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"FOLK CLASSIFICATIONS"

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I want this evening to talk about 'folk classifications' - the way ordinary people conceptualize and classify the natural world.[2] It may come as a surprise to some people that I'm going to talk specifically on this topic; partly because I'm billed to give you insights into the "traditional uses, superstitions and medicines" related to animals and plants, and partly because 'classification' is often seen as something only taxonomic biologists do. We tend to forget that human beings are by nature 'classifying' animals and that human life as we understand it would not be possible without classification.

Folk Versus Scientific Classifications

Now for many ordinary naturalists there is a wide, almost unbridgeable gulf between the classifications of science on the one hand, embodied as these are in Latin nomenclature, and the names and natural classifications of ordinary people. Towards the first we show amazing respect, even reverence. No priest of old was treated with as much awe as that accorded to contemporary systematic botanists. I mean, if you showed somebody a plant and he or she told you it was *Brassica oleracea* var *bullata* of the family Cruciferae you'd be impressed; you wouldn't be impressed if he told you it was a cabbage. This respect towards scientific classifications is often deserved - but it is unnecessary, and it is exaggerated. There's nothing esoteric or unfathomable about the activities of systematic biologists or the Latin they espouse, so there's no need for any of us to have an inferiority complex. On the other hand naturalists have an unnecessarily negative even derogatory attitude towards the names and classifications of ordinary people. I'll give you an example. It comes from a man I knew quite well. I met him when I was still a *mnyamata* and he was in his seventies. He was a good naturalist, and did a lot of good work with respect to the conservation of wild life in Malaŵi. I have a high opinion of Rodney Wood; yet this is what he wrote in one of his articles devoted to small mammals - of which he made an important collection. He wrote:

> "I have added a list of 'native' names referable to certain species, but would caution any future workers to pay little attention to them. My experience over many years has been that they are almost always unreliable. Having no knowledge whatsoever of systematic natural history, the African has nearly always applied a local vernacular name to 'groups' of animals that may have a superficial similarity of appearance, but not actually be clearly allied."

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1. Present address: Goldsmiths' College, University of London, SE 14 6NW.
2. This article is from a lecture given to the Society of Malaŵi in March 1980.

And he goes on to suggest that the sooner all vernacular terms are forgotten the better (Wood, 1949).

You see, he was a good enough naturalist to realise the need to record common names, but his attitude towards them is essentially a negative one. And he's not alone in this.

Now what I want to try and do this evening is two things. Firstly, I want to suggest to you that the names and classifications of ordinary people *are* worth something, reiterating what the worthy John Buchanan (1895) wrote about nearly a hundred years ago, when he briefly looked at the semantics of some local plant names. Secondly, and linked to this, I want to suggest to you that there is not an unbridgeable gulf between folk and scientific classifications, and that they are related in rather interesting ways.

The Universality of Terms

Let me start first with a criticism that is always levelled at folk classifications, namely that they do not provide standardized or universal terms for animals and plants. This is one of the things that Rodney Wood bewailed when he noted that certain vernacular terms covered more than one scientific species. Given the fact that there is no universal common language, that there is no one-to-one correspondence between folk and scientific taxonomies, and that synonyms are widely used in folk taxonomies, this must be the case. But the criticism is rather overstated. Firstly, synonyms are not "rampant" in folk taxonomies, as many have implied; in fact within a given locality or culture there is very wide agreement regarding plant and animal names. The names of the more common plants and animals are by no means ambiguous or cluttered with synonyms. Take, for example, the names of trees here. Trees like *Uapaca kirkiana (Mzuku), Adansonia digitata* - the Baobab *(Mlambe), Pseudolachnostylis maprouneifolia* - Kudu berry *(Mzolo)* - all widespread - have vernacular terms that are pretty standard, common to both Yao and Chewa languages. Synonyms only become conspicuously evident with trees that are uncommon, like *Canthium gueinzii*, a shrub found in evergreen forests which has two Yao and two Chewa names - and probably only known to a few herbalists. Secondly, scientific classifications themselves are by no means standard. It is interesting to read Charles Jeffrey's useful introduction to 'Biological Nomenclature' (1973). On page 5 he insists that a fundamental principle of nomenclature is that "names must be unambiguous and universal", and so common names are dismissed as unsatisfactory. Yet given the fact that scientific classifications must inevitably change with our increasing knowledge of the natural world and that such classifications attempt to reflect phylogenetic relationships, a few pages later he notes that scientific classifications are subject to "continuous change", and that scientific terms, like common names, are by no means either unambiguous or universal. There is, as he notes, an "inherent conflict" between the stability of nomenclature and the need to have a system of classification that best reflects our present knowledge. That shrub you find on the rocky outcrops of Zomba and Mulanje is still called *Cheyo* here, but at Kew they no longer call it *Vellozia*. And, (1978) of the new Bir changes and revisions only two decades.

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call it *Vellozia*. And, you only have to read John Alder's review (1978) of the new Bird Checklist to realise the considerable changes and revisions in nomenclature that have taken place during only two decades.

The Cultural Importance of Latin

Scientific nomenclature, as you well know, is based on Latin - not the classical Latin of the Ancients, but a rather technical, refined Latin derived from the medieval herbalists. Some two hundred years ago one of these herbalists wrote: "Those who wish to remain ignorant of the Latin language, have no business with the study of botany" (John Berkenhout). Now if you're not a biological taxonomist, and I'm not, the tendency is to think that Latin belongs to a past world, that it has no relevance at all in understanding the present one. I want to try and indicate to you that it has, and in particular that studying Latin is helpful - and I shall come to this presently - in understanding the nature of English *folk* taxonomies. I'm not a Latin scholar either: my second language was standard English, my first being a Black Country dialect. So I'll have to approach these issues by way of anthropology.

One thing that is universal in almost all human cultures is the belief in an immaterial essence that survives the body - *Mzimu* is the CheŴa term. In the English language there are two basic terms for this - soul, and spirit. Now if you look at the present connotations of these two terms you will see that they are quite different, though neither has entirely lost its religious tinge. Soul is connected with music, emotions, sadness; spirit is connected with vitality and uplift. If you are spiritual or spirited we can admire you; if you are soulful we can only sympathize. So although their original meanings were very similar, the shifts in meaning of the two terms have gone in quite different directions; spirit, as it were, has moved in an upward, soul in a downward direction. And of interest of course is that spirit is a word of Latin origin, soul is Teutonic, derived from the early tribal communities of Western Europe. And if you know your English history, you will know that for several hundred years Latin was the language of the aristocracