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1. Introduction

The purpose of this paper is fourfold: to note the features of a particular class of expressions in the semantic structure of Papua New Guinean languages, to seek evidence of parallel structures in the languages of Irian Jaya, to compare these with corresponding structures in Indonesian, and to suggest potentially problematic areas of cross-cultural communication.¹

The class of expressions in consideration includes those which consist of primarily the terms for the body parts plus predication about them. Examples from several Papua New Guinean languages are:²

Kâte (Huon Peninsula, Moroba Province)

('her inside is bad') 'she is sad'
('her head is heavy') 'she feels draggly'
('her nose bursts') 'she is conceited'
('it speared her belly') 'it incited her to action'

Gedaged (Madang Province)

('his liver is divided') 'he is unreliable'
('it put his liver crosswise') 'he is frustrated'
('his liver turns over and breaks off') 'he is distressed'
(‘his inside arises’)      ‘he remembered’
Selapet (Huon Peninsula, Morobe Province)
(‘his mouth is parched’)    ‘he does not share his
food’
(‘his ear is strong’)      ‘he does not obey orders’
(‘his nose is dry’)        ‘he is unsociable’
(‘his blood is dull’)      ‘he is an unsuccessful
hunter’
Daga (Central and Milne Bay Provinces)
(‘she feels her belly’)    ‘she has pity’
(‘her liver is splitting’) ‘she is distressed’
(‘her insides are hot’)   ‘she is irritable’
(‘her bone is hot’)       ‘she is afraid’
Wahgi (Western Highlands Province)
(‘his belly is hot’)       ‘he is angry’
(‘his bones are soft’)     ‘he acts cowardly’
(‘his brains dried up’)   ‘he is stupid’
(‘he sent his shadow away’) ‘he became afraid’
Yareba (Northern Province)
(‘no heart’)               ‘unsympathetic’
(‘heart has an itchy burn’) ‘bitterness’
(‘thoughts are one’)       ‘agreement’
Fasu (Southern Highlands Province)
(‘to have one heart’)    ‘to be in agreement’
(‘heart filled with water’) ‘cowardly’
(‘to speak straight to the eye’) ‘to insult’
(‘to eat the belly’)       ‘to grieve’.

It has been the usual practice of lexicographers and researchers from other disciplines to classify such expressions as idioms and to give them a unit treatment, i.e., in the dictionary or idiom list a meaning is assigned to each expression with little attention given to the literal meaning. Dictionaries of Papua New Guinean languages which express this treatment are those of Brown (1968), Flierl and Strauss (1976), Franklin and Franklin (1976), Healey (1976), Keysser (1925), Koschade (1955), Lang (1973), Lanyon-Orgill (1960), Lister-Turner and Clark (n.d.), Lithgow and Lithgow (1974), Loving and Loving (1975), Mager (1952), Nilles (1969), Rench (1976), Swick (1969), Weimer and Weimer (1974) and Wright (1964). Other lexicographers who included most of the literalisations chiefly as an aid to the non-vernacular readers are McElhanon and McElhanon (1970), Murane and Murane (1974) and Ramsey (1975).

Such a unit treatment is in full accordance with an acceptance of the standard definition of idiom as any polylexemic expression, the meaning of which cannot be understood by the literal meanings of its constituents. Most linguists and lexicographers have, in practice, assumed that such a definition is universally applicable. That this acceptance is not unanimous is evidenced by Chafe’s (1970:46) remark that “speakers of English ‘know’ that the idiom is derived from the other (i.e. the literal complex expression--K.M.), so that a description of the language somehow ought to reflect this knowledge.” It will become evident in the course of this paper that such a definition is not wholly applicable to many Papua New Guinean languages because in body image idioms the meanings of the constituents contribute substantially to the idiomatic meaning.

It has been argued elsewhere (McElhanon, 1976a) that current definitions of ‘idiom’ are culturally bound (and often theory specific) and that the standard definition of idiom, in particular is the result of the development of the concept of man and personality in Western thought.

Evidence that definitions are culturally bound is found in the difficulty an expatriate lexicographer has in identifying idioms in exotic languages. This difficulty results from the analyst applying the criterion that the meaning of an idiom can
not be understood from the literal meaning of its components. The logic which is culturally defined for the vernacular speaker may not be readily apparent to the analyst. For example, an analyst may not consider the Selepet expression ('bad talk') 'vulgarities' as an idiom but may well regard ('living talk') 'rumour' as being idiomatic. Upon investigation, however, the cultural logic is clear: as living things are transient, have no substance in themselves and ultimately die, so also does 'living talk' have no substance in itself and will ultimately be rejected. Similarly ('it appeared in his hand') 'he was successful' may be regarded as idiomatic at first sight. In a culture where material gain is the chief means of recognizing success, however, it may be the normal non-idiomatic way of expressing such success.

That the definition of an idiom is theory specific is, of course, just one aspect of the total cultural package surrounding the concept of idiom. Theory specific criteria include, for example, Weinreich's (1969:40-44) requirements that an idiom must exhibit a reciprocal contextual selection of subcases (e.g., 'red' and 'herring' in the expression 'red herring' have the subcases 'phony' and 'issue' respectively), literal counterparts, ambiguity, and transformational definitiveness. Also see Fraser (1970:32). Chafe (1970:48), on the other hand, states that ambiguity is not a necessary characteristic and that idioms need not have a literal counterpart. Makkai (1972:48-50) contests Weinreich's assertion that idioms must exhibit a reciprocal contextual selection of subcases. Finally, in Quang Phue Dong's (1977:204) theory, a particular expression is an idiom when the noun can only be introduced into a derivation as the object of the verb. Compare, however, Makkai's (1972:54-58) comments regarding Quang's analysis.

That the standard definition of idiom is a result of the development of a particular concept of man and personality is a hypothesis to account for the relationship between the literal and idiomatic meanings of English body image idioms. Briefly the hypothesis is that all peoples at one time have had the concept of a body image, that man consists of both material (physical) and immaterial (spiritual) correlates. In this body image the spiritual correlate is involved in activities and states in much the same way as is the physical correlate. The activity or state of a person's spiritual correlate affects his emotional or physical condition. The relation is one of cause-effect. This can be illustrated by the Selepet expression ('his shadow went') 'he was frightened'. 'His shadow went' is not an idiom but rather a statement of conceptual reality, and the fact of being frightened is the natural result. Similarly, when a person's 'inside' goes to another, the result is love.

Many speakers of English deny that man has any immaterial correlates to his body. This belief, however, has not always been typical of speakers of English. Speakers of Old and Middle English believed that man consisted of both sets of correlates, and these speakers probably freely coined new expressions based upon their concept of the immaterial part of man. Such expressions gradually became frozen and regarded as quaint and idiomatic as a result of the age of enlightenment and the development of the concept of personality. This drift from such notions has proceeded to the point now where emotions are commonly explained by bio-physical processes and neuro-logical impulses. As a corollary the body image expressions no longer reflect conceptual reality.

The hypothesis set forth in MøElhammon (1976a) is that: all languages may be placed on a continuum which reflects the world views of their speakers. At one end are those whose speakers totally reject the belief in immaterial correlates of the body and regard all body image expressions as idiomatic. At the other end are those whose speakers support this belief and
regard such expressions for the most part as reflecting reality. Near this end one could place the languages of the European world as they were during the Middle Ages, most current Papua New Guinea languages, and undoubtedly languages of many other societies not affected by the psychology of the Western world.

2. Papua New Guinean Body Image Concepts

Research is in progress to determine the boundaries of the body image concept of Papua New Guineans. That is to say, which body parts are regularly used in body image idioms, and what are the psychological functions expressed by them. Moreover, what are the features there and what is their distribution? For example, in the Papuan languages of the Huon Peninsula, the liver is not very productive in the generation of such idioms. This is in contrast with the languages of the Central Highlands where the liver plays a very important role. On the basis of this current research some useful observations may be put forth.

2.1 The Body Image as a Semantic Field

The body image concept may be represented as a semantic field generally expressing qualities of personality and other traits of character. Although there are features common to Papua New Guinean languages which would allow us to speak of a Papua New Guinean body image concept, the exact nature and variation of these features are culture specific. For example, culture A may express agility and prowess as features of the body image concept but culture B may express these as single lexemes. Speakers of Selepet use body image idioms to show ineptness: ('his hand is dull') 'he was inept in shooting', ('his blood is dull') 'he is inept as a hunter', and ('his tongue turned over') 'he was inarticulate (inept in speaking').

In Kate, however, there is a lexeme bitite- 'to be inept'.

In any given language only a portion of the body part terms function in the body image concept. Usually only a few of these are very productive and some may occur only rarely. For example, in Selepet, 'inside' and 'belly' produce in excess of 150 expressions but 'molars' produces only one. It is probably too that a language rarely makes productive use of more than three terms for internal organs, and that in cases where three are used two are predominant.

In cases of near synonymy where distinctions may depend upon the presence or absence of observable behaviour, the absence of such behaviour may be indicated by an expression built upon an internal organ, but its presence expressed either by an expression with an external body part or by a separate lexeme. Compare the following Selepet expressions:

- 'he is angry' - a lexeme denoting observable, strong, antisocial behaviour.
- ('his nose is bad') 'he is visibly upset about it; he is disgruntled'
- ('his inside is bad') 'he is displeased, dissatisfied with the matter'
- ('I cut my inside') 'I am so angry that I could scream (i.e. I am angry to the point of expressing it')
- ('it pierces my inside') 'I am so angry that I want vengeance'
- ('my inside is hot') 'I am quite upset about it'
- ('my inside burns and blisters') 'I am very upset about it'

The last four of these expressions can only be said in the first instance by the angry person since they express degrees of anger only perceived by him.

It is also common for a body part term to express a meaning of physical response such as pain or numbness as well as a psychological function. This is particularly true of the parts other than internal organs.
A working assumption is that the cognitive space allotted to the psychological function of any given body part is discrete. Therefore, if a lexicographer cites two or more body parts as constituting, for example, the 'seat of the emotions', it is possible that some basic and distinctive feature of the system has been overlooked. In the early stages of Selepet lexicography, the analysts listed both the 'belly' and the 'inside' as representing the seat of the emotions. This was only superficially true because further investigation revealed that the former represents one's emotions in a sociological context and expresses such feelings as generosity, approval, desire, lust, jealousy, loneliness, pity, selfishness, and reconciliation. The latter reflects one's personal attitude or frame of mind and expresses feelings and attitudes such as diligence, faithfulness, tenacity, eagerness, anticipation, excitement, satisfaction, despair, anxiety, and regret. Furthermore, it is used of one's emotions and attitudes about others only if they are members of one's immediate family. These distinctions are evident in the following expressions:

('my inside stands for her') 'I am devoted to her'
('my belly stands for her') 'I approve of her behaviour'
('his inside is white') 'he is calm, peaceful'
('his belly is white') 'he is calm as a result of being reconciled with his enemy'

('my inside pulls itself out for that') 'I am afraid for myself'
('my belly pulls itself out for that') 'I am afraid for another's safety'

A second working assumption is that there is no true synonymy and that any two expressions will always differ in some way, however subtle it may seem to the expatriate analyst. The following expressions from Selepet all relate to selfishness, but they are distinguished on the basis of the degree of importance attached to the kinds of possessions involved and the frequency of the act:

('his belly is tough') 'he does not share his food because it is so tasty'
('his mouth is parched') 'he is not sharing his food' (an isolated occurrence)
('no hospitality') - 'inhospitable' denotes that the person never provides enough food to satisfy his visitors.
('his belly is heavy') 'he is not generous with the things which really count' (usually things which can be exchanged or borrowed)
('totally selfish') 'he shares absolutely nothing'

The outstanding characteristic of this class of idioms which distinguishes it from those of European languages is its vitality. Although it is possible to generate novel body image idioms in English, for example, these are usually generated on the basis of analogy. We may express a person's cause for joy by saying 'he has a song in his heart'. Variations on this 'theme' may be 'he has music in his heart', 'his heart is full of music', 'his heart is singing', 'she will put a song back into his heart', 'what he needs is to find the song that used to be in his heart', etc.

The differences in the formation of such novel utterances in English and those of Papua New Guinean languages is that the latter are apparently generated on the basis of semantic features. For example, once the Selepet speaker has selected the body part which is most applicable to the context to which he wishes to address himself (e.g., 'belly' rather than 'inside' because his emotions originated in a social context), then he adds the appropriate verbal element. In this he has considerable selectivity in the addition of the verbal element. His selection is based upon other factors applicable to the situation,
factors such as the permanence or change in his attitude, the intensity of his emotion, the possibility of success, the degree of hope to which he holds, and many more.

It is evident in the choices made that the semantic components of the verbal lexemes play an important part in expressing the finer nuances of meaning in the body image idioms. Moreover, it is also apparent that the verbal lexemic hierarchy parallels a hierarchical arrangement of the idioms expressing one's emotions.

In expressing his emotions the speaker may state them positively, neutrally, or negatively by using verbs denoting respectively, (1) an increase in size, volume, strength or height, (2) a maintenance of the status quo, and (3) a decrease in size, volume, strength or height. In Selepet these may be illustrated by the following expressions:

('his inside got up') 'he is excited' (i.e., at the point of action)
('he holds his inside') 'he is noncommittal'
('he is still holding his inside') 'he is still hoping' (neither an increase nor a decrease in his emotional state)
('his inside descended') 'he is over his excitement'

This last expression simply indicates that the person's excitement has ended, and the context determines whether it ended in satisfaction or disappointment. Verbal lexemes at a lower level of the lexical hierarchy, however, may be used to clearly specify what the outcome was. Both expressions ('his inside abated'—as an earthquake abates) and ('his inside sank'—as a fresh grave sinks) indicate that the person is satisfied. At the same level as these two is the negative counterpart ('his inside slid down') 'he is disappointed'.

Such a hierarchy is also indicated by the fact that verbs with similar meanings yield body image idioms with comparable meanings. Compare the expressions within the following groups:

(1) ('my inside is shut up tightly') 'I failed to learn it'
    ('my inside is always shut tightly') 'I consistently fail to learn it'
(2) ('my inside is hot') 'I am upset'
    ('my inside burns and blisters') 'I am very upset'
(3) ('my inside got up') 'I became excited'
    ('my inside raised up slowly as a snake rises') 'I became gradually more excited'

2.2 Determining the Psychological Function of a Body Part

Because the body image concept represents a semantic field and each body part term represents a discrete portion of that field, it is essential that the analyst study the complete system and the usage of each term in relation to the others. Not to do so may lead to false conclusions regarding the psychological functions.

Evidence has shown that in comparing the usage of these terms it is important to firstly maintain the predicate constant and vary the noun and secondly to reverse the procedure. Usually the Papuan New Guinean prefers the former in generating possible collocations. Then the analyst finds it useful to maintain the body part terms constant and vary the predications in order to determine the psychological functions. The larger the number of predications about a body part, the easier it is to determine the appropriate function.

The following Selepet predications about the blood indicate that the blood is considered to be important in the normal physical development of a child to puberty and, in the case of a man, in his prowess as a hunter:

('her blood gathered together') 'it is in the embryonic stage of development'
('she hit her blood')
('her blood broke loose')
('it is only with blood')
('she gave it only with its blood')
('they cook for its blood')
('she (the mother) did it with her blood')
('it happened because of his blood')
('his blood is happy')
('his blood is hot')
('his blood is dull')
('his blood is weak')

('she induced an abortion')
('she miscarried')
('the child is newly born')
('she gave it for adoption in early infancy')
('they fed a feast for the child to ensure its normal development')
('the child is stunted in growth')
('he is weak and emaciated')
('he is entering puberty')
('he is a successful hunter')
('he is an unsuccessful hunter')
('he was unsuccessful on a hunting trip')

The substitution of various body part terms in the following expressions contrasts their psychological functions.

('his ear is strong')
('his head is strong')
('his teeth are strong')

('he is disobedient')
('he is stubborn')
('he is very bossy')

The ear represents one's responsiveness to external stimuli, so the expression 'his ear is strong' implies disobedience to an order. The head, however, expresses one's personal behavior as a characteristic; in other words, the person is intractable. The teeth represent a person's behavior when he is offensive, aggressive, insulting, overbearing, bossy, or dangerous.

3. Cross-Cultural Communication

The fact that Papua New Guineans generate body image idioms on the basis of semantic components and a concomitant semantic field accounts for the important role played by the constituent morphemes. Any variation in the constituents results in a change in the idiomatic meaning.

The relevance of this to cross-cultural communication is that the message encoded in such an idiom in one language is usually transferred to another language with the same expression and then decoded in the terms of the semantic structure of that language. In other words, it is translated and understood literally. Whether or not the message is correctly understood depends upon the congruence of the body images expressed in the two languages. One may assume, however, that no two languages are completely congruent in this regard.

The likelihood of a literal transfer of the message depends upon at least three factors: (1) whether the expression denotes an emotional or a physical condition, (2) the degree of relationship between the languages, and (3) the acculturation on the part of the hearer.

In specific situations these factors may reinforce each other or they may clash. For example, closely related languages may evidence superficially similar body image idioms having different meanings. The hearer may be sufficiently familiar with the language of encoding, however, that he correctly decodes the message in spite of these superficial similarities.

Polylexemic expressions denoting emotional states are usually not adequately transferred from one language to another unless the body images are congruent at this point. An example of such congruency is that in many languages 'anger' is expressed as an internal organ being hot. Thus, if one language has ('his liver is hot'), this may be readily equated with ('his intestines are hot') in the receptor language with no loss of meaning.

