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THE PRAGMATICS OF FOLK CLASSIFICATION

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ABSTRACT.—In an examination of Chewa folk biological classifications, specifically those relating to the fungi, the paper suggests that functional criteria are intrinsic to their taxonomic ordering, and that their mode of classification is essentially prototypical rather than categorical and hierarchic.

INTRODUCTION

In 1925, almost sixty years ago, Malinowski (1974:44) wrote: "The road from the wilderness to the savage's belly and consequently to his mind is very short. For him the world is an indiscriminate background against which there stands out the useful, primarily the edible, species of animals and plants." There has been a justified, though perhaps unnecessarily harsh, reaction against this kind of pragmatism. No one has expressed this better than Levi-Strauss, who has argued that the outlook of pre-literate peoples towards the natural world is primarily intellectual, and that totemic symbols cannot be understood in terms of a naturalistic perspective. For Levi-Strauss (1966:9) the "specific" character of the animal and plant world is the initial source or impulse for symbolic classifications, but the main purpose of these classifications is not a practical one: "It meets intellectual requirements rather than . . . satisfying needs."

Of equal interest, however, is the viewpoint of the ethnoscientists, such as Brent Berlin and his associates (1974). Although stemming from a different theoretical tradition—that of Anglo-Saxon empiricism—the latter share with the structuralists an interest in folk classifications. As with Levi-Strauss, folk knowledge is seen primarily in classificatory terms, and there is an equal stress on a logic of what Levi-Strauss (1969:163) calls "oppositions and correlations, exclusions and inclusions . . .", that is, on systematics and coherence. Furthermore, though focusing on specific semantic domains, they have other affinities with Levi-Strauss in their search for universals, reflecting a consistent and healthy opposition to cultural relativism. Similarly, like Levi-Strauss, ethnoscientists see folk classifications as expressing a purely intellectual interest in the natural world. Whereas for Malinowski (1925), pre-literate people appear to think through the stomach, Levi-Strauss and the ethnoscientists view the interest in the world of pre-literate people as cognitive and intellectual and, divorced from pragmatic concerns, as being related primarily to a "search for order". Neither tradition, of course, denies that animals and plants have a utilitarian significance, e.g., food or medicines, but both imply that this is largely unrelated to the way that people systematically classify the natural world.

Given the different philosophical perspectives of the ethnoscientists and the structuralists, the two traditions naturally advocate a different kind of intellectual and classificatory mode. For Levi-Strauss, pre-literate people are concerned with a mode of thinking that unifies through symbolic logic diverse aspects of their culture; for Berlin and his associates (1974), on the other hand, subjects are proto-botanists concerned with ordering the natural world through criteria based on morphology and structure. Both of these perspectives have been necessary, but they have also limited our understanding of folk classifications. The structuralist approach, by focusing on the symbloic logic, over systematizes the social reality and tends to ignore the praxis of human groups. The

approach of the ethnoscientists, on the other hand, has tended to underplay the relevance of practical interests in the structuring of folk taxonomies. My aim in this paper is to focus on the latter issue and to show, through an examination of the natural taxonomies of the Chewa people of Malawi[1] that pragmatic concerns are highly relevant in interpreting the nature and structure of folk classifications, echoing some of Bulmer's (1974) early misgivings about ethnoscience.

TWO ILLUSTRATIONS OF FUNCTIONAL CATEGORIES

In an article on the uses of succulent plants in Malawi, one biologist, Hargreaves (1976:190), admitted that he found local plant nomenclature somewhat confusing. He wrote:

> I found, for example, that a small herbaceous mint, a shrub, a grass and the large tree *Acacia albida* were all referred to as *'Mbeya'*. These plants were totally unrelated and showed no resemblance to each other. I was therefore puzzled until an informant told me to taste them. Then it became clear. *'Mbeya'* means 'salt'! I soon learned to overcome my own taxonomic prejudice and look at plants according to their uses. Many plants in Chitipa, in fact, have no local name because they have no use.

And he goes on to state that "Botany grew from herbals listing useful plants and did not arise out of the objectivity which modern scientists like to pretend to."

It would be easy, of course, to dismiss these suggestions as untenable. Some plants in Malawi, as elsewhere, have names but no apparent utility, e.g. the parasitic ***Kamfiti,*** *Striga Asiatica.* Clearly there is no simple correlation, as Hargreaves seems to imply, between utility and nomenclature. Nonetheless, it is important to realize, as Brokensha and Riley (1980:121) write of the Mbeere, that utility is a major factor in the classification of plants.

One could also perhaps question Hargreaves on his knowledge of the local language, and suggest that ***Mbeya*** is not a plant name at all, since it means salt; the term, significantly, is not in the Malawi 'Dictionary of Plant Names' (Binns 1972). Indeed, some have thought it important to indicate the semantic confusions that appear to have crept into local floras, when terms were discovered which meant 'medicine' or 'poison' or are the name of some local disease or complaint (cf. Carrington 1981). These, it is suggested, cannot possibly be taxonomic labels! Although offered as criticisms of botanists, such suggestions indicate a stringent taxonomic outlook. After all, no one disputes that such English terms as "heartsease", "eyebright", "sanicle" (from Latin verb *sano,* heal), "gum", "rubber", "wormwood" and "liverwort" are valid plant names–not to mention those terms that have long since disappeared from our vocabulary, e.g., "nosebleed" (yarrow). It is therefore somewhat misleading to assume that terms like "poison" or "salt" or the name of some disease do not have taxonomic significance in folk classifications; indeed it is my contention that they do, which brings me to my second illustration.

Some years ago while studying the epiphytic orchids of Malawi (Morris 1970), I noticed that many of these plants were well-known to local people, and that the commoner species–*Angraecopsis parviflora, Cyrtorchis arcuata, Bulvophyllum sanderonii*– though morphologically quite distinct, were referred to by the collective term ***Mwana wa mphepo***, meaning "child of the wind". Given my ecological bias, I thought it quite an appropriate term for epiphytic orchids, many of which grew high on the outer branches of trees. Many years later I discovered that this term was applied to several other plant life forms–herbs, shrubs and climbers–and was not restricted to epiphytic orchids. Focused on the family Vitaceae, the herbs *Cyphostemma junceum* and *Ampelocisus obtusa* being prototypical, many of these plants, but not all, are referred to by other generic terms (Table 1.). Plants referred to as ***Mwana wa mphepo*** belong, therefore, to

TABLE 1.—*Outline of the taxon mwana wa mphepo*

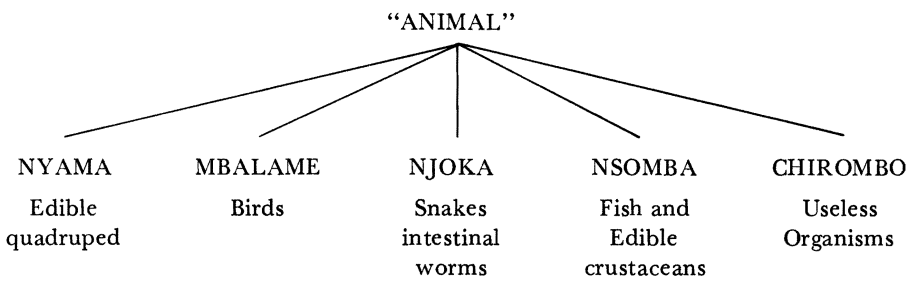
	CHIWAMASIKA	Ampelocisus obtusata Cyphostemma crotalarioides Cyphostemma zombensis	
	MPELESYA	Rhoicissus tridentata	MPESA MPETE
		Cissus cornifolia Cissus integrifolia Cissus quadrangularis (Cissus rubiginosa)	MTHAMBE
	NDEMIKANGONO	Cissus buchananii Cyphostemma junceum	MWINIMUNDA MWANANKALI
	NCHOFU	Cyphostemma subciliatum Cayratia gracilis	NTEREVERE
MWANA WA MPHEPO			
	Angraecopsis Parviflora		
	Cyphostemma gigantophyllum		
	Cyphostemma rhodesiae		
	Ampelocissus africana		
	Rhoicissus tomentosa		
	Cissus cucumerifolia		
	Cissus faucicola		
	Cissus producta		
	Cissus trothae		
	Cissus aristolochitolia	KAMUTU	
	Rhoicissus revoilii	NTUTOMUKO MDYAPUMBWA	
	Jateorhiza bukobensis	NJOKA KASANA	
	Tinospora caffra	CHIDYAKAMBA	
	Bulbophyllum sandersonii	KALISACHI	
	Crytorchis arcuata	KALISACHI MWANAMVULA	
	Adenia gummifera	MKUTA MLOZI	
	Elephantotthiza goetzei	CHITETE CHALIMA	
	Paullinia pinnata	MKANDANKHUKU	
	Pyrenacantha kaurabassana	CHITUPA NAKULUNGUNDI	

several distinct families, and each one is used as a medicine in the treatment of a disease which is called by the same term, and which is as complex as the plant taxon. The important point is that *Mwana wa mphepo* is a polysemic term, and it is quite contrary to Chewa thought to consider plants and diseases as somehow utterly distinct and exclusive domains (cf. Turner 1967:299-358). Many plant categories do indicate their utility, and one herbalist I knew categorized the plants she used either by the term *(Mtengo) Wazilengo* (relating to misfortunes caused by medicines) or by the term *(Mtengo) wa madzoka* (of the spirit induced illness Madzoka). For these particular trees she never used, or indeed knew, any other term. To understand Chewa folk concepts, therefore, one has to accept that they have a pragmatic dimension, and that such taxonomies are not conceptually isolated, as a domain, from other aspects of Chewa culture.[2]

ZOOLOGICAL LIFE FORMS

As with many other cultures, there are no terms in Chewa that can be considered equivalent to the English terms 'animal' and 'plant', which derive from Latin and were used widely only toward the end of the 16th Century (cf Morris 1980). The Chewa have a concept of life *(- Moyo)* and in many contexts use terms that imply a distinction between the two main types of living organisms. The noun-classes themselves to some extent reflect this distinction. Whereas many animals belong to the *Munthu* class *A/Fisi, A/Nyalugwe, A/Mende* (hyena, leopard, creek rat), most of the *Mtengo* category—which includes the majority of the plants known to the Chewa—belong to a different noun class (typically referred to as the *Mtengo* class) such as *Mkuyu, Mkundi, Msopa, Mlombwa* (all taking the plural prefix Mi-). As in other languages, there are a host of terms referring both to plant morphology and usage and to plant growth that would imply a distinction between plants and other organisms, but whether such distinctions warrant the label of "covert" category (Berlin et al 1968, 1974; Brown 1974) is difficult to say.

The main life-form categories of the Chewa are as follows:



Nyama is a polysemic term referring both to meat and to any edible species of mammal. It can include edible reptiles and amphibians but it excludes *Nsomba* (fish and edible freshwater crustaceans), *Mbalame* (birds) and *Njoka* (snakes). *Nyama* has a complex meaning: and in normal contexts it excludes the larger predatory mammals, e.g., hyena, leopard, and lion, as well as those smaller animals not usually eaten, like the mongoose and jackal. It also has a great ritual significance to the Chewa because of its association with hunting. Schoffeleers (1968) suggests that besides meaning "edible quadruped", it refers to the spirit or power released by the blood of a slain person—thus giving the concept a mystical quality. Significantly the "flesh" of a bird, snake or a vegetable substance is not referred to as *Nyama* but as *Mnofo*. Besides these four main life forms—to call them zoological drastically narrows their meaning—there is a kind of residual category *Chirombo*, which refers to any hostile wild animal; *Nyalugwe* (leopard) and *Fisi* (hyena) are proto-

typical. Essentially however, *Chirombo*, means any useless living thing, and also includes weeds and most invertebrates; like *Nyama*, the term also has important symbolic connotations, being associated with evil spirits and with the masked dancers (who impersonate spirit animals) at certain ceremonies.

"Within" these categories a distinction is made between wild and domesticated species. Domesticated animals are referred to as *Chiweto* or *Chifuyo*; the latter terms include chickens, ducks and dog, as well as the larger livestock like goats and cattle. For example *Bakha* refers to the domestic duck, and besides being seen as outside the *Mbalame* (bird) category, is considered quite distinct from wild species such as *Chipweyo*, the fulvous tree duck and *Kalanga*, the Hottentot teal. Europeans often use *Bakha* as a generic term, but Chewa-speakers around Lake Chilwa were adamant that the term *Bakha* applied *only* to the domesticated species.[3] This conceptual demarcation is common amongst the Chewa; *Nkbumba* and *Nguluwe*, for example, refer to the domestic and wild pig respectively and *Nkbunda* and *Njiwa* to the domestic and wild pigeon. The distinction between the village *(Mudzi)* and woodland *(Thengo)* is indeed an important ecological and symbolic demarcation amongst the Chewa, and it is a division that has wide cross cultural reference (cf. Strathern 1980).

In an important sense, then, three of the five life form categories which I have briefly discussed above are largely functional categories that cannot be understood simply in terms of morphological criteria. The polysemous nature of the main category *Nyama* suggests, as Bulmer remarked, that such 'life-forms', "may be defined as much by cultural evaluation . . . as by their objective biological characteristics" (1974:23). Needless to say, in Chewa thought people *(Anthu)* form a separate and unique category.[4]

BOTANICAL LIFE FORMS

There is no term in Chewa for "plant" although literate speakers of the language often try to find or make one. Thus the terms *Chomera* or *Chimerara* (derived from *Ku-mera*, to sprout or shoot) can be used to describe plants generally but their focus is essentially on cultivated species, especially those like the sweet potato which are propagated vegetatively. These terms have no general use. There are three basic terms in Chewa for what might loosely be described as the plant world: *Mtengo*, which, at a superficial level, is a general category for trees and woody plants, *Maudzu*, grasses, and grass-like herbaceous plants like the anthericum lilies, and *Bowa*, edible fungi.

The majority of plants known to the Chewa fall under the category *Mtengo*, and in addition to trees, it includes vines, creepers and small herbs. It also refers to a stick, the woody stem or a piece of wood; the allied concept *Thengo* is a general term for woodland dominated by the genera *Brachystegia* and *Uapaca* (not "bush" as it is usually translated), as distinct from evergreen forest *Nkhalango*. The term *Chire* is more frequently used to refer to regenerate bushland.

To understand the meaning of *Mtengo*, however, one has to shift one's perspective, and view the natural world not only in terms of morphology but also in terms of utility. Many small herbs that are utilized as food or medicines are referred to as *Mtengo*, although they are not trees in the European sense. In a program on Malawi radio on January 10, 1972, a professor of botany was interviewed in English about her work and writings. Part of the discussion was focused on the plant *Galinsoga parviflora* which has the quaint name *Mwamuna aligone* (literally 'My husband is sleeping') whose leaves form a useful relish dish. Throughout the discussion the Malawian interviewer described the plant as a 'tree' yet it is only a small slender herb, barely six inches high.

Many herbs, however, do not fit into the *Mtengo* category. If a local person is asked what sort of plant, say, a balsam is, or whether a generic category is a 'tree' *Mtengo* the informant may be hesitant, and may conclude that it is a *Maluwa* (flower), significantly

using the plural. So in a sense *Duwa* or *Luwa* (flower–singular form) can take on the role of a general plant category, although many small herbs remain essentially unaffiliated. Many Europeans are surprised to discover, therefore, that many conspicuous plants such as *Gloriosa virescens, Crinum pedicellatum* and *Crocosmia aurea* have no name, and are virtually unnoticed and unrecognized by Chewa speakers (cf. Brokensha and Riley 1980; 121) who yet, somewhat paradoxically, have such a detailed and accurate knowledge of the plant world. The reason is that *Mtengo* is essentailly, that is prototypically, a category of useful wild plants, and that *Crocosmia aurea* (for example), which has no evident uses, has no name and is not a 'tree'.

Two other words are often used almost interchangeably with that of *Mtengo*. The first is *Mankhwala*, which may be translated as "medicine", and includes both animal and plant material. Medicines and their uses permeate Chewa culture, and are utilized for protection against witchcraft *(Ufiti)*, as good luck charms and in the treatment of illness and disease. I have often, in pointing to a shrub or tree, asked someone 'What's this?' *(Ichi ciani?)* only to get the reply *"Mankhwala"*, and many of my Yao informants in Malawi used the term *Mtera* which is a generic concept for both "medicine" and "tree". Such polysemy seems widespread in Africa, and in his classic study on the Azande Evans-Pritchard (1937:440) notes:

> "The Zande word which I have translated as 'medicine' or 'magic' according to context is *Ngua*. *Ngua* means 'tree' or 'wood' or 'plant' so when we ask a Zande what medicine is used for a certain activity we are asking him what tree or plant is used."

But if we concentrate, like Evans-Pritchard, on the magic, or like the ethnoscientists on the botany, we miss, I think, the essence of Chewa thought in which medicines and plants are intimately linked.[5] The second word which is used almost as a synonym for *Mtengo* is 'root'. The true Chewa term is *Mezu* (plural *Mizu)* but I rarely heard this term used in the area where I did my research; the concept *Mtsitsi* was employed instead. It is difficult for us to understand or feel the significance that roots have for the Chewa. Although I am stressing the importance of utility in Chewa classifications I am not denying that they do not have an interest in plant morphology and structure–indeed they do–but this interest if focused to a large extent on leaves and roots. In asking what uses of specific plants were *(Ntchito ciani?)* the immediate response often was "You dig down" *(Mukumba Pansi)*, and you were expected to realize the implications, i.e. that it had medicinal value as *Mankhwala*. Many times I have observed herbalists digging up roots to check or confirm the identification of a plant, and one woman to whom I showed a specimen (an *Albuca* lily) said to me "Bring me more leaves and the *root* and I'll tell you what it is!"

Many herbalists, in particular, have an amazing propensity for identifying plants by their roots. This is because many of the plants that are of crucial importance to the Chewa are neither trees, nor do they have conspicuous flowers; it is their utility as food or medicines that give them salience. Several members of the plant families *Vitaceae, Asclepiadaceae* and *Menispermacceae* are examples. Incidentally, the old Greek herbalists were called *Rhizotomoki,* the root gatherers.[6]

It is important, then, to realize that there are no concepts in Chewa which correspond to the broad morphological divisions of 'tree', 'shrub', 'herb' (noted by Theophrastus, [Hort 1968]) or 'vine' (cf. Berlin et al 1974:373). There are terms which are sometimes glossed as "shrub" or "bush" such as *Chitsamba (Tsamba*, leaf) or *Chipfutu.* Essentially these refer to the shrubby or tufted growth of either grasses or trees, on their regeneration after being cut back or burned and not to shrubs as such. The term *Chilambi* (Yao *Chisirisya*)–*Cissampelos Mucronata* is prototypical–is also used to cover several creepers, and like the term *Mtsitsi,* appears to mean, in some contexts, 'vine' or 'creeper'. However, cultivated vines and plants such as the creeper *Mondia Whytei,*

because they are not used as cordage, are not considered 'vines' at all, although they ought to be on morphological grounds. Equally important is the fact that bamboos, bananas and many cultivated plants are considered outside (unaffiliated) to the two main categories. Thus millet, maize and sorghum are not ***Mandzu***, although, again, they ought to be by morphological criteria, and indeed the pearl millet ***Machewere*** belongs to the same genus *Pennisetum* as does the grass ***Nsenjere***. This division largely reflects what we have already noted, namely the important symbolic categorization in Chewa between the village and the woodland, and both ***Mtengo*** and ***Maudzu*** essentially refer to useful plants that are to be found in the woodland.

Although there is a pragmatic emphasis at both the life-form and generic levels of Chewa classifications there are also a number of intermediate categories that have a largely functional significance. I have already mentioned ***Mwanawamphero***. Three other taxa are worth noting: (1) ***Thelele*** is a grouping of plants used in the preparation of a kind of mucilaginous relish, referred to by the same term. It is focused around the semi-cultivated *Hibiscus acetosella*. Other species in this category are, in addition, referred to by monotypic generic terms, such as ***Denje*** *(Corchorus trilocularis)* and ***Chewe*** *(Sesamum angolense)*. (2) ***Mtibulo***, although probably of Yao derivation, this is a category that is widely applied to plants that are used by men as a potency medicine. The category is focused on the creeper *Mondia whytei*. (3) ***Mpira*** is usually translated as rubber, but it is employed as a taxonomic category for many latex-bearing plants like *Landolphia kirkii* and *Euphorbia geniculata*. Whether one considers these as generic or intermediate categories seems unimportant: what is essential to understand is that these taxa have both a functional and a taxonomic significance for the Chewa. And each of these categories—indeed almost all categories for the Chewa—have a prototypical member which virtually defines the class; for instance, *Hibiscus acetosella* is described as ***Thelele Yeni-Yeni*** (truly this plant) (cf. Berlin et al 1974:34, Bulmer 1979:58).

To further stress the close relationship between utility and classification I now outline, in some detail, the Chewa classification of fungi, a category that tends to be overlooked by cognitive anthropologists.

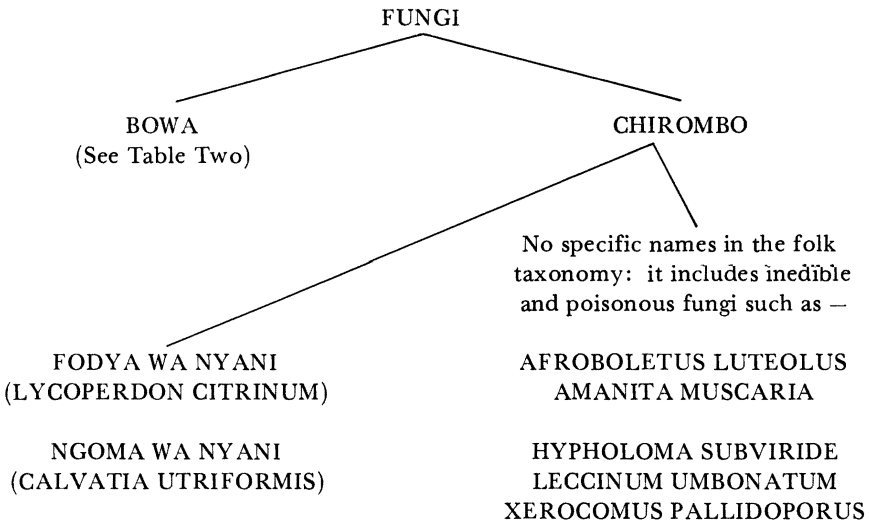
CLASSIFICATION OF FUNGI *(Bowa)*[7]

Around 500 species of the larger fungi have been described from the Shire Highlands of Malawi (Morris 1983). Around 14 percent (70) of these are known to have cultural significance for the Chewa. With the exception of two taxa, all are categorized as ***Bowa*** and are considered edible. Although it may be possible to speak of ***Bowa***, like the English term mushroom, as a general concept for the larger fungi, in Chewa it essentially refers only to edible species. Edibility is a defining characteristic of the taxon, and in everyday usage inedible and poisonous fungi are *not* considered ***Bowa***. Any of the latter species when categorized at all, for they have no generic name, are usually referred to as ***Chirombo***. This category, as we have noted, is complex; it essentially refers to any organism that is useless or harmful to mankind.

I have heard it suggested that the term ***Chirombo*** is not applicable to fungi or plants, but almost everyone I knew who collected fungi made a clear categorization between edible fungi or ***Bowa***, and inedible species which were described as ***Chirombo***. "It is not a ***Bowa*** but a useless thing ***(Chirombo)***" was an expression that women often used. Interestingly, several species which are in fact edible, but which are not eaten (as far as I could ascertain) in Malawi have no common name. Examples are *Agaricus silvaticus*, and, in the Zomba district at least, *Suillus granulatus*.

In an early report on local foods Williamson (1941:12) mentions that in the classification of fungi "each district seems to have its own distinct set of names." This is true, and what is significant is that not only is there wide agreement about common names

within a specific locality, but there seems to be a common pattern of categorizing fungi throughout Malawi. The basic schema is denoted as follows:



ETHNOMYCOLOGY OF THE CHEWA

Most women in rural areas have an extensive knowledge of the identification and ecology of fungi. Although I recorded about seventy edible species, because of their varied geographical distribution, few women knew all of them. Most female informants could name, without difficulty, about 20 species. Knowledge about fungi, as with other wild vegetable foods, is largely confined to women, and there were few men who knew anything about fungi, except for the commoner species, which they normally referred to simply as ***Bowa***. I asked the president of a herbalist association, a man with a deep and impressive knowledge of medicinal plants, what edible fungi he knew. He named four, and after a few minutes of thought, admitted that he could remember no more. This variability in folk knowledge according to age, sex, class or ritual affiliations tends to be overlooked in some discussions of folk classifications (cf. Hays 1976:491).

Although there is a broad correspondence between folk terms and scientific nomenclature, several names are applied to species of quite diverse scientific genera. The grounds for doing so may be ecological. For example, many mushrooms are associated with the ***Msuku*** tree, *(Uapaca kirkiana)* and these bear names that indicate the association, ***Kamsuka***, ***Nakasuku***, ***Ngunda Suku*** (Pipe of the ***Msuku***). Thus certain edible species of *Lactarius* are put in the same category as *Cantharellus*, although local people do not confuse them, for they usually treat the latex-bearing *Lactarius* to a more elaborate cooking procedure. Likewise the two species of *Lentinus* share the same term as the Bolete *Gyroporus Luteopurpureus*, ***Kamchikuni (Nkhuni***, firewood), as all grow on or near dead timber.

Other groupings are based on texture or appearance. ***Kanchombo*** is a term derived from ***Mchombo***, the navel, and is indicative of a pointed or unbonate cap. It is specifically applied to *Termitomyces eurrhizus* whose sharply pointed cap enables the fungus to push its way through the termite mound. But it is also applied to two common species of *Psathyrella*, one of which significantly bears the specific name ***Atroumbonata*** (***Atro***, dark, ***Umbilicus***, navel). The mycologist, Pegler is clearly thinking along the same lines as the Chewa. Another widely used term is ***Msongolo wa Nkhwali*** –"the lower leg of the

Francolin". This has been noted with reference to a number of very different fungi — *Cantharellus tenuis* and *Melanoleuca Melaleuca* for example, and alludes to the reddish color of the cap, which is reminiscent of the red legs of this common game bird.[8]

Like all good mycologists, Chewa women do not put much stress on color, but when handling and identifying fungi rely more on smell and texture. When discussing my specimens with women, I found great difficulty curbing their natural tendency to tear the fungus apart, as they always do in verifying the identification of a particular species. If one asks a woman to group a collection of fungi they invariably place the important species into two categories. Into one category they place *Russia schizoderma,* all the *Cantharellus* and *Termitomyces schimperi;* into the other they put the three main species of *Amanita,* and *Termitomyces eurrhizus.* If one asks about the rationale behind this 'covert' categorization it is suggested that the second grouping consists of those ***Bowa*** which have a slippery texture— ***"Onse Lutelele"***. This is in accord with the folk classifications, for the taxon *Katelela* is virtually a generic term for the edible *Amanita.* Again this links with an important functional category within the ***Mtengo*** life-form, ***Thelele*** (discussed earlier).

Folk generics (see Table 2) can be roughly divided into two types: simple generics like ***Manyame***, ***Nakajeti*** and ***Nyonzwe***, and those which have metaphoric connotations, such as ***Ngoma wa Nyani***, ("Drum of the Baboon"), ***Mpafa ya Fulu***, ("Liver of the Tortoise") are examples. But significantly, this division corresponds to the cultural importance of the fungi; all those generic terms which are metaphorical are of secondary importance as a food source, or like ***Fodya wa Nyani***, Baboon's Tobacco *(Lycoperdon citrinum)* are considered inedible.

Finally, it is worth noting that Chewa Women see a much closer association between mushrooms and meat *(Nyama)* than between fungi and either plants or vegetables. One woman categorized a basket of fungi by dividing them always into two piles, ***Nyama*** (edible) and ***Chirombo*** (inedible fungi). She used the term ***Nyama*** almost as a taxonomic category for the edible species. This association of fungi with animal life, rather than with plants *(Mtengo),* based as it is on texture and edibility rather than morphology, is probably widespread in traditional cultures. Gerard described fungi as "meates", and the tissue of fungi is normally spoken of by analogy as flesh (cf. The writings of Theophrastus in Hort 1968:21). One anthropologist, writing of the Semai people of Malaysia, suggests that fleshy fungi are indeed grouped with animals as 'real' food (Dentan 1968: 34-35). The Chewa clearly see ***Mtengo*** and ***Bowa*** as quite distinct categories, and the general notion, accepted by Europeans and many past biologists, that all living things belong to one of two kingdoms, plants and animals (with 'fungi' placed in the 'plant' category) makes little sense to the majority of Chewa women. To suggest to a Chewa that a particular fungus belongs to the ***Mtengo*** category is rather like asking an English person whether a cabbage was a kind of tree. Thus the views of Chewa women are probably closer to those of the modern taxonomist than the ideas of the great botanist Linnaeus.

CONCLUSIONS

I have given above a broad outline of Chewa folk classification, and specifically the classification of fungi *(Bowa).* In the light of this discussion some broad conclusions can be made.

