine Languages.' *Philippine Studies* 15:130-166. Reprinted in Andrew Gonzalez et al, eds, 1973, *Readings in Philippine Linguistics*, 389-416. Manila: Linguistic Society of the Philippines.
- 1974 *A Comparative Philippine Word-list*. Edited by Ernesto Constantino. University of the Philippines: Archives of Philippine Languages and Dialects and the Philippine Linguistic Circle.

LOUNSBURY, Floyd

- 1956 'A Semantic Analysis of the Pawnee Kinship Usage.' *Language* 32:158-194.
- 1964 'The Structural Analysis of Kinship Semantics.' In: H.G. Lunt, ed., *Proceedings of the Ninth International Congress of Linguists*, 1073-1093. The Hague: Mouton.

McCARTHY, Kevin M.

- 1970 The linguistic adaptation of loanwords in Modern Standard Turkish. Doctoral dissertation, University of North Carolina at Chapel Hill.

MANUEL, Arsenio

- 1948 *Chinese Elements in the Tagalog Language*. Manila: Filipiniana Publications.
- 1949 'The Origin of the Tagalog Language and the Chinese Contributions to its Growth.' *Fookien Times Yearly*.
- 1953 The Origin and Development of Philippine Languages and their Relation with the Chinese Language.' *Fookien Times Yearly*.
- n.d. 'Pre-Proto-Philippinian.' In: F. Landa Jocano, ed., *Filipino Cultural Heritage, Lecture Series Number 1:36-60*. Philippine Women's University.

MOHRING, H.

- 1974 'The Word anito and its Associations: A Remark about Etymological Research.' In: Andrew Gonzalez, ed., *Parangal kay Cecilio Lopez*, 15-37. Q.C.: Linguistic Society of the Philippines.

MURRAY, Francis J., Jr

- 1973 'Lowland Social Organization I: Local Kin Groups in a Central Luzon Barrio.' *Philippine Sociological Review Special Issue on Kinship* 21:29-36.

PANGANIBAN, José Villa

- 1966 *Talahuluganang Pilipino-Ingles*. Maynila: Kagawaran ng Palimbagan.
- 1972 *Diksiyunario-Tesaurus Pilipino-Ingles [i.e. Tagalog]*. Q.C.: Manlapaz.

PEREZ, Enriqueta David

- 1973 *Recipes of the Philippines*. Manila: Enriqueta David-Perez.

PIÑOL y ANDREU, Francisco

- 1937 *Diccionario Chino-Español del dialecto de Amoy, Chiang-chiu, Choan-chiu, Formosa, etc.* Hongkong: Imprenta de Nazaret.

POSPISIL, Leopold

- 1965 'A Formal Analysis of Substantive Law: Kapauku Papuan Laws of Land Tenure.' *American Anthropologist Special Publication on Formal Semantic Analysis* 67:186-214.

RUELLOS, Engracia

- 1969 A componential analysis of Tagalog kinship terms. M.A. thesis, University of the Philippines.

SA'ID, Majed F.

- 1967 *Lexical Innovation through Borrowing in Modern Standard Arabic.* Princeton Near East Papers No. 6. Princeton University: Program in Near Eastern Studies.

SALZMANN, Zdenek

- 1954 'Problem of Lexical Acculturation.' *International Journal of American Linguistics* 20:137-139.

SAPIR, Edward

- 1921 *Language.* New York: Harcourt, Brace.

SCHACTER, Paul and Fe T. OTANES

- 1972 *Tagalog Reference Grammar.* Los Angeles: University of California Press.

SCHANE, Sanford

- 1973 *Generative Phonology.* Englewood Cliffs, N.J.: Prentice-Hall.

STANLEY, Richard

- 1967 'Redundancy Rules in Phonology.' *Language* 43:393-436.

STOODLEY, Bartlett

- 1957 'Some Aspects of Tagalog Family Structure.' *American Anthropologist* 59:236-249.

STURTEVANT, E.H.

- 1917 *Linguistic Change: An Introduction to the Historical Study of Language.* Chicago: University of Chicago Press.

THORP, John

- 1972 The lexical content of Tagalog and the culture of the Philippines. TS. Ateneo de Manila University.

VERSTRAELEN, Eugene

- 1959 'Chinese Influences on Tagalog (a review of Arsenio Manuel's Chinese Elements in the Tagalog Language).' *Philippine Studies* 7:245-248.

WALLACE, Anthony

- 1965 'The Problem of Psychological Validity of Componential Analyses.' *American Anthropologist Special Publication on Formal Semantic Analysis* 67:229-348.

WALLACE, Anthony and John ATKINS

- 1960 'The Meaning of Kinship Terms.' *American Anthropologist* 62:58-80.

WANG TEH MING

- 1964 'Sino-Filipino Historico-Cultural Relations.' *Philippine Social Sciences and Humanities Review* 29:277-471.

WANG, William

- 1967 'Phonological Features of Tone.' *International Journal of American Linguistics* 33:93-105.
- 1969 'Competing Changes as a Cause of Residue.' *Language* 45:9-25.

WEINREICH, Uriel

- 1966 'Explorations in Semantic Theory.' In: Thomas A. Sebeok, ed., *Current Trends in Linguistics*, vol.3:395-477. The Hague: Mouton.

WILSON, Helen Irene

- 1972 *The Phonology and Syntax of Pakanan Verb Affixes. Working Papers on Linguistics* 4/5. University of Hawaii.