Frequently, however, the fine nuances of meaning are lost in the receptor language. Thus, if a Selepet speaker bases an expression upon 'belly' rather than upon 'inside' because someone caused his anger, this nuance of meaning would be lost in the
transfer to a receptor language not expressing this distinction.

Another likelihood is that the hearer will not fully appreciate the precise meaning of the expression and he will substitute a more generic one. For example, ('my belly shook') 'I have a momentary urge for her' and ('my belly flares up') 'I am beside myself with excitement' may be equated with ('my belly raised up') 'I am desirous' in the receptor language.

Very common is the tendency for the hearer to equate a polylexemic expression with one of a single lexeme in his own language. Usually a message received in this way carries less impact. For example, ('his belly died') 'he has no regard for it' may reflect a strong emotional response on the part of the speaker, but the hearer may simply equate it with the lexeme meaning 'dislike' in his own language and have a weak emotional response.

At worst, the context may permit the message to be completely misunderstood. ('His belly is heavy') may express 'grief' in one language but be decoded as 'selfishness' in the receptor language.

Physical conditions, on the other hand, are more readily transferred accurately. Polylexemic expressions relating pain, a state of pregnancy, diarrhoea, the regaining of one's voice, etc. are readily equated with semantically similar expressions in the receptor language. Thus there would usually be little impairment in the communication of speakers from languages which would express pregnancy by expressions based upon 'belly' and predications such as 'carry', 'hold', 'put', 'to be with', 'to be big', 'to be extended', and 'to be swollen'.

Furthermore, if the identical polylexemic expression in the receptor language has a different idiomatic meaning, it is usually rejected in favour of the correct one. For example, ('it happened to his belly') 'he has diarrhoea' may mean 'he has a stomach ache' in the receptor language and consequently be replaced by ('his stools were weak') or 'he excreted water'.

It is to be expected that the more closely languages are related the more likely it is that the body images will have a high degree of congruency. The Papuan languages of the Huon Peninsula share a large number of body image features and probably represent a block of languages with areal characteristics which differ, say, from those of the languages of the Highlands.

In Papua New Guinea, moreover, there is usually a high degree of contact between male speakers of related languages so that one could expect the level of communication to be reasonably high. Until adequate tests of information transfer are carried out, however, statements about mutual intelligibility will continue to include speculation. My experience is that such languages have to be very closely related and that the degree of contact has to be quite high before speakers of one language can control the idiom of the other. It may be that adequate contact is only found in affinal relationships. Certainly, most trading partnerships would not constitute an adequate basis.

If the communicants are speakers of unrelated languages with quite diverse cultures, as is the case of Papua New Guineans and speakers of Indo-European languages, then the differences in their world views and cognitive frameworks are so great as to virtually preclude wholly adequate communication in normal contacts. Support for this statement may be presented briefly in the form of two current situations. The first involves expatriates attempting to introduce concepts through the Papua New Guinean body image, and the second involves national students failing to adequately comprehend abstract words in English.

In the first instance, the examples are taken from attempts
to express the concepts of love, repentance and commitment through the use of Tok Pisin. Expressions for each of these were coined on the basis of bel 'belly' plus a predication. Two associated factors, however, contributed to a resultant confusion over the meaning of the message.

Firstly, since Tok Pisin is a contact language most communicants first encode body image idioms according to the semantic field of their own vernacular and transfer these literally into Tok Pisin. The decoding is the reverse. The result is that expressions which do not represent a common Papua New Guinean core (i.e., common to most languages) are frequently misunderstood (see McElhanon 1975, 1976b).

Secondly, when expatriates coined new body image idioms on the basis of bel, they apparently did not take into consideration that although bel expressed many of the psychological functions attributed to 'heart', it could not be extended in the same way. The result was that the message was encoded as literal translations of English body image idioms but decoded according to the semantic structure of the particular languages of the Papua New Guinean hearers.

Thus the English expression 'to give one's heart to someone', i.e., 'to love someone' was expressed as givim bel ('give the belly'). Laycock's (1970:48) claim that this meant 'to get someone pregnant' was supported by Mihalic's (1971:58) statement that "virtually everywhere on the mainland, as well as throughout the length and breadth of New Britain, New Ireland and the Solomons, this term unfortunately (i.e., unfortunately because it has been misused by the expatriate translators of the Nupela Testament—K.M.) means only one thing: to impregnate outside of marriage...".

A second expression is that of tanim bel ('turn the belly') which is derived from 'turn one's heart (to God)'. It is meant to express a change of heart or repentance, but it is generally understood as referring to nausea.

Thirdly, a few missionaries have coined the expression jisag em i mas kam inisat long bel bilong yu ('Jesus must come into your belly') to encourage potential converts to submit their wills to the will of God. This expression is an obvious semi-literal translation of 'let Jesus come into your heart'. Many groups of people in Papua New Guinea speak of only one class of supernatural beings which can enter one's belly, namely, the evil spirits of the forest. Therefore, one would expect some hesitation on the part of the hearers to accept such a suggestion.

The second instance involves Selepet students and their understanding of English abstract terms. A survey revealed that the students had considerable difficulty in grasping a concept if it was expressed by a single lexeme in English but was represented by body image idioms in Selepet. One of the most difficult was that of 'responsibility', and it is probable that the difficulty stemmed from the fact that it is represented by idioms built upon at least three separate body part terms. Furthermore, these idioms are not logically linked together by Selepet speakers. These idioms are:

('he knows his neck')

('he is responsible', that is,

('he carried it with

('he is responsible in carrying

('his inside disappeared')

('the teeth of (the action)')

('he is old enough to

('he is responsible for

('he is not responsible for

('he bore the responsibility

of absurd behaviour')

of another's action')

of action')

act responsibly')

out his assignments')

of absurd behaviour')

of another's action')

4. Ekagi (Kapauku Body Image Expressions)

For this comparison I have chosen the Ekagi language spoken by about 60,000 people near the Wissel Lakes because it is one
of the better documented vernaculars of Irian Jaya. Data were taken from Doble (1960) and Steltenpool (1969). Neither of these dictionaries provide literal translations for the body image idioms, so A.T. Walker and I have had to attempt such translations. Since neither of us have morphological control of the language, the English glosses may not be fully accurate. In some cases, we could not determine the literal meanings of the predications. In other cases we could only reach an approximate overall English translation. Hopefully, these preliminary observations will enthrall others to undertake detailed studies of the semantics of Irianese languages.