Firstly, although ethnoscience was motivated by a genuine desire to present the cognitive principles of a particular culture (and Sturtevant (1964) indeed defined ethnobotany as a "specific cultural conception of the plant world") an undue focus was put on morphology and classification. But folk taxonomic hierarchies are relatively shallow, and the term hierarchy is almost a misnomer when one considers, for instance, that about 20 percent of Tzeltal plant categories are unaffiliated to any life-form taxa, and that some

TABLE 2.—*Chewa classification of the Taxon Bowa*

		Cantharellus cibarius CHIPATWE WAYERA NAFUWANKHUKU NGUNDASUKU
		Cantharellus congolensis CHIPATWE CHAKUDA NAKAMBUZI
MANYAMA CHIPATWE (Y)		MAKUNGUTA (Y)
		Cantharellus longiporus CHIPATWE WAFIRA NGUNDASUKU ANAKSUKU
		Cantharellus densifolius NGUNDASUKU WAYERA
	MSONGOLO WANKHWALI	Catharellus tenuis
		Melanoleuca melaleuca KASANJALA KANJALA
		Lactarius gymnocarpus KUNGULUKWETITI KAMSUKU NKWICHI
	NAKASUKU	
		Lactarius sp. JW 563 KAMBWALO KAMPHANDE
		Lactarius sp. BM 131 NGUNDASUKU
		Lactarius vellereus
		Russula schizoderma
		Russula sp. JW 578 LILANGWI
CHIPINDI		USINDA (Y) MKADZADZULO
		Russula sp. JW 593
		Russula sp. JW 580 NAMALOBA
		Russula cyanoxantha TERENYA WAFIRA
TERENYA		Russula ochroleuca TERENYA WAYERA

TABLE 2.—*Chewa classification of the Taxon Bowa* (continued)

		Macrolepiota diolichaula
		NAMANDADERENGWA
		Amanita hemibapha
		KALONGONDWA
		KATSOBOLA
	UTENGA (Y)	NDEZA
	TAMBALA	
NDELEMA		Amanita rhodophylla
KATELELA		
		Amanita zambiana
		SANDJI
		Amanita bingensis
		NAKAJONGOLO
		MSONGOLO WANKHWALI
		Aminita elegans
		BONGOLOLO
		NAKATOTOSI (Y)
		KATALESYA (Y)
		Amanita rubescens
NGODZI		Amanita goossensiae
NAKAJETI (Y)		MUSENDAIWA
		Amanita sp. JW 595
		Lepiota sp. JW 585
		NKOTWE
		Gyroporus luteopurpureus
KAMCHIKUNI		
		Lentinus cladopus
		Lentinus squarrosulus
		KAMSEMPHA
		CHINTSEMPHA
		NAKATASI (Y)
		Phlebopus colossus
		NGOMA WANYANI
MPAFA YAFULU		
MPHAMFA		Russula nigricans
		Phaeogyroporus portentosus
		Pulveroboletus aberrans
		Suillus granulatus
		Xerocomus soyeri
		Schizophyllum commune
KALISACHI		
		Clavaria cfr albiramea
		KABVISAZA
		KASANZA
		MUSANJALA
		NAKAMBI (Y)

TABLE 2.—*Chewa classification of the Taxon Bowa* (continued)

			Termitomyces robusta
			Termitomyces eurrhizus
			KACHOFU
			NAKATERESYA (Y)
			UTEMBO (Y)
			UWUMBU
			MAZUMBUKIRA
			KAMBVI
NTHANDO			
	KANCHOMBO		Termitomyces microcarpus
			MANDA
		UJONJO	
		NYONZWE	Termitomyces clypeatus
			NAKASUGULI
			Micropsalliota brunneosperma
			Psathyrella atroumbonata
			Psathyrella candolleana
			Mycena sp. JW 697
			CHAMASALA
			Termitomyces schimperi
			NYONZWE WANKULU
			USINDA WANKULU (Y)
			LILANGWI
			MANANDARENGWA
			MAZUMBUKIRA
			NAKASOWU (Y)
Unaffiliated taxa			
KASALE			Termitomyces striatus
CHANJIRA UPYA			Termitomyces aurantiacus
NAKATERESYA			
UTALE			Termitomyces nr titanicus
BAMBOMULUZA			
KATSOKOMOLE			
NGUNDA NGULUWE			Xerocomus pallidoporus
MPANDO WAFISI			Strobilomyces costatispora
FISI			
KASANGA			Gyroporus castaneus
KADYA M'LERO			Lactarius sp. JW 581
CHING 'AMBE			
NYAME			
BOWA WAFIRA			Russula lepida
KAFIDI			Russula atropurpurea
KAMWAZI			
MKODZO WAGARU			
KAMTHOVA			Russula delica

TABLE 2.—*Chewa classification of the Taxon Bowa* (continued)

DEGADEGA	Amanita baccata
KACHITOSI	Amanita nr calopus
BONGOLOLO	Amanita vaginata
PEZUPEZU	Amanita fulva
CHADWALI	Oudenmansiella radicata
NKALANGANJI	Serulina lachnocephala
KANJADZA	Stereopsis hiscens
KANYAMA	Cymatoderma dendriticum
ULANDI (Y)	Inocybe sp. BM 74
NKOLAKOLA	Agaricus campestris
MSOLO WANKHWALI	Agaricus sp. JW 571
MATWE	Auricularia auricula
MAKUTUKUTU	
KHUTULANJOBVU	
MANGUNGULI	Collybia dryophila
KWASANGA	Collybia sp. JW 662

85 percent of the generics are monotypic. When Friedberg (1979:85) suggests that plants in Bunaq taxonomy appear to be classified more according to a "complex" web of resemblances" rather than forming a neat hierarchy, she would seem closer to the ethnographic reality. Moreover, to suggest as do some ethnoscientists, that "a culture itself amounts to the sum of a given society's folk classifications" (Sturtevant 1964:100) or that "natural phenomena may be said to be culturally relevant simply by virtue of their existence" (Hunn 1977) is to state both too little and too much. In the former regard, folk knowledge extends well beyond what is encapsulated in formal taxonomies, and many Chewa-speakers knew the medicinal properties of plants for which they could not give a name, for much knowledge is memorate or unformalized. In the latter regard, to suggest that classification extends well beyond what has immediate utility, and that plants and animals have salience simply because they happen to be there within the human life-space, because "curiosity as well as hunger is a basic human drive" is to go to the opposite extreme.[9]

The Chewa do not "see", let alone know and classify most of the fungi which are to be found in their immediate environment, and the same might be said of most human communities. In addition Chewa folk concepts do not constitute logical or inclusive categories, for their folk classifications are inherently flexible, with many ambiguous or overlapping categories. While they do have a deep interest in the naming and categorization of plants (and in this they contrast significantly with the Hill Pandaram) their classifications largely focus *around* prototypical taxa. Hallpike's suggestion (1979:169-235) that folk classifications are inherently complexive rather than hierarchic, and dominated by concrete associations and "functional entailment" are certainly confirmed by my own studies.

Secondly, although we can accept that there is no necessary one-to-one relationship between utility and nomenclature,[10] nevertheless it is important to recognize that functional criteria are intrinsically linked to taxonomic orderir ʃ,. As I have tried to indicate above, many Chewa life-form categories cannot be understood in purely morphological terms, and functional categories like *Mwana wa Mphepo* also have a taxonomic relevance. Ethnoscientists have recognised that cultural significance has salience in the differentiation of folk generics (Berlin et al 1974:99, Berlin 1976:392-4) and they have recognized too that functional categories exist although these are seen rather misleadingly as non-taxonomic groupings (cf. Hays 1979:257). But a true understanding of the nature of

folk classifications, both in a culturally specific context and in terms of the evolution–the "encoding sequence"–of life-form categories demands that we incorporate into the analysis functional criteria. As anthropologists we should be concerned with systematically exploring the relationship between folk classifications and other aspects of cultural life. To view folk taxonomies simply as taxonomies, abstracted from utilitarian, ecological and cultural concerns, limits our understanding of how human groups related to the natural world.

LITERATURE CITED

BERLIN, BRENT, D. E. BREEDLOVE and P.H. RAVEN. 1968. Covert categories and folk taxonomies. Amer. Anthr. 70: 290-99.

———. 1974. Principles of tzeltal plant classification. Academic Press, New York.

BERLIN, BRENT. 1974. Further notes on Covert Categories and Folk Taxonomies. Amer. Anthr. 76:327-331.

———. 1976. The concept of rank in ethnobiological classification: some evidence from aguaruna folk botany. Amer. Ethnol. 3:381-99.

BINNS, BLODWEN. 1972. Dictionary of plant names in Malawi. Govn. Print. Zomba.

BROKENSHA, DAVID and W. RILEY BERNARD. 1980. Mbeere knowledge of their vegetation and its relevance for development. Pp. 113-129 *in* David Brokensha, D.M. Warren and Oswald Werner, Indigeous Knowledge Systems and Development. Univ. Press of America, Lanham, North Dakota.

BROWN, CECIL H. 1974. Unique beginners and covert categories in folk biological taxonomies. Amer. Anthr. 76:325-327.

———. 1977. Folk botanical life forms: their universality and growth. Amer. Anthr. 79:317-342.

———. 1979a. Folk Zoological life-forms: their universality and growth. Amer. Anthr. 81:791-817.

———. 1979b. Growth and development of folk botanical life forms in the Mayan language family. Amer. Ethnol. 6:366-385.

BULMER, RALPH. 1974. Folk Biology in the New Guinea Highlands, Soc. Sc. Inform. 13:9-28.

———. 1979. Mystical and mundane in Kalam classification of birds, Pp. 57-79 *in* Roy F. Ellen and David Reason Classifications in their social context. Academic Press, New York.

CARRINGTON, J. F. 1981. Linguistic pitfalls in Upper Zairean folk taxonomy research. Unpubl. Mss. Nat. Univ. Zaire.

DENTAN, ROBERT K. 1968. The Semai, Holt, Rinehart, New York.

EVANS-PRITCHARD, E. E. 1937. Withcraft, Oracles and Magic amongst the Azande, Clarendon Press, Oxford.

FOLEY, DANIEL J. 1974. Herbs for use and for delight. Dover Publ., New York.

FRIEDBERG, CLAUDINE. 1979. Socially significant plant species and their taxonomic position among the Bunaq of Central Timor, Pp. 81-100 *in* Roy F. Ellen and R. David Rason. Classification in their social context. Academic Press, New York.

HALLPIKE, C. R. 1979. The foundations of primitive though. Clarendon Press, Oxford.

HARGREAVES, BRUCE J. 1976. Killing and curing: succulent use in Chitipa. Cactus and Succulent J. 48:190-196.

HAYS, TERENCE E. 1976. An empirical method for the identification of covert categories in ethnobiology. Amer. Ethnol. 3:489-507.

———. 1979. Plant classification and nomenclature in Ndumba, Papua, New Guinea Highlands. Ethnology 18:253-270.

HOEG, OVE A. 1983. Country People in Norway and their knowledge of Plants. Paper delivered at Plants in Folklore Conference, Univ. Sussex, April 1983.

HORT, ARTHUR. 1968. Theophrastus: Enquiry into plants. Heinemann, London.

HUNN, EUGENE S. 1977. Tzeltal folk zoology: the classification of discontinuities in nature. Academic Press, New York.

———. 1982. The Utilitarian Factor in Folk Biological Classification. Amer. Anthrop. 84:830-847.

LEVI-STRAUSS, C. 1966. The Savage Mind. Weidenfeld and Nicolson, London.

LITERATURE CITED (continued)

———. 1969. Totemism. Penguin Books, Harmondsworth.

———. 1972. Structural Anthropology. Penguin Books, Harmondsworth.

ALINOWSKI, B. 1974. Magic, science and religion. Souvenir Press, London. Reprint of 1925 edition.

ITCHELL, J. C. 1956. The Yao Village. Manchester Univ. Press, Manchester.

ORRIS, BRIAN. 1962. A denizen of the evergreen forest. African Wildlife 16:117-121.

———. 1964. Mammals of Zoa Estate, Cholo, Nyasaland J. 17:71-78.

———. 1967. Wild flowers of Mlanje Mountain. African Wildlife 21:71-77, 152-157.

———. 1970. The Orchids of Malawi. Society of Malawi.

———. 1976. Whither the Savage Mind? Notes on the natural taxonomies of a hunting and gathering people. Man (NS) 11:542-547.

———. 1980. Folk Classifications. Nyala 6:83-93.

———. 1983. The Macrofungi of Malawi. Unpubl. Mss. on deposit with author.

NGUBANE, HARRIET. 1977. Body and Mind in Zulu Medicine. Academic Press, London.

RICHARDS, AUDREY I. 1969. Land, labour and diet in Northern Rhodesia (1939). Oxford Univ. Press.

SCHOFFELEERS, J. M. 1968. Symbolic and social aspects of spirit worship among the Mang'anja. Unpubl. Ph.D. Thesis, Oxford Univ.

STRATHERN, MARILYN. 1980. No nature, no culture: The Hagen Case, Pp. 174-222 *in* C.P. MacCormack and M. Strathern Nature, Culture and Gender. Cambridge Univ. Press.

STURTEVANT, W. C. 1964. Studies in Ethnoscience. Amer. Anthr. Pp. 39-61 *in* J. W. Berry and P. R. Dasen (eds.) Culture and Cognition (1974) Methuen, London.

TAMBIAH, S. J. 1969. Animals are good to think and good to prohibit. Ethnology 8: 424-459.

TURNER, VICTOR. 1967. The forest of symbols. Cornell Univ. Press, Ithaca, New York.

WILLIAMSON, JESSIE. 1941. Nyasaland native foods. Nyasaland Times.

———. 1975. Useful plants of Malawi. Univ. Malawi, Zomba.

WITKOWSKI, STANLEY R. and CECIL H. BROWN. 1978. Lexical Universals Ann. Rev. Anthr. 7:427-51.

WITKOWSKI, STANLEY R., CECIL H. BROWN and PAUL K. CHASE. 1981. Where do tree terms come from? Man (NS) 16:1-14.

NOTES

1. Ethnobotanical research in Malawi was undertaken during the year 1979-80 and was supported by an SSRC grant for which I am grateful. My own ethnobiological researches in Malawi go back more than twenty years, for during seven years' residence in the Thyolo and Mulanje districts (1958-65) I collected a lot of data on the folk names and cultural uses of plants and small mammals. (cf. Morris 1962, 1964, 1967). I am thus fairly fluent in Chichewa. During my year's residence I became a student 'novitiate' to several ***asinganga*** (doctor-diviners) and market herbalists, and altogether I worked closely with about twenty-five informant friends, ten of whom were women. In the drafting of the present paper I am appreciative of the help given by Willard Van Asdall and Pat Caplan.

2. It is beyond the scope of this present paper to offer ethnographic material on the wider culture of the peasant communities of Malawi. For some useful background material on the Yao and Chewa-speaking peoples cf Mitchell 1956, Schoffeleers 1968.

3. Tambiah's (1969) interesting discussion of animal categories in Thailand notes that chickens and ducks are not considered to be birds ***(Nog)***, and that many categories are almost defined in terms of edibility.

NOTES (continued)

4. How these ethnographic facts fit into the encoding sequence in the evolution of zoological life forms, as postulated by Cecil Brown and his associates (Witkowski and Brown 1978:437-8, Brown 1979a) it is difficult to assess. But clearly ***Nyama*** is a life-form category of the same taxonomic status as ***Njoka*** and ***Mbalame*** (under no circumstances would ***Njoka*** be described as a kind of ***Nyama)***, and it is defined by cultural criteria for which Brown's perspective finds no place, at least in his discussion of animal categories. Moreover, to situate 'animal' beyond or outside the schema obscures some interesting developments that have occurred in the evolution folk taxonomies, and the shift of focus from utility to morphology.

5. The polysemous nature of plant categories is widespread (cf Richards 1969:232, Bulmer 1974: 20, Ngubane 1977:22). In a recent paper, Witkowski and his associates (1981) note that the wood/tree polysemy is found in a variety of languages. Whether the loss of this polysemy is *directly* linked to increased societal complexity is difficult to say, for a hunter-gathering community like the Hill Pandaram has three morphological categories–***Maram*** (trees and woody plants), ***Valli*** (creepers and lianas) and ***Chedi*** (ferns and herbaceous plants) (Morris 1976:546), that are very similar to those described elsewhere (cf. Berlin et al 1974, Berlin 1976:385, Hays 1979) while a much more technologically complex society like the Yao has but two life forms (excluding the fungi), the primary category ***Mtera,*** which like the Chewa ***Mtengo,*** is polysemous and extremely wide in scope. Brown's study of the development of Mayan botanical life-forms (1979) indicates that almost all life-form categories derive initially from functional polysemous concepts, and yet, surprisingly, in an earlier paper (1977:320) he appears to *define* these categories as non-functional.

6. The Anglo-Saxon word "wort" originally meant 'root', and was used to designated many plants that has medicinal properties. Many English plant names still carry the term, e.g., St. John's Wort, Figwort, Mugwort, Ragwort. It has been suggested that it was a virtual synonym for "herb", a concept that did not originally refer to small herbaceous plants, i.e., it was not a morphological category at all, but to any plant that had utility as medicine or for culinary purposes (Foley 1974:187). Many common herbs, of course, are shrubs (Dogrose), trees (Wych Hazel) or climbers (Nightshade). Early English folk classifications also seem, therefore, to have a functional bias. In an interesting paper, Hoeg (1983) has described how country people in Norway are able to identify ferns by the feel of their rhizomes, and in Gerard's classic 'Herbal' (1597) the illustrations of the plants all show the structure of the roots, sometimes, as with the common arum, without the flowers.

7. With respect to the present paper I should particularly like to express my thanks to Chenitta Selemani and her sister Esmie, Benson Zuwani, Kitty Kunamano, Rosebey Mponda and Salimu Chinyangala for help and instruction on those aspects of Malawi cultural life relating to ***bowa.*** During the year–and in a subsequent short visit–I made water-color sketches, and collected data and specimens of over five hundred fungi. The specimens are deposited in herbaria located at Kew and Zomba. Material for this paper is based on these collections, and draws on my larger study on the Macrofungi of Malawi (in press). For the identification of my specimens I am grateful to Dr. David Pegler of the Herbarium, Royal Botanical Garden, Kew, England.

8. Importantly when categorizing and describing fungi reference is continually made to the three 'primary' colors, names - *era,* light or white, *-da,* dark or black, and - *fira,* covering all the fiery colours as well as yellow. These are basic to the Chewa and have important symbolic connotations.

9. In a recent paper, Hunn (1982) has modified his earlier views and has, like myself, although in a more substantive theoretical manner, come to stress the 'utilitarian factor' in folk classifications.

10. In a more recent study of the Aguaruna Indians of Peru, Berlin (1976:393) suggests that about one third of the plants known to these people are conceptually recognized but lack cultural importance.