Network Models to Describe the Kilivila Classifier System
Author(s): Gunter Senft
Source: *Oceanic Linguistics*, Vol. 30, No. 2 (Winter, 1991), pp. 131-155
Published by: University of Hawai'i Press
Stable URL: http://www.jstor.org/stable/3623085
Accessed: 15/05/2009 08:46

Your use of the JSTOR archive indicates your acceptance of JSTOR's Terms and Conditions of Use, available at http://www.jstor.org/page/info/about/policies/terms.jsp. JSTOR's Terms and Conditions of Use provides, in part, that unless you have obtained prior permission, you may not download an entire issue of a journal or multiple copies of articles, and you may use content in the JSTOR archive only for your personal, non-commercial use.

Please contact the publisher regarding any further use of this work. Publisher contact information may be obtained at http://www.jstor.org/action/showPublisher?publisherCode=uhp.

Each copy of any part of a JSTOR transmission must contain the same copyright notice that appears on the screen or printed page of such transmission.

JSTOR is a not-for-profit organization founded in 1995 to build trusted digital archives for scholarship. We work with the scholarly community to preserve their work and the materials they rely upon, and to build a common research platform that promotes the discovery and use of these resources. For more information about JSTOR, please contact support@jstor.org.

University of Hawai'i Press is collaborating with JSTOR to digitize, preserve and extend access to *Oceanic Linguistics.*

http://www.jstor.org

NETWORK MODELS TO DESCRIBE THE KILIVILA CLASSIFIER SYSTEM

GUNTER SENFT

RESEARCH GROUP FOR COGNITIVE ANTHROPOLOGY
MAX-PLANCK-INSTITUTE FOR PSYCHOLINGUISTICS

The system of "classificatory particles" in the Kilivila language of the Trobriand Islands (originally described by Malinowski in 1920) is examined in detail. The 88 particles studied can be seen as operating dynamically within 20 semantic domains, with much potential for substitution of particles within and between domains available to speakers in discourse. Variable rules are developed with relative frequencies for the choice of individual particles in a given domain. When the substitution possibilities are plotted in two dimensions, a type of network results. The question as to whether there is a valid hierarchy of domains and whether the network might consist of more than two dimensions is also considered.

1. INTRODUCTION.[1] Kilivila (also known as Kiriwina, Boyowa) is one of the 40 Austronesian languages spoken in the area of Milne Bay Province in Papua New Guinea. Typologically, it is classified as belonging to the "Papuan Tip Cluster" (Capell 1976:6, 9; Ross 1988:25–27); moreover, it is classified as one of the languages with VOS word order (Senft 1986: 107–112). The Kilivila language family encompasses the languages Budibud (or Nada), Muyuw (or Murua), and Kilivila. Kilivila is spoken by about 17,500 speakers; the majority of these speakers lives on the Trobriand Islands.

Ever since Malinowski's classic paper "Classificatory Particles in the Language of Kiriwina" (Malinowski 1920), Kilivila has been known in linguistics as a so-called "(numeral) classifier language" (Allan 1977: 286–288).[2] Kilivila presents a system of "Classificatory Particles" (from here onward abbreviated CPs) that encompasses at least 177 formatives (Lawton 1980, Senft 1983).

For the last eight years this fascinating system of classification has been one of my main concerns in learning, studying, describing, and analyzing Kilivila (Senft 1983, 1985, 1987, 1989). Just recently I finished the descrip-

Oceanic Linguistics, volume 30, no. 2 (Winter 1991)
© by University of Hawaii Press. All rights reserved.

tion and analysis of a subsystem of 88 CPs (see Appendix) with respect to its functions, its acquisition, its realization in actual speech production, its change, and its semantics (Senft 1991). These 88 CPs represent the classifier system of the speech community of Tauwema village on Kaile'una Island, my place of residence during 15 months of field research in 1982/83 and during 4 further months of field research in 1989. The 88 CPs constitute semantic domains. My analyses of the CP system reveal that these semantic domains cannot be described as static; on the contrary, these semantic domains interact dynamically with each other. The question is how to describe these dynamics. To answer this question I propose three so-called "network models" for the description of the Kilivila CP system. However, before I present these models, I will first briefly describe the grammatical and discourse functions of the Kilivila CPs to give at least an impression of the grammatical relevance of these formatives.

2. GRAMMATICAL AND DISCOURSE FUNCTIONS OF CPS IN KILIVILA. The system of noun classification is an important means of word formation with all (but one) of the demonstrative pronouns, with one form of (numerical) interrogative pronouns/adverbs, with two classes of adjectives, and with numerals. These word classes require concord with the class of the noun they refer to. This concord is secured by the CPs that are infixed or prefixed to the respective word frame or word stem. I have described these processes of word formation and syntactic aspects of constituents with CPs in detail elsewhere (Senft 1985:374–379; 1986). However, I will give a general account of the respective processes of word formation here.

With the exception of the demonstrative pronoun *besa*[3] or *beya* 'this' (with a deictic gesture), all other demonstrative pronouns consist of a fixed morphological frame, formed by the word-initial morpheme *ma-* (with the phonological variants *m-* or *mi-*), the word-final morpheme *-na*, and an infixed morpheme, which is the CP. To distinguish between singular and plural, there is also a plural-marking morpheme *-si-*, which is infixed between the CP and the word-final morpheme *-na*. Demonstrative pronouns formed in this way express the concept of 'this/these here'. To express the deictic concept of 'that/those there', the morpheme *-we-* is infixed either in singular forms between CP and word-final *-na*, or in plural forms between the plural-marker *-si-* and word-final *-na*. To express the kind of deictic concept that comes close to the English demonstrative 'yonder', the Kilivila speaker takes the forms of the demonstrative pronouns expressing the concept of 'that/those there' and changes the final vowel /a/ of the word-final morpheme *-na* to an /e/ that is lengthened and that gets a minor accent.

There are three classes of adjectives in Kilivila. One class must be used without CPs, the other class may be used with or without CPs, and the third class must always be used with CPs that are prefixed to the word stem.

The numerals, or more precisely, the cardinal numbers in Kilivila consist of the word stem and a prefixed CP.

There is also one form of an interrogative pronoun/adverb that consists of the word stem *-vila* and a prefixed CP.

As already mentioned above, I refer the reader who wants more detailed information about these processes of word formation to my previously published work on this topic (Senft 1985, 1986, 1989); for present purposes it suffices to finish this brief descriptive account by presenting two sentences containing all the four word classes involved in the system of noun classification. In the examples the CP (-)*ke*(-) is italicized:

(1) Kevila waga lekotasi?
ke-vila waga le-kota-si
wooden-how. many canoe 3P. Past-arrive-Plural
'How many canoes arrived?'

(2) Keyu waga makesina kemanabweta (lekotasi).
ke-yu waga ma-*ke*-si-na
wooden-two canoe this-wooden-Plural-this
ke-manabweta (le-kota-si)
wooden-beautiful (3P. Past-arrive-Plural).
'These two beautiful canoes (arrived).'

Here the speakers of these sentences refer to 'canoes'; they have to indicate the noun class of 'canoe' with the CP for 'wooden things', (-)*ke*(-), in the interrogative pronoun, in the numeral, in the demonstrative pronoun, and in the adjective.

With these few remarks on the morphological relevance of the CPs, I already mentioned one function these formatives assume, namely, to secure concord between the noun and the four word classes involved in these word-formation processes. This concord implies redundancy in the information transported by a sentence, of course. This is illustrated in sentences (1) and (2) above. The reference of the respective word classes is unequivocal, and the redundancy in the information given is obvious: Trobriand canoes are made of timber, so they are "wooden things." (I will discuss this aspect of redundant information below.)

The complex inventory of CPs allows the speakers to classify a noun "temporarily" (Berlin 1968:175), that is, to emphasize certain characteristics of the noun they refer to. This is illustrated by the following examples (see Senft 1985:380–387).

(3) natala yena
na-tala yena
animal-one fish
'one fish'

(4) kevalalima yena
kevala-lima yena
batch. drying-five fish
'five batches of smoked fish'

(5) oylalima yena
oyla-lima yena
string-five fish
'five strings strung with fish'

(6) makupona yena
ma-kupo-na yena
this-two. string-this fish
'these two strings of fish'

(7) mapwasasina yena
ma-pwasa-si-na yena
this-rotten-Plural-this fish
'these rotten fish'

These examples first present the CP (-)*na*(-) in its connotation 'animals' and then illustrate a part of the noun-modifying group of CPs that specify the noun with respect to its quantity, its order, its arrangement, and its condition or state.

Sentence (8) presents the two sex-specifying CPs (-)*to*/*te*(-) and (-)*na*(-), the latter now in its connotation 'persons of female sex', and the age-subclassifying CP (-)*gudi*(-):

(8) Bibodi tetala natala guditala.
bi-bodi te-tala na-tala gudi-tala
3P. Fut-benefit male-one female-one child-one
'It will benefit each man, woman, and child.'

The following noun phrase (9) (see Lawton 1980:49) nicely illustrates the semantic power of the CPs used.

(9) kai mabubosina kwelatolu
kai ma-bubo-si-na kwela-tolu
wood this-cut. across-Plural-this pot-like-three
'these three potlike sawn-off sections of timber'

Sentence (10) shows that CPs can also be used metaphorically:

(10) Kugisi magudina waga kekekita okopo'ula waga dimdim!
ku-gisi ma-gudi-na waga ke-kekita okopo'ula
2P-look this-child-this canoe wooden-small behind
waga dimdim
canoe white man
'Look at this small dinghy behind the motorboat!'

All these examples illustrate the referential function of CPs and their semantic power. A closer look on some of these examples shows some other—grammatical—functions the CPs perform.

In sentence (8), the numerals *tetala, natala, guditala* are translated as nominal expressions. This is legitimate, especially when we assume that the respective nouns of the three noun phrases given (*tetala* ***tau*** 'one man', *natala* ***vivila*** 'one woman', *guditala* ***gwadi*** 'one child') were deleted. This analysis, which is possible because of the information redundancy transported by CPs, assigns to the numerals proper nominal status. We also find this kind of nominalization with demonstrative pronouns and adjectives (see Senft 1985:384).

The phrases (11) and (12), as well as the phrases (4–6), illustrate the plural-marking function of CPs.

(11) makena nuya bwaveaka
ma-ke-na nuya bwa-veaka
this-wooden-this coconut tree-big
'this big coconut *tree*'

(12) mapo'ulana nuya bwaveaka
ma-po'ula-na nuya bwa-veaka
this-plantation-this coconut tree-big
'this plantation of big coconut *trees*'

In addition to this function of plural marking, we also find some CPs that fulfill the function of quantifying enumeration, a function independent of that of numerals proper. The noun phrase in (6) is an exemplary illustration of this function.

Examples (4), (5), (7), and (9) show as well that some CPs also take on the function of verblike expressions within a noun phrase. This is especially true for CPs that specify certain activities or refer to such activities (see Senft 1985:385). So far I dealt with CPs on the sentence or phrase level only. In what follows I will look at the CPs used in actual discourse.

Sentence (8) above demonstrated that noun phrases may be constituted by numerals alone, without the respective nouns to which these numerals

refer. I explained this principle of noun phrase construction by positing that the respective nouns are deleted and that the other word classes (in the example given, the numerals) that constitute the noun phrases acquire nominal status.

Malinowski (1920:59) hinted at such an interpretation of Kilivila sentences illustrated by (8). He compared these sentences with elliptic utterances in English. Sentences that are constructed like our example (8) are indeed quite frequently produced in Trobriand discourse. Trobriand Islanders introduce certain nominal referents explicitly. If they want to refer to an earlier-mentioned entity in the course of their discourse by means of numerals, demonstrative pronouns, or adjectives, they usually no longer need to use the noun—the noun is deleted.

This deletion is only possible because the CPs represent the deleted nouns in a quasi-fragmentary way, and because the anaphoric reference of CPs secures semantic concord beyond sentence boundaries. Now we can explain why we sometimes find redundant information within the noun phrase: It is only the information redundancy given by the CPs within a Kilivila noun phrase that enables the deletion processes to occur without any loss of information, even beyond sentence boundaries. Thus CPs fulfill the important function of securing coherence in discourse. As a general rule, a noun can be deleted as long as it is not reclassified—for stylistic reasons, perhaps—by another CP. In the latter case, the noun must reappear as a constituent of the noun phrase in order to secure unequivocal and unambiguous reference. In my sample of transcribed Kilivila speech data, I have one (rather extreme) example in which a speaker (Tomalala, Informant V 16) introduces a nominal referent to which he refers 16 sentences (78 words) later with the appropriate CP. Nevertheless, the reference is unequivocal and unambiguous.

The following examples (13–15) illustrate these functions of CPs.

(13) Atatai tataba. Tauwau Tabalu mtosina makena si koni.
a-tatai tataba tauwau tabalu
1P-carve tataba. board men Tabalu.subclan
m-to-si-na ma-ke-na si koni
this-male-Plural-this this-wooden-this their sign.of.honor
'I carve a *tataba* board. These men belonging to the Tabalu subclan, this is their sign of honor.'

Here the speaker refers to a certain board with carving patterns that marks houses, food houses, and canoes as the personal property of men belonging to the Tabalu-subclan. The reference of the two demonstrative pronouns produced is unequivocal.

(14) Tauwau pela emesi bilebusi. Ekokwa'usi kebila mabudanaga ekugwasi emesi.
tauwau pela e-me-si bi-lebu-si
men for 3P-come-Plural 3P.Fut-take-Plural
e-kokwa'u-si kebila ma-buda-na-ga
3P-weave-Plural stretcher this-group-this-Emphasis
e-kugwa-si e-me-si
3P-first-Plural 3P-come-Plural
'The men have come to take him with them. They have woven a stretcher, the men belonging to this group who were the first to arrive.

Here the speaker uses the CP (-)*buda*(-) with the demonstrative pronoun in the second sentence to refer unequivocally to the noun *tauwau* produced in the first sentence.

(15) O davalusi esisusi tommota topaisewa. Vivila nasalau, tauwau tobugubagula. Tommota gala todubakasala, kena kumwedona enukwalisi bubunesi bwena.
o da-valu-si e-sisu-si tommota
in our (incl)-village-Plural 3P-live-Plural people
to-paisewa vivila na-salau tauwau
human.beings-work woman female-busy men
to-bugubagula tommota gala
male-work.in.the.garden people not
to-dubakasala kena kumwedona e-nukwali-si
human.beings-rude but all 3P-know-Plural
bubune-si bwena
manners-their good
'In our village live people taking pleasure in their work. The women are busy, the men are good gardeners. The people are not rude, but all have good manners.'

This example illustrates that, in general, reclassification does not allow the deletion of the then more specified noun. To emphasize the different characterization of men and women on the one hand and all villagers on the other, the nouns can hardly be deleted. The speaker uses the CP (-)*to*(-) first to refer to 'human beings' and then to 'persons of male sex'. The CP (-)*na*(-) is used to refer to 'persons of female sex'. If the speaker did not use the noun *tommota* in the last sentence again, then this sentence would refer to 'persons of male sex' only (see Senft 1985:387).

The following points summarize the grammatical and discourse functions CPs fulfill in Kilivila.

1. CPs play an important role in the word formation of all numerals, all demonstrative pronouns (with the exception of the general demonstrative *besa*), some adjectives (see Senft 1986:85–88), and one interrogative adverb or numerical interrogative pronoun.

2. CPs fulfill the function of marking concord between the respective nouns classified and the word classes just mentioned.

3. CPs classify and specify their nominal referents—inherently as well as temporarily—in many and various ways, with much semantic power.

4. CPs can nominalize all numerals, some adjectives, and all demonstrative pronouns (with the exception of *besa*).

5. CPs, being collective terms ("*Kollektiva*"; see Royen 1929:595, 597, 601, 612, also 251, 512), can fulfill the function of marking plural in nouns they refer to (see also Adams and Conklin 1974:8).

6. Some CPs can fulfill verblike functions within noun phrases.

7. CPs with their anaphoric referential function can constitute noun phrases that are comparable to elliptic utterances: once a noun has been introduced, the following noun phrases referring to this entity may consist of numerals, adjectives, and/or demonstrative pronouns only (the noun itself is then no longer used, or, to phrase it differently, the noun is then "deleted" in the respective noun phrases) *if* the noun these noun phrases refer to is not reclassified (see also Adams and Conklin 1974:1, 10–12; Bühler 1934:155–159).

8. CPs with their anaphoric referential potential can also fulfill the function of preserving coherence in discourse (see also Hopper 1986).

3. KILIVILA CPS AND THE SEMANTIC DOMAINS THEY CONSTITUTE. My analyses of the Kilivila CP system are based on three corpora I collected in 1982–83 and in 1989. The first corpus consists of all the transcribed speech data I documented during my field research. It consists of 34,955 words,[4] which include 1,564 CP tokens representing 41 different CP types. The second corpus consists of 88 CP types I elicited in 1983 with the help of a questionnaire from 60 informants of five different age groups, ranging in age from approximately 4 to 75 years (see Senft 1987:102–107). The third corpus, finally, consists of data I elicited in my 1989 CP restudy with 78 informants in order to control in three different elicitation tests and in participant observation the results of my previous analyses (see Senft 1991, chapter 4).

I analyzed the first two corpora with respect to the questions how the CP system functions, how it is acquired by children, how it is actually used in speech production, what kind of changes affect it, and how its semantics can be described. With this description and analysis I wanted to predict which CPs a speaker will produce to refer to a given nominal concept. The

TABLE 1. SEMANTIC DOMAINS CONSTITUTED BY THE KILIVILA CPS AND THE CONCEPTS THEY COVER

1. a. Person
   b. Body part
2. Animal
3. a. Quantity (living beings, in general)
   b. Quantity (things, in general)
4. General CPs (unmarked forms for inanimates, in general)
5. Measure
6. Time
7. Place
8. Quality
9. Shape
10. Tree, wood, wooden thing
11. Utensil
12. Yam
13. Part of a food house, a canoe, a creel
14. Door, entrance, window
15. Fire, oven
16. Road, journey
17. Text
18. Ritual item
19. Dress, adornment
20. Name

semantic analyses revealed that the 88 CP types described can be grouped into 20 semantic domains that cover the following concepts (see Table 1).

The order in which these domains are given in Table 1 is completely arbitrary. *The grouping of the domain defining and constituting CPs was primarily based on common sense considerations* that among other things took into account ethnographic information and knowledge of the speech community studied. However, the results of the restudy confirm this grouping of the 88 CP types: Kilivila native speakers accept the semantic domains proposed. I did this first grouping of the domain constituting CPs under the tacit assumption that these domains could be described as static or closed systems. However, my preceding analyses of the CP system, especially the cross-references given by my informants for certain CPs and the results with respect to the actual use of the individual CPs in different contexts, made it obvious that this procedure was only an idealization necessary to establish a basis for discussing the problem of the dynamics of these semantic domains. The grouping of the CPs was based on the rather trivial fact that all the CPs that constitute a certain semantic domain share certain important features; however, some CPs have inherent features that permit them to be assigned to more than one semantic domain. Such a possible multiple assignment of certain CPs to different semantic domains again raises questions about the dynamics of such a classificatory system.

Let me use the semantic domain "shape" (see also Friedrich 1970) as an example to discuss this problem.

Even a superficial glance at the inventory of CPs in Kilivila showed that there are some classifiers that have something to do with the concept 'shape'. After a closer look at the CP inventory, I considered the following CP types as constituting the semantic domain 'shape'.

Domain 'Shape':

CP types	
ke	'rigid, long objects' (= ke_2)
kabulo	'protuberances' (= $kabulo_1$)
kasa	'row, line'
gili	'row'
nutu/notu	'kneaded things, dot, drop'

Looking at the CP production data that constitute my second corpus, where I elicited the production of CP types from 60 informants of different ages, I realized that the CP *kabulo* was not produced at all if speakers wanted to refer to the concept 'protuberances'; instead, speakers used tokens of the CP types ke_2 'rigid, long', *bwa* 'tree', and *utu* 'scrap'. The CP *kabulo*, however, was used instead of the expected CP *nunu* in the domain encompassing the concept 'place'. Here we observe three kinds of CP substitution: the CP *kabulo* is replaced by the CP ke_2; ke_2 and *kabulo* are regarded as constituting one and the same domain. This is a substitution of one CP by another CP within one and the same domain. Therefore, I call this kind of substitution "*intra-domain substitution.*" The CP *kabulo*, however, was also replaced by the CPs *bwa* and *utu*, which are regarded as constituting the semantic domains 'tree, wood, wooden things' and 'quantity (things, in general)'. I call this kind of substitution, where CPs constituting other semantic domains "come" into the semantic domain observed, "*in-domain substitution.*" Finally, the fact that the CP *kabulo* is produced in the domain that encompasses the concept 'place', replacing the expected CP *nunu* there, represents the kind of substitution I call "*off-domain substitution*" because the (tokens of the) CP *kabulo* are used off the original domain and "go" into another semantic domain. Thus, cases of "off-domain substitution" observed with one domain are "in-domain substitution" cases in another (or other) domain(s). CPs that "come" into a certain semantic domain by cases of "in-domain substitution" and CPs that are used within this certain semantic domain are regarded as actually constituting this domain. Together with the CP types I assumed to constitute a semantic domain, I wanted to note down all the cases of "in-, intra-, and off-domain substitution" of CP types that affect the domain. I indicated cases of "in-domain substitution" by the notation

"+ + +", cases of "off-domain substitution" by the notation "——", and cases of "intra-domain substitution" by the notation

		| |
which reads:	tokens of CP X	X
	are produced	|
	instead of	|
	the expected	| |
	tokens of CP Y	Y.

I also wanted to know and to note how many tokens of CP types were used by the 60 informants producing the data under analysis—ideally, each of the 60 informants should produce three tokens of one CP type. Moreover, I also wanted to give a comparative figure and therefore computed and noted down the relative frequency (hereafter r.f.) with which the respective tokens of a CP type were produced by informants for each semantic domain observed. The r.f.s were computed on the basis of 180 tokens (= 60 informants producing in the ideal case three tokens of a certain CP type). Thus, if I observed 180 tokens of a certain CP type produced in the test, these tokens got the r.f. *1.0*. If I observed no token of a certain CP type the production of which was expected, the CP type got the r.f. *.0*.

This procedure resulted in tables for all 20 semantic domains that attempt to reflect the dynamics involving the constitution of these domains by CP types. All tokens of the CP types that actually constitute the respective semantic domains (including all tokens given for these CP types in "intra-domain substitution" and "in-domain substitution" cases) were counted and ordered according to the frequency of their production. On the basis of their sum, relative frequencies (r.f.s) for all tokens constituting the domain were computed to give a comparative figure for the inter-domain weighting of each CP type. The r.f.s for all CP types constituting a certain domain add up to 1.0. (If the r.f.s add up to 1.01 or to .99 it is not a computing deficiency; it is rather the result of arithmetic processes of bringing the individual values up or down to round figures.)

On the basis of these data I then tried to set up the rules speakers (may) adhere to in their production of a certain CP of the respective semantic domain discussed. I regard these rules as the expression of the transfer of a given semantic concept into an appropriate classifier. The rules have to cope with the domain-inherent and domain-affecting dynamics. Thus, most if not all of the rules proposed and formulated are actually variable rules (for a discussion and further references see Labov 1972: 237; Romaine

1985; Senft 1982:6). I dispensed with a formal notation of these rules in favor of a comprehensive formulation that I hope will be easier to understand. In my opinion these rules are the only means to come up to the expectation of being able to predict which CP(s) a speaker will produce to refer to a given nominal concept. In my opinion and to my knowledge, variable rules can apprehend, describe, and record such dynamic processes in the most appropriate way.

Again, let me exemplify this procedure with the semantic domain 'shape'. Tables 2a and 2b attempt to present the dynamics of this domain and give the evaluation of the CP types that actually constitute it. The domain numbers are the same as those used in Table 1.

TABLE 2A. DOMAIN 9 'SHAPE'

IN-DOMAIN SUBSTITUTION					OFF-DOMAIN SUBSTITUTION		
			ke$_2$	107 *.59*			
(domain 10) *bwa*	3 *.02*	+++	*kabulo*$_1$		—	3 *.02*	*nunu* (domain 7)
(domain 3b) *utu*	38 *.21*	+++					
(domain 4) *ke*	2 *.01*	+++	*kasa*	139 *.77*	—	10 *.06*	*meila* (domain 17)
(domain 4) *kwe*	9 *.05*	+++			—	3 *.02*	*nina* (domain 17)
					—	3 *.02*	*giwi* (domain 8)
					—	3 *.02*	*gum* (domain 3b)
					—	1 *.01*	*yuva* (domain 3a)
					—	2 *.01*	*deli* (domain 3a)
				3 *.02*			
(domain 4) *kwe*	29 *.16*	+++	*gili*	12 *.07*			
(domain 8) *vili*	3 *.02*	+++					
(domain 8) *ya*	101 *.56*	+++					
(domain 19) *vakala*	2 *.01*	+++					
(domain 4) *kwe*	33 *.18*	+++	*nutu/notu*	103 *.57*			

TABLE 2B. DOMAIN 9 WITH R.F.S INTERPRETED AS FIGURES FOR THE EVALUATION OF CP TYPES (IN-, INTRA-DOMAIN)

1. kasa 'row, line'	139 + 3	= 142	r.f. .24
2. ke_2 'rigid, long'	107	(= 107	r.f. .18)
ke_3 'inanimates'	2	(= 2	r.f. .003)
	109	= 109	r.f. .19
3. notu 'kneaded/dot'	103	= 103	r.f. .18
4. ya 'flexible/thin'	101	= 101	r.f. .17
5. kwe 'thing'	9 + 29 + 33	= 71	r.f. .12
6. utu 'scrap'	38	= 38	r.f. .06
7. gili 'row'	12	= 12	r.f. .02
8. vili 'untwisted'	3	= 3	r.f. .005
9. bwa 'tree'	3	= 3	r.f. .005
10. vakala 'belt'	2	= 2	r.f. .003
		585	.99

Table 2a documents that with domain 9 we observe two cases of intra-domain substitution and nine cases of in-domain substitution (affecting CPs that constitute the domains 3b 'quantity', 4 'general CPs', 8 'quality', 10 'tree, wooden thing', and 19 'dress, adornment').

We also observe seven cases of off-domain substitution (affecting the domains 3a&b 'quantity', 7 'place', 8 'quality', and 17 'text').

Table 2b presents the CP types that constitute the domain and gives the r.f.s for the production of the individual CP types within the domain as a whole.

On the basis of these two tables I try to formulate the variable rules a speaker adheres to in her/his production of a certain CP type of domain 9 that covers the concept 'shape':

> If speakers want to refer to the concept 'protuberances', they do not produce the special and most appropriate CP *kabulo*$_1$ at all, but most often use the CP *ke*$_2$ (r.f. .59). The CP *utu* is also produced in this context (r.f. .21; here speakers may intend to refer to a 'protuberant part'). Moreover, it is possible, though rather rarely observed, to produce the CP *bwa* in this context (r.f. .02; here speakers may intend to refer to 'protuberant wooden things').
>
> If speakers want to refer to the concept 'row, line', they most often produce the special and most appropriate CP *kasa* (r.f. .77). It is also possible, though rarely observed, to encounter the two general CPs *kwe* (r.f. .05) and *ke* (r.f. .01) in this context.
>
> If speakers want to refer to the concept 'row', they only produce the special and most appropriate CP *gili* if they are persons of status (r.f. .07). To refer to this concept speakers most often produce the CP *ya* (r.f. .56; here speakers may intend to emphasize the flexible quality of a row). Another possibility here is to produce the general CP *kwe* (r.f.

.16). Moreover, it is also possible, though rather rarely observed, to find either the CP *vili* (r.f. .02; here speakers may intend to refer to a 'row brought into an untwisted line'), the almost synonymous CP *kasa* (r.f. .02), or the CP *vakala* (r.f. .01); however, the production of the CP *vakala* in this context is somewhat idiosyncratic.

If speakers want to refer to the concept 'kneaded things, dot, drop', they most often use the special and most appropriate CP *nutu/notu* (r.f. .57). It is also possible to produce the general CP *kwe* (r.f. .18) in this context.

Table 2b shows that the CPs *kasa, ke, nutu/notu, ya,* and *kwe* play the more important roles within this semantic domain.[5]

After this presentation of examples, I can now proceed to introduce the network models which I propose for the description of the Kilivila classifier system.

4. NETWORK MODELS TO DESCRIBE THE KILIVILA CLASSIFIER SYSTEM.

In the preceding section I illustrated my analysis of the semantic domains constituted by the Kilivila CP system. Let me briefly summarize the procedure in this analysis once more.

My aim is to present the dynamics of the semantic domains constituted by the CPs described and to formulate language production rules that predict a speaker's choice of a certain CP to refer to a given nominal concept. These rules are understood as expressing the transfer process from a given semantic concept a speaker wants to refer to into an appropriate CP.

To reach my aim, I first defined the semantic domains by grouping the CPs based on "common sense" considerations that took into account ethnographic and sociological information about the speech community. This procedure provided the basis for describing what actually happens if a certain CP type is produced to refer to a given semantic concept. The observation of the processes which I called "intra-" and "in-domain substitution," together with the weighting and evaluation of these processes by computing the relative frequency with which a certain CP is used within the domain as a whole, resulted, on the one hand, in the formulation of (variable) rules—which I interpreted as rules speakers adhere to in their production of a certain CP type of the respective semantic domain—and, on the other hand, in an insight into the evaluated distribution of the individual CP types within the semantic domain constituted by these CP types.

The logic inherent in this procedure can thus be summarized as follows:

If speakers want to transfer a given semantic concept into an appropriate CP to refer to just this concept, they first have to assign the

given semantic concept to the semantic domain that encompasses this concept.

Then they have to implement the respective (variable) rule or rules required to produce a certain CP type of this domain that refers to the concept given.

If the rule is a variable rule that allows the production of more than one CP type in the respective context, speakers have to decide on one of the possible CP types that seems to be most adequate for their purposes in referring to the given concept. If they are persons of status, and if the variable rule activated includes a CP type that serves the function of a sociolinguistic variable, they also have to decide whether they want to use this CP with its sociolinguistic implications.

All these decision processes then lead to the production of one CP that speakers assume to be most appropriate for referring to the given semantic concept and for the ends they want to pursue with their verbal reference.

Thus, my attempt to predict a speaker's choice of a certain CP to refer to a given nominal concept also emphasizes the following fact: among other things CPs must be understood as formatives that can be used *strategically* to serve certain ends that speakers want to pursue and express.

Moreover, my procedure also emphasizes that the semantic domains constituted by the CPs are not static at all. They are *dynamic* and interact with each other, and can be understood as "program clusters, procedures, scripts" or "functional pathways" (see Pribram 1987:7–12) that speakers employ and rely on in their speech production.

In a heuristic phase of the analysis of the dynamics of these domains, I noted the cases of in-, intra-, and off-domain substitution for all 20 domains on a large sheet of paper. The result was a kind of drawing that looked like a mycelium, or like a network,[6] to use another simile. Being aware of the fact that this label has some tradition in semantics and in psycholinguistics (see Collins and Quillian 1969; Lakoff 1987:116; Miller and Johnson-Laird 1976:272–276); see also Fox 1975:112, 115, 118; Wallace 1989) and that it was also used by Hundius and Kölver (1983:192; see also Unterbeck 1990:68), I will nevertheless use this "network" simile from here on because I am convinced that it is the most appropriate term to describe the facts observed.

Thus, on the basis of the analyses presented here, I describe and understand the semantic domains constituted by the CPs as a network in which the respective CPs are realized in at least two different ways:

Some CPs are only used within one semantic domain; I characterize these CPs as elements that are uniquely represented and uniquely localized within the semantic network.

Some CPs are used within more than one semantic domain; I characterize these CPs are elements that are multiply represented and multiply localized

within the semantic network. These can be understood as the network linking elements, the network ramifications, or the network switches that open up and offer the speakers new ways for creative and innovative use of these CPs.[7]

Moreover, I assume—on the basis of the results with respect to the actual production of CPs and the processes of language change in progress—that CPs being uniquely represented and localized elements of the network can change their status and become multiply represented and localized elements within the network. On the one hand, this change of status of a CP as an element within this network can be only temporary—if a speaker uses this possible device offered by the network to pursue certain strategic aims (for example to produce a new catching metaphor). On the other hand, this change of status of a CP as an element within this network can become permanent—if the speech community approves of the fact that the respective CP can also be recognized as constituting one or more semantic domains that are different from the domain this CP originally coconstituted. This process of change in status of an element within the network can also take place in the opposite direction, that is, a multiply represented and localized CP can become a uniquely represented and localized CP if the speech community no longer accepts or uses it as a network linking element. Thus, the dynamics of this network offer the speaker an excellent point of departure in the comprehensive framework of the "*Sprachspiel*" (Wittgenstein 1977, 1980). These dynamics of the network explain the semantic power inherent in the CP system. Moreover, they also permit us to consider the semantic network established by the CPs as an infinite system, at least in principle.

The semantic network itself which is constituted by the semantic domains that in their turn are constituted by the CPs can be described (at least) in three different ways:

First, we can present this network in a linear order. All semantic domains are regarded as having the same status and quality within the network, or, to say it the other way round, there is no evaluation whatsoever of the respective semantic domains that constitute the network. This idea is indeed one-dimensional; but it has the advantage that it offers a model of description that can do with a minimum of basic "axioms": it is only postulated that a number of CPs establish a number of semantic domains that establish a semantic network. I have tried to give an idea of how this network-model might look in Section 3 above.

Second, we can present this network in a linear, one-dimensional but hierarchical order. Here we assume that the semantic domains are differentiated with respect to quality or status within the network. This proposal needs elaboration.

After I had dealt rather intensively with the semantic domains that are

constituted by the Kilivila CP system, it was rather natural to ask the question whether I could find any kind of *hierarchical order* of the 20 semantic domains. The problem with the hypothesis of a possible hierarchical order, however, was that I had to develop a measure to express the hierarchical relations between the semantic domains in an adequate way. Attempting to solve this problem, I had to set out on the rather uncertain ground of the following hypothesis that serves as the basis for developing such a measure.

So far I had been arguing in my analyses on the basis of absolute and relative frequencies that document the production of the described subset of the Kilivila CPs. I kept up this methodological device, and assumed that the sum of all the realized tokens of the CPs that constitute a semantic domain can be taken as an indication of the importance of the domain. However, the number of CPs that constitute the 20 semantic domains described varies from 1 to 34. Thus, to take this variable into consideration, I divided the sum of the number of CP tokens used within a domain by the number of CP types used within this domain. The result of this division is an index which I regard as the measure that expresses the hierarchical status of the respective domain within the Kilivila speech community. This admittedly rather simple and unsophisticated procedure led to the results I present in Table 3. This table presents the 20 semantic domains constituted by the subset of the Kilivila CPs described in the hierarchical order expressed by the "hierarchy index."

The computing of the hierarchy index for the 20 semantic domains ordered the domains (and subdomains) in such a way that they permit a rough though plausible division of the domains into five different groups (I–V).

I will not comment on this table in detail here, except to file a caveat against the hierarchy and to remark briefly on one of the semantic domains.

First the caveat: I have to emphasize once more that the hierarchy presented in Table 3 is based on a particular hypothesis, as formulated above.

The second remark refers to semantic domain 12, which covers the concept 'yam'. Everyone familiar with Trobriand ethnography should be skeptical about a result in which this domain holds the lowest rank but one within the hierarchy. It goes without saying that yams are one of the most important constitutive factors of Trobriand society (see Malinowski 1935; Weiner 1976, 1988)! It may well be that one of the most important CPs for domain 12, the "zero-classifier," is too closely linked with ritual and ceremony so that it is just not produced in profane situations, and thus cannot be elicited in a language production test. This may explain the rather low rank of domain 12—it is most probably an artifact of the proposed computation of the hierarchy index.

TABLE 3. THE 20 SEMANTIC DOMAINS CONSTITUTED BY THE SUBSET OF THE KILIVILA CPS DESCRIBED IN THEIR HIERARCHICAL ORDER

Semantic Domain Hierarchy	Domain Number	Hierarchy Index (Tokens:Types)
I		
1. Person	1a	495:3 = 165
2. General CP	4	164:1 = 164
3. Animal	2	162:1 = 162
4. Tree, wooden thing	10	903:6 = 150.5
II		
5. Person, body part	1a&b	950:10 = 95
6. Place	7	910:10 = 91
7. Quantity	3a&b	2790:34 = 82.1
8. Quantity (-animate)	3b	2109:26 = 81.1
9. Fire, oven	15	323:4 = 80.8
III		
10. Name	20	155:2 = 77.5
11. Time	6	609:8 = 76.1
12. Quantity (+animate)	3a	681:11 = 61.9
13. Road, journey	16	308:5 = 61.6
14. Quality	8	898:15 = 59.9
IV		
15. Shape	9	585:10 = 58.5
16. Body part	1b	455:8 = 56.9
17. Utensil	11	377:7 = 53.9
18. Dress, adornment	19	152:3 = 50.7
19. Door, entrance, window	14	298:6 = 49.7
20. Ritual item	18	140:3 = 46.7
21. Part of a Food house, a canoe, a creel	13	308:7 = 44
V		
22. Measure	5	157:4 = 39.3
23. Yam	12	154:4 = 38.5
24. Text	17	296:9 = 32.9

To finish these considerations I want to summarize that we are on relatively safe ground assuming that we can consider all semantic domains to be of equal rank. However, if we dare to set out on the uncertain ground of speculation concerning the hierarchy of the semantic domains found, we can use this hierarchy to restructure the data. This results in a network model that is still linear and one-dimensional, but which is now hierarchically structured and this perhaps more adequate for the description of this complex classifier system.

Third, this network can be presented in a multidimensional hierarchical order. In such a case we would assume that certain semantic domains are located on different levels within the comprehensive hierarchically structured network. This idea—which I can only sketch here briefly—may result in a two- or three- or even multidimensional model of description.

Following the basic idea of the "variety grammar" concept developed by Klein (1974; Klein and Dittmar 1979; see also Senft 1982) the dimension of the network in this model depends upon the intra- and extralinguistic variables (such as speaker's sex, speaker's age, speaker's status, speech situation) chosen to define the "hierarchy space" the linguist wants to employ for the purposes of describing the CP system. With such a multidimensional "hierarchy space," the linguist also defines the degree of the netting complexity (the "*Vernetzungsgrad*," to use Vollmer's [1988*a*: 136, 1988*b*: 265–267] expression) of the respective network. That this model is much more complex and needs many more processes of abstraction is evident. Such a complex network may well serve as a good starting point for the linguist's attempt to arrive at a description of language production processes which can also simulate the actual decision processes and strategies a speaker follows in producing a certain CP.

5. CONCLUSIONS. In this paper I have tried to present three models for the description of complex CP systems. In an overview I developed the idea that led to the first linear and one-dimensional network model used to describe the Kilivila CP system. I also indicated briefly how the second model to present such systems might look. To describe the Kilivila CP system in the framework indicated by the third model as sketched would ask for a study of its own; however, such a study must be based on the kind of insights gained by the research I could only roughly sketch here. It goes without saying that these models for describing complex classifier systems do not hold only for the Kilivila system. In principle they can be applied to all classifier languages with a complex inventory of CPs.

NOTES

1. This paper is based on 19 months of field research on the Trobriand Islands. I want to thank the German Research Society (Ei-24/10-1; Se-473/2-1, 2), the Max-Planck-Society, and the Research Unit for Human Ethology for their support in realizing my field research. I also thank the German Research Society (477/34/91) and the Cognitive Anthropology Research Group for their support which enabled me to attend the 6th International Conference on Austronesian Linguistics in Hawaii, May 1991, where this paper was presented. I wish to thank the National and Provincial Governments in Papua New Guinea and the Institute of PNG Studies for their assistance with, and permission for, my research projects. I express my great gratitude to the people of the Trobriand Islands, especially to the inhabitants of Tauwema; I thank them for their hospitality, friendship, and patient cooperation.
2. The term "numeral classifier language" is somewhat inaccurate because in numeral classifier languages we find classifier morphemes in anaphoric and

deictic expressions (see Downing 1986; Asmah 1972:90; Berlin and Romney 1964:79). Nevertheless, I adhere to this technical term as it is introduced in the general linguistic literature.

3. The Kilivila orthography is based on Senft (1986:14–16).
4. The definition of the concept "word" is based on Senft (1986, section 4); however, affixes are not counted separately here.
5. I would like to (proudly) note here that the results of my 1989 restudy confirmed the variable rules I formulated describing the Kilivila native speakers' CP production in a rather impressive way (Senft 1991, chapter 4).
6. If there may be any readers whose enthusiasm about Kilivila CPs may equal that of the author, they can easily "redraw" this picture, just by putting the semantic domains described in Senft (1991) together and then connecting the domains according to the notation conventions marking the cases of "in-" and "off-domain substitution."
7. The 20 semantic domains are connected or "short-circuited" by 15 CP types (two of which are represented with two different connotations each). As could be expected, the general CP *kwe* (= kwe_1) plays a role in 19 different semantic domains. (The only domain where the general CP *kwe* does not play a role is domain 2. However, here the CP *kwe* in its connotation 'shells and clams' (= kwe_2) is one of the domain-constituting CPs!) The other general CP *ke* (= ke_3) plays a role in 11 different semantic domains. The CP *ya* connects 8 and the CPs *pila* and *utu* connect 7 semantic domains each. The CP *bwa* plays a role in 5 domains, and the CP *kasa* constitutes 4 domains each. The CPs ke_1, *tam*, and *vili* connect three domains each. Finally, the CPs *bubwa*, *kada*, *meila*, na (= $na_1 + na_2$), *oyla*, *si*, *sisi*, *to/te* (= to/te_2), and *vakala* play a role in two domains each.

   Thus, we can record that roughly a fifth of the 88 CPs that constitute the 20 semantic domains are decisive for the domain-connecting dynamics of this linguistic phenomenon.

REFERENCES

Adams, Karen, and Nancy F. Conklin. 1974. On the numeral classifier in Thai. Paper presented at the 7th International Conference on Sino-Tibetan Language and Linguistic Studies, Atlanta, Georgia, October 1974. 23 pp.

Allan, Keith. 1977. Classifiers, *Language* 53:285–311.

Asmah, Haji Omar. 1972. Numeral classifiers in Malay and Iban, *Anthropological Linguistics* 14(3):87–96.

Berlin, Brent. 1968. *Tzeltal numeral classifiers: A study in ethnographic semantics.* The Hague: Mouton.

Berlin, Brent, and A. Kimball Romney. 1964. Descriptive semantics of Tzeltal numeral classifiers, *American Anthropologist* 66 (3, part 2):79–98.

Bühler, Karl. 1934. *Sprachtheorie: Die Darstellungsfunktion der Sprache.* Jena: Gustav Fischer. Reprinted 1978. Frankfurt am Main: Ullstein.

Capell, Arthur. 1976. General picture of Austronesian languages, New Guinea area. In Wurm 1976:5–52.

Collins, A. M., and M. R. Quillian. 1969. Retrieval time from semantic memory. *Journal of Verbal Learning and Verbal Behavior* 8:240–247.

Craig, Colette, ed. 1986. *Noun classes and categorization.* Amsterdam: John Benjamins.

Downing, Pamela. 1986. The anaphoric use of classifiers in Japanese. In Craig 1986:345–375.

Friedrich, Paul. 1970. Shape in Grammar. *Language* 46:379–407.

Fox, James, J. 1975. On binary categories and primary symbols: Some Rotinese perspectives. In Willis 1975:99–132.

Hopper, Paul. 1986. Some discourse functions of classifiers in Malay. In Craig 1986:309–325.

Hundius, Harald, and Ulrike Kölver. 1983. Syntax and semantics of numeral classifiers in Thai. *Studies in Language* 7:165–214.

Klein, Wolfgang. 1974. *Variation in der Sprache.* Kronberg: Scriptor.

Klein, Wolfgang, and Norbert Dittmar. 1979. *Developing grammars.* Berlin: Springer.

Koch, Walter A., ed. 1989. *Das Ganze und seine Teile* [The whole and its parts]. Bochum: Brockmeyer.

Labov, William. 1972. *Sociolinguistic patterns.* Philadelphia: University of Philadelphia Press.

Lakoff, George. 1987. *Women, fire, and dangerous things: What categories reveal about the mind.* Chicago: University of Chicago Press.

Lawton, Ralph. 1980. The Kiriwina classifiers. MA thesis. School of General Studies, Australian National University, Canberra.

Malinowski, Bronislaw. 1920. Classificatory Particles in the Language of Kiriwina, *Bulletin of the School of Oriental Studies, London Institution,* 1(4):33–78.

———. 1935. *Coral gardens and their magic.* 2 vols. Reprinted 1966. London: Allen & Unwin.

Miller, George A., and Philip N. Johnson-Laird. 1976. *Language and perception.* Cambridge: Belknap Press.

Pribram, Karl H. 1987. Brain and meaning. Stanford. Mimeo. 22 pp.

Romaine, Suzanne. 1985. Variable rules, O.K.? Or can there be sociolinguistic grammars, *Language and Communication* 5:53–67.

Ross, Malcolm D. 1988. *Proto Oceanic and the Austronesian Languages of Western Melanesia.* Pacific Linguistics C-98. Canberra: The Australian National University.

Royen, Gerlach. 1929. *Die nominalen Klassifikations-Systeme in den Sprachen der Erde. Historisch-kritische Studie, mit besonderer Berücksichtigung des Indogermanischen.* Anthropos Linguistische Bibliothek, vol. 4. Wien/Mödling: Anthropos.

Senft, Gunter. 1982. *Sprachliche Varietät und Variation im Sprachverhalten Kaiserslauterer Metallarbeiter.* Bern and Frankfurt am Main: Peter Lang.

———. 1983. The system of classificatory particles in Kilivila reconsidered: First results on its inventory, its acquisition, and its usage. Paper presented at the Annual Meeting of the Linguistic Society of Papua New Guinea, Port Moresby, July 4–6, 1983 (see Senft 1987).

———. 1985. Klassifikationspartikel im Kilivila: Glossen zu ihrer morphologischen Rolle, ihrem Inventar und ihrer Funktion in Satz und Diskurs, *Linguistische Berichte* 99:373–393.

———. 1986. *Kilivila: The language of the Trobriand Islanders.* Mouton Grammar Library, No. 3. Berlin: Mouton de Gruyter.

———. 1987. The system of classificatory particles in Kilivila reconsidered: First results on its inventory, its acquisition, and its usage, *Language and Linguistics in Melanesia* 16:100–125.

———. 1989. Apropos "The Whole and its Parts": Classificatory particles in Kilivila language, In Koch 1989:142–176.

———. 1991. The system of classificatory particles in the Kilivila Language: Studies on its functions, its acquisition, its inventory realized in actual speech production, its change, and its semantics. Andechs and Nijmegen. Mimeo.
Unterbeck, Barbara. 1990. Kollektion, Numeralklassifikation und Transnumerus: Überlegungen zur Apprehension im Koreanischen und zu einer typologischen Charakteristik von Substantiven. Dissertation, Zentralinstitut für Sprachwissenschaft, Akademie der Wissenschaften der DDR, Berlin.
Vollmer, Gerhard. 1988*a*. *Was können wir wissen?*, vol. 1, *Die Natur der Erkenntnis*. Stuttgart: Hirzel.
Vollmer, Gerhard. 1988*b*. *Was können wir wissen?*, vol. 2, *Die Erkenntnis der Natur*. Stuttgart: Hirzel.
Wallace, Ron. 1989. Cognitive Mapping and the Origin of Language and Mind, *Current Anthropology* 30:518–526.
Weiner, Annette B. 1976. *Women of value, men of renown: New perspectives in Trobriand exchange*. Austin: University of Texas Press.
Weiner, Annette B. 1988. *The Trobrianders of Papua New Guinea*. New York: Holt, Rinehart & Winston.
Willis, Roy, ed. 1975. *The interpretation of symbolism*. London: Malaby Press.
Wittgenstein, Ludwig. 1977. *Philosophische Untersuchungen*. Frankfurt am Main: Suhrkamp. Earlier edition 1958. Oxford: Blackwell.
Wittgenstein, Ludwig. 1980. *Das Blaue Buch. Eine Philosophische Betrachtung* (*Das Braune Buch*). Frankfurt am Main: Suhrkamp. Earlier editions 1958, 1969. Oxford: Blackwell.
Wurm, Stephen A., ed. 1976. *Austronesian languages. New Guinea Area Languages and Language Study*, vol. 2. Pacific Linguistics C-40. Canberra: The Australian National University.

APPENDIX
KILIVILA CP TYPES

NOTES:
\# = this connotation of the CP type was not elicited in the test (second data corpus).
\+ = this (these) connotation(s) of the CP type are the result of my lexicographic research.

CP TYPE	GLOSS(ES) AND COMMENTS
1. beku	stone blade
2. bililo	trip (#)
3. bogi	night
4. bubu, bobu, bobo	cut across, cut transversely, (block) cut off
5. bubwa	cut across, part(s) cut off
6. buda, boda, budu	group, team, crowd
7. bukwa, buko	a. fruit cluster b. cowries tied into a specific cluster (+)
8. bwa	trees, wooden things
9. bwalita	sea
10. deli	company, group on the move
11. doba	skirt made of banana leaves, "grass" skirt

12. duli	cluster, bundle
13. dumia	swamp, swamplike (#)
14. duya, duyo, kaduya, kaduyo	door, entrance
15. gili	row
16. giwi	cut
17. guba	bundles of taro
18. gudi	a. child b. immature human (#)
19. gula, guli, gulo, guno	heap, group
20. gum	bit, small piece
21. iga, yegila	name
22. kabisi	compartment of a food house, section/division in a food house
23. kabulo, kabulu	a. protuberances b. village sectors; areas of authority (#) c. cape, point, peninsula (+) d. half of something (+)
24. kada, keda	a. road, track b. way in which something is done (+)
25. kai	stone blade
26. ka'i	tooth
27. kala	day
28. kali	paddle strike (#)
29. kapwa, kapo	a. bundles (wrapped up), parcel b. nest of birds (+)
30. kasa	row, line
31. kauya	fish trap, creel (#)
32. kavi	tool
33. ke	a. wooden things b. rigid, long objects c. unmarked form for inanimates (general classifier) d. fire
34. kila	clusters/hands of bananas
35. kova	fire, fireplace
36. kubila, kwabila	large land plot
37. kudu	a. band of fibers (especially the band of fibers at the waistband of a "grass" skirt) b. tooth c. bundles of lashing creeper (#)
38. kumla	earth oven
39. kwe	a. thing, anything indefinite or unknown, unmarked form for inanimates (general classifier) b. shells and clams
40. kweya, kwaya, keya	a. limb, severed limb b. yard (+)
41. kwoila, kwela, kway, kwaila, kweikwa, kwena	clay pot, potlike
42. kwoya, koya	mountain, hill
43. liku	a. compartments of a food house, compartments of a canoe

	b. area of authority (+)
44. lila	bough, branch, leaf
45. lilo, lola, lilo'u	a. walk, journey
	b. number of times going somewhere (+)
	c. number of times doing something (+)
46. lipu	compartment of a creel, tier (#)
47. luba	bundle (of rolls), parcels (of taro pudding)
48. luva	a. wooden dishes (*kaboma* type), full of one's share of food during a food-distribution ceremony/ritual)
	b. tied bundle
49. megwa	magic, magical formula
50. meila, mavila	a. part of a song, part of a magical formula
	b. part of a (bible) chapter (+)
	c. part of a day (+)
51. mmwa, mmo	conical bundle (of taro)
52. na	a. persons of female sex
	b. animals
	c. stars, planets, moon (#)
	d. carvings in human likeness (#)
	e. corpses (+)
	f. spirits, dwarfs (+)
53. nigwa, nigo	a. hole
	b. nest (+)
54. nina	a. parts of a song
	b. idea, thought (+)
55. nutu, notu	kneaded things, dot, drop
56. nunu	corner(s) of a garden
57. oyla	a. string
	b. fish on strings
58. peta, ta	a. basket
	b. contents of a basket (but not basketfuls of yams!) (+)
59. pila, pa	part, piece
60. po'ula	a. plantation, grove
	b. heap, group (+)
61. pwanina, pona, ponina, ponu, polu, pwana	punctured, something with a hole in it, hole
62. sa	nut bunch
63. sam	ginger (in play accompanying verses) (#)
64. si	small bit
65. sipu	sheaf (Lawton [1980] also gives the glosses: tangle, tangled line, rope, net, string)
66. sisi	a. bough
	b. cut off part of a tree (#)
	c. division of a magical formula (+)
67. siva	a. time
	b. number of times doing something (+)
68. siwa	sea portions, ownership division with reference to fishing rights
69. suya, suye	batch of fish on strings

70. tam	sprouting, sprouting yams
71. tetu	yams
72. to/te	a. persons of male sex b. human beings
73. tuta, tuto	time, occasion
74. utu	scrap, parts (cut off), small particles, fragments
75. uva	a. span, measure (the span of two extended arms, from tip to tip) b. items measured in spans (+)
76. va, vaya, vayo, vala	a. door, window b. river, creek, sea passage (+)
77. vakala	belt of spondylus shell discs
78. vili	untwisted
79. vilo	place, area, village
80. vosi, wosi	song, parts of a song
81. wela	batch of fish, string of fish
82. ya	flexible things, thin things
83. yam	a. day b. number of days (+)
84. yuma, yam, yuma	a. hand b. length, measure (the span of two extended arms, from the fingertips of one hand to the wrist of the other hand (#)
yama	c. yard (+)
85. yeni	a handful of something (#)
86. yulai, yule	bundle of four things
87. yuva, yuwo	shoal
88. 0	a basketful of yams (this "zero-classifier" is only used when basketfuls of yams are counted)

I have to mention here that during my restudy on the Trobriands in 1989, my informants mentioned three additional CPs, namely,

num	magic, magical formula
tili	bits of lime clinging to a lime spatula
sebulu	"grass" skirt for little girls

However, these CPs seem to be either very rarely used or almost obsolete. They are only mentioned here for the sake of completeness.