An examination of these expressions reveals a system comparable to that of Papua New Guinean languages. Firstly, the nouns seem to play the central role. Note the following ten expressions denoting anger:

1. **boko ibo gai-a** ('to feel a large chest')
   - 'to be very angry with'
   - *(Steltenpool 1969:35)*

2. **kegema ibo** ('large heart')
   - 'to be angry'
   - *(op.cit.:135)*

3. **kegema etai-a** ('heart increases, grows')
   - 'to become angry'
   - *(Doble 1960:14)*

4. **boko esenumai-a** ('chest swells up')
   - 'to be angry with'
   - *(Steltenpool 1969:35)*

5. **uuguy gai-a** ('to feel one's forehead')
   - 'to get angry with'
   - *(op.cit.:243)*

6. **enore tai** ('to have blood')
   - 'to be angry with'
   - *(op.cit.:72)*

7. **enorezga etai** ('to do another's blood(?)')
   - 'to make angry'
   - *(ibid.)*

8. **egokago tai** ('to have a protuberance, knot on one's tooth')
   - 'to be jealous, angry'
   - *(op.cit.:67)*

9. **juma to pogowadaa tai** ('to only push up one's nose')
   - 'to be angry with'
   - *(op.cit.:121)*

10. **kegema digitai-a** ('to have a stained heart')
    - 'to be angry'
    - *(op.cit.:134)*

There are six different nouns in these expressions: 'chest', 'heart', 'forehead', 'blood', 'tooth', and 'nose'. The obvious next step is to look for distinguishing criteria since it is probable that few of the expressions are truly synonymous.

The term for 'chest' is also used to express the emotions of pride and jealousy, and to form statements denoting authority, judgment, the settling of disputes, and the bringing of people to a mutual understanding. The 'heart', on the other hand, indicates patience, self-control, confidence and generosity. The 'forehead' is used in expressions of happiness, being relieved of anxiety and having wisdom. The 'tooth' shows amusement, courage and shame. Finally, the 'nose' is the basis for expressing approval, what one considers to be important, one's memory and the speaking of one's mind frankly.

To get a full appreciation of the psychological functions of these body parts one would have to compare more expressions in a wide variety of contexts. One may suppose, however, that when an expression of anger is built upon the term for 'chest' that it may denote anger within the context of a dispute or arbitration, whereas one built upon 'heart' may denote anger as a more basic characteristic of the person. One built upon 'tooth' may combine anger with aggression, and so forth.

There are other examples in the dictionaries where quite different expressions are glossed similarly. "To untie one's forehead" means 'to become wise, intelligent, become enlightened' and '(to have a head like buka arrows—which have a broad bamboo point) means 'to be enlightened, educated, clever'. At first appraisal it seems that the former may denote a normal maturity whereas the latter may indicate a broadening of one's knowledge based upon the analogy of the broad arrow point.

Another comparison involves that of '(to cut the head)' which means 'to make peace' and its related expressions '(to cut the
war-head') 'to bring an end to a conflict' and ('to cut the talk-head') 'to pass judgment, pronounce a sentence'. These contrast with those built upon the 'chest' which focus upon arbitration as in ('to split one's chest') 'to judge between', ('to split (as in splitting planks) the talk- chest') 'to discuss a question thoroughly, settle a problem' and ('to cut the talk-chest') 'to achieve some measure of mutual understanding by discussion'. Furthermore, it is probable that variations in the predicate vary the meaning of the expression. In number one the state of being large is identified with a state of anger. In number three the increase in size correlates with the emergence of anger. One would also expect number four to be distinctive in some way. Number seven appears to be the causative form of number six.

Expressions based upon the head also indicate the variations which may be introduced by changing the predicate:
('to gather (small things) and carry them on one's head')
('to carry in one's head')
('with the head')
('to put in one's thought-head')
('to really put in one's head')

'to be responsible'
'to bear responsibility'
'not forgetful'
'to keep thinking of something'
'to memorise'

5. Indonesian and its Role as a Contact Language

Broadly speaking, one could compare the role of Indonesian in Irian Jaya with that of English in Papua New Guinea. For speakers of local Papuan or Austronesian languages it is primarily a contact language, a language of communication with the governing authorities. Therefore one should expect that these speakers who use Indonesian as a secondary language will contribute to it a flavour from their own vernaculars. If what these speakers contribute represents semantic features common to Irianese languages, then we may see the emergence of a dialect of Indonesian representing an Irianese idiom.

Indonesian too evidences a body image concept which is not unlike that presented for Papua New Guinean languages. The remarks which follow do not represent definite statements about Indonesian semantic structure. Rather they should be regarded as suggestions to be followed up by insightful research and clarification. The data are taken from Wojowasito and Poerwadarmita (1967) and Wojowasito et al (1972).

Firstly, it too utilises more than one body part as the basis for expressions with similar meanings. All of the following are glossed as 'indifferent', 'unfeeling' or 'heartless': ('thick liver'), ('thick skin'), ('thick face') and ('thick ear'). From a Papua New Guinean point of view one could guess that ('thick ear') might mean 'indifferent to the pleas of someone in need', ('thick face') might mean 'insensitive to the needs of those around oneself'; ('thick skin') looks like a borrowing from an Indo-European language, and ('thick liver') may denote a person's trait of character. In any case one may assume that the expressions are not synonymous.

Secondly, it appears that similar predications may be made about body part terms resulting in related meanings. ('Big liver') means 'glad, rejoiced, proud' but ('small liver') means 'proud, haughty'. The former appears to be positive in focus but the latter negative. These contrast, of course, with ('big head') 'proud'.

('Rock head') 'obstinate, headstrong' and ('hard, stiff head') 'obstinate, stubborn' reflect similar semantic components in their qualifying features. This difference may be one of degree.

As a final example, note ('his blood is hot') 'he is short-tempered' and ('blood ascends') 'quick-tempered, passionate, hasty'. When the causative prefix is added to the latter expres-
sion the result is ("to make another's blood to ascend") 'to make someone angry'. This type of transformation is common in Papua New Guinean body image idioms.

As distinct from Papua New Guinean languages, Indonesian seems to have a greater percentage of abstract lexemes. Compare, for example, arif 'capable, sensible, clever, learned, intelligent', cerdas 'educated, clever, intelligent', cerdik 'clever, shrewd' and ber-akal 'clever, sensible', all of which could be equated with body image idioms in Ekagi. The problems associated with the communication of abstract ideas expressed by single lexemes in English but by body image idioms in Papua New Guinean languages could be expected to occur with the introduction of Indonesian to speakers of Irianese languages.

A comparison of the Indonesian body image concept with that of Ekagi illustrates further potential areas of difficulty for Ekagi speakers in their comprehension of Indonesian.

We have already seen that there are at least ten Ekagi expressions based upon six body parts denoting anger. These compare with a similar use of three body part terms in Indonesian. The English glosses for these words are:

<table>
<thead>
<tr>
<th>Ekagi</th>
<th>Indonesian</th>
</tr>
</thead>
<tbody>
<tr>
<td>'blood'</td>
<td>'blood'</td>
</tr>
<tr>
<td>'chest'</td>
<td>'eye'</td>
</tr>
<tr>
<td>'forehead'</td>
<td>'liver'</td>
</tr>
<tr>
<td>'heart'</td>
<td>'nose'</td>
</tr>
<tr>
<td>'nose'</td>
<td>'tooth'</td>
</tr>
</tbody>
</table>

The only overlap in the two systems is the occurrence of the terms for 'eye', but the literalisation of the Indonesian expression mata gelap ('dark eye') 'in a range', would probably be understood by an Ekagi speaker as meaning 'blind' (peka wane 'dark, dusky eye')

6. Conclusion
In the teaching of English to Papua New Guineans at the primary and secondary levels, little or no attempt has been made to compare and contrast the languages involved. English and Papua New Guinean vernaculars represent attitudes, values and world views which are in many ways opposed. They simply reflect different cognitive arrangements of the world and human experience. In order to bring the speakers of these diverse languages closer together in mutual understanding, it is important that comparative semantic studies be undertaken and that the insights gained from them be applied in the educational programmes.

In comparison to the history of English in Papua New Guinea, that of Indonesian in Irian Jaya is short. It is assumed that the problems of introducing Indonesian are not unlike those of introducing English in Papua New Guinea, although the differences may not be as great. Hopefully, the fruits of research into the semantics as well as the grammars of Irianese languages will aid the introduction of Indonesian as a national language.

Notes
1 My research in the Selepet language and other languages of Papua New Guinea has been in progress since 1964 while I and my wife have been under the auspices of the Summer Institute of Linguistics and the Australian National University. I am indebted to A.T. Walker for library research in Ekagi and Indonesian and to K.J. Franklin for useful suggestions.

2 The literalisations of vernacular expressions are included in parentheses followed by the idiomatic meaning.

References
Fraser, Bruce, 1970. 'Idioms within a Transformational Grammar', Foundations of Language 6(1):22-42.
The system itself incorporates the number ten 'sura' until the figure twenty is reached, i.e. 11 = suraiya bovari 'ten and one'; 12 = suraiya boru 'ten and two', etc. These are indicated simply by raising the fingers one by one to correspond with the number desired beginning with the thumb.

After twenty is attained, the system then becomes based on twenty and remains so.

20 = piare
21 = piareva bovari
30 = piareva sura
31 = piareva suraiya botoru
40 = piaru

etc.

There is also a special system of counting ocean culture (fish) which is based on the number four.

4 fish = buarei
8 fish = buaru
12 fish = buaitory
40 fish = buaisurah

etc.

2. Type II

Both the numbering system of the Berik people found in the Tor or River area and the system of the Bausi people found west of the Mamberamo River fit into the second type. These groups count using hands and feet as their basic unit.

The Berik people usually discontinue counting at the number fifteen and there has been some difficulty noted with the numbers eleven and sixteen. The reason for this difficulty is unknown at the present time. There does not seem to be any other system of counting such as was described in the Ambai ocean culture, and everyone seems able to use it.

When one hand has been completed one counts in the following
manner:
5 = tafna guri
6 = tafna afwer daafenfa
7 = tafna afwer naara
10 = tafna naa sama guri
11 = tafa daafenfa
15 = tafa guri
16 = tafa afwer daafenfa
20 = tafa naa sama guri
21 = tafa naa sama guri daafenfa
'hand all'
'hand other one'
'hand other two'
'hand two both all'
'foot one'
'foot all'
'foot other one'
'foot two both all'
'foot two both all one'

Similarly, the Bausi people use the hands and feet system. They easily count to twenty but because of the length of the description of each number, the younger generation is tending to use the shorter numbers of the national language. Anything over the worth of one or two men may be described as a duate 'a lot'.

When both hands are completed, the hands are clapped together and when counting on the feet, it is customary to hold onto the toes being included. The following numbers are described in this manner:
5 = auhole
6 = au mei viva
7 = au mei behasu viva
10 = au ahim folo
11 = naba bu vametea viva
15 = naba meida ahebu folo
16 = au ahim folo, naba meida folo, naba bu meida vametea viva
20 = naba ahim folo
21 = dat meida anekeha vametea viva
'palm finished'
'palm another digit'
'palm another two digit'
'palm pair finished'
'foot (bu) one digit'
'foot one all finished'
'palm pair finished, foot another finished, foot (bu) one digit'
'foot pair finished'
'man another hand one digit'

3. Type III

The third type of counting system is found among the Bime people located in the highlands south of Jayapura. In this system, only the upper extremities and head are used starting with the fingers of the left hand and continuing up over the head and down the right arm as illustrated in the picture below.

There are two variations of the base system. The main one is based on twenty-five while the second is based on twenty-eight. This latter system includes the eyes and nose and by so doing raises the numerical value of each point past the center.
of the head by three. The speaker points first to the left eye, then the nose, and then the right eye. Most often, counting takes place in a face to face encounter so that only the root word which is the part of the body involved is spoken. Only the numbers fourteen and fifteen are spoken with the prefix dana 'right'. When the number twenty-five is reached, the speaker returns to the left side but uses the prefix kaip for numbers between 26 and 50. Anything over fifty is called weize 'many'.

The first time money was introduced to the Bime people, fifty rupiah coins were commonly used in exchange. Therefore, when counting money, fifty has become the base. Otherwise, everything else is counted in the manner described above.

Notes

1 I wish to express appreciation to the following SIL team members who contributed the information for the respective language groups in which they do linguistic research:
   Ambai - Peter Silzer
   Berik - Susan Westrum
   Bauri - author
   Bime - James DeVries

ME AND YOU VERSUS THE REST
Abbreviated Pronoun Systems in Irianese/Papuan Languages
Don Laycock
Australian National University

A pronoun system, for any language, is defined as the way in which, for any set of morphological elements, the language expresses contrasts in the central categories of person, number, and gender, as well as certain peripheral categories which are outside the scope of this paper, such as social status, kinship, and deixis--insofar as this last is not subsumed under person.

A language may--and usually does--have a number of pronoun systems. Pronouns may be free or bound, emphatic or non-emphatic, full or abbreviated; they may also appear with different case-endings. Each such set may form a different system in that different categories are distinguished. In this paper I have tried to use the most basic set of free subject pronouns wherever possible, but have drawn on other sets to exemplify various patterns.

The major pronominal types of what are usually called Papuan or Irianese languages--that is, non-Austronesian languages of the New Guinea region--are set out in the accompanying table. The table should not, however, be taken as being complete, although most of the 'abbreviated' pronoun systems--that is, languages with less than about five distinct pronouns--are included. The remaining systems are merely illustrative.

The following conventions are used in the table:
- the numbers 1, 2, 3 represent first, second, and third person.
- letters represent blending of persons: R = 1+2, A = 1/2/3; E = 1 + 3.
- the first column is always singular, and the second column is always plural. Where there are three columns, the
third column represents dual.

- solid arrows link systems which are derivable by the addition of a single additional distinction. Broken arrows show derivations of greater complexity.

- the numbers across the tops of the columns show the total number of distinct pronominal forms in the system. The letters at the left of the rows are simply there to facilitate reference to any particular system.

In devising the tables, I have sometimes ignored indications of duality or plurality that are the same for all persons; thus a language that optionally expresses first dual as 'we two' and first plural as 'we all' has been counted as not expressing the category of number—especially where there is no other morphological indication of number. Similar consideration applies to other non-singular numbers such as trial, or paucal, which are omitted entirely from consideration at present.

The table should be studied in the light of the implicational hierarchies stated by Greenberg (1963); those most relevant to the present paper are the following:

The three most common nominal inflectional categories are number, gender, and case. Among systems of number, there is a definite hierarchy which can be stated in the following terms:

Universal 34. No language has a trial number unless it has a dual. No language has a dual unless it has a plural.

Non-singular number categories are marked categories in relation to the singular, as indicated in the following universal:

Universal 35. There is no language in which the plural does not have some non-zero allomorphs, whereas there are languages in which the singular is expressed only by zero. The dual and the trial are almost never expressed only by zero.

The marked character of the non-singular numbers as against the singular can also be seen when number occurs along with gender. The interrelations of these two sets of categories are stated in the following universal:

Universal 36. If a language has the category of gender, it always has the category of number.

Universal 37. A language never has more gender categories in non-singular numbers than in the singular.

This latter statement may be illustrated from Hausa, which has a masculine and feminine gender distinction in the singular but not in the plural. The opposite phenomenon, to my knowledge, never occurs.

Finally, pronominal categories may be briefly considered. In general, pronominal categories tend to be more differentiated than those of the noun, but almost any specific statement in this regard will have some exceptions. As a general statement we have the following universals:

Universal 42. All languages have pronominal categories involving at least three persons and two numbers.

Universal 43. If a language has gender categories in the noun, it has gender categories in the pronoun.

Gender categories show certain relations to categories of person in pronouns, as might be expected.

Universal 44. If a language has gender distinctions in the first person, it always has gender distinctions in the second or third person, or in both.

There is likewise a relation to the category of number.

Universal 45. If there are any gender distinctions in the plural of the pronoun, there are some gender distinctions in the singular also.

(Greenberg 1963:74-76)

The pronominal systems of Irianese/Papuan languages are in conformity with all of these principles except Universal 42, which is essentially the reason for this paper. Thus we see clearly that singular is the unmarked category, and that the pronouns rank, in topicalisation, first, second, third. In referentiality the pronouns rank third, second, first; that is why gender first makes its appearance in pronouns that are both third person and singular, and why gender in other persons is
rare: I know what sex I am, and can make a fair guess at what sex you are, but it is not always possible to be so sure of a third party.

It is equally clear that first person pronominal forms in non-singular numbers necessarily involve other persons. If the most basic speech event is that of speaker, hearer, and other, it follows that the speaker must include one of the other two persons when he says 'we'. The unmarked form is what is usually called the 'inclusive' pronoun; you and I—a conclusion which follows naturally from the greater topicalisation of first and second persons, as against third. The marked category is exemplified by the 'exclusive' pronoun; he and I, or first plus third. Since the exclusive category is more highly marked, it is readily lost—and in fact, if we look at Austronesian languages that do not make the inclusive/exclusive distinction, it is always that *kita* form that is retained.

Running briefly across the table, then, we can make a few additional observations. The first person system that is capable of making distinctions in categories at all contains two pronouns—and, predictably, these divide the universe solipsistically, into the speaker and everybody else (2B). The example from Morwap, a little-known language of Irian Jaya on which I collected data in 1970, I should perhaps say that my data on the language is not of high reliability, in that I was working through Malay, a language I do not control well; nevertheless, persistent testing failed to elicit more than two pronouns, so the data may well stand until challenged.

In any case, Morwap is not the only language which contradicts Universal 42. In 3B, we have a language from the Papua New Guinea border area (Amanab), which adds a non-singular number, but makes no further distinctions in persons. My data on Amanab suggest that there may be three numbers, singular, dual, and plural, in first person; but in any case I could find no distinction between second and third person in any number. Also, if we take 3C, we have a system which distinguishes three persons, but makes no number distinctions; I exemplify this by Aywi, another little-known language of Irian Jaya, but such a system is not in fact uncommon, being also found in other Irian Jaya languages such as Simog, Daonda, Nimboran, and perhaps, Naltya.

When we get to four pronouns it is merely a case of filling out the person and number categories. System 4F adds a third person to the Amanab system of 3B—but only in the form of an exclusive pronoun, a blend of first and third person. Unfortunately I have lost some of my original notes for this paper, and cannot now establish which language yielded this system. We come somewhat near the system in a non-Iranian, the Burmic language of Gurung in Nepal, which is the same as 4F with the addition of a distinction between second and third person—or the same as 4C with the addition of 'exclusive'. Other gaps in the table could be filled in with languages from other parts of the world, but I have not thought it desirable to go outside the Papua New Guinea area for the present.

Languages with five pronouns continue to expand in terms of already established categories. It is interesting to note, however, how far across the table the category R—blend of first and second persons—extends, on non-singular numbers. This is a widespread feature of Iranian/Papuan languages, and one that may well serve to characterise them.

Also included in volume five are two instructive systems that have the same pronoun for first plural and second singular—a system that is also found in the verb morphology of other Highlands languages in Papua New Guinea, such as Gahuku. The explanation for this seems to lie in the fact that, as we have said above, first person non-singular essentially contains a second person as addressee, and it is not far from this to
equating the two forms.

It is only when we come to column six—that is, languages with six distinct pronouns in the system—that it becomes possible to add an additional category, that of gender. Gender does not make its appearance in any language until the category of number has been established—making gender the third in the hierarchy of person, number, gender. Other systems in this column continue to expand already established categories, but the fact that there is a tendency to symmetry and stabilisation is shown by the fact that one of the very common systems is that of 6D: three persons, two numbers. This is a system that is very widespread both in Irianese/Papuan language, and also throughout the world.

Column seven continues expanding established categories. In column eight, the gender category can be expanded in two ways: either by adding to the number of genders in the singular (8A)—and in multiple-classifying languages, this gender or class expansion is open-ended—or by extending the gender category, first into second person (8B), and ultimately into first person (12A). Unfortunately, I have not been able to come across an unambiguous Irianese/Papuan example of 8A, though it would not surprise me if one existed; accordingly, 8A is enclosed in parentheses in the table, and can be taken as representing English (at the stage when thou was still in use).

In conclusion, I should like to say that I, and my colleagues at the Australian National University who are working on the New Guinea area, would appreciate further grammatical data on languages of Irian Jaya, especially such data as would support or contradict the views I have outlined above. But if the data I have given on abbreviated pronoun systems is proved to be correct, then we are in a position to say that Irianese/Papuan languages have once again made a contribution, if only small, to international linguistic theory.

Notes

1 The location of Morwab is shown on a map accompanying an article by C.L. Voorhoeve in Wurm, ed. (1975); the same article refers to a previous article by Voorhoeve in which a few more details on Morwab are given. The pronouns I recorded were ka and so; in eliciting a paradigm of the verb 'eat' all pronouns after the first were given as so. I am not quite sure whether this means that ka is first singular only, and so all others, or whether (which seems more reasonable) that ka is first person, all numbers, and so is all other persons and numbers.

References


Identification of Languages, according to Pronominal Systems shown in Table:

<table>
<thead>
<tr>
<th>System</th>
<th>Language</th>
<th>System</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>2B</td>
<td>Morwop, TNGP</td>
<td>8C</td>
<td>Karam, TNGP, Wiru, TNGP</td>
</tr>
<tr>
<td>3B</td>
<td>Amanab, TNGP</td>
<td>8E</td>
<td>widespread</td>
</tr>
<tr>
<td>3C</td>
<td>Awyi, TNGP</td>
<td>9D</td>
<td>Boiken, SERP</td>
</tr>
<tr>
<td>4B</td>
<td>Kiwai, TNGP (bound subject-marking in verbs)</td>
<td>10B</td>
<td>Olo, TF; Moni, TNGP</td>
</tr>
<tr>
<td>4C</td>
<td>Manem, TNGP (ignoring pluralising element)</td>
<td>10C</td>
<td>Buin, EPP</td>
</tr>
<tr>
<td>4F</td>
<td></td>
<td>10D</td>
<td>Toaripi, TNGP</td>
</tr>
<tr>
<td>5B</td>
<td>Wiru, TNGP (possessive pronouns)</td>
<td>11B</td>
<td>Abelam, SERP</td>
</tr>
<tr>
<td>5C</td>
<td>Imonda dial. of Varis, TNGP</td>
<td>12B</td>
<td>Ngala, SERP</td>
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<tr>
<td>5D</td>
<td>Suki, TNGP</td>
<td>16F</td>
<td>Vanimo, SP</td>
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<tr>
<td>5E</td>
<td>Asmat, TNGP</td>
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<tr>
<td>5G</td>
<td>Awa, TNGP (bound subject-marking in verbs)</td>
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<td>6B</td>
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<td>Vanimo, SP (bound subject-marking in verbs)</td>
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<td>Southern Kati, TNGP</td>
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<tr>
<td>8B</td>
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</tr>
</tbody>
</table>

For locations of all languages cited, as well as further grammatical details, and information on phylic classification, see Wurm, ed. (1975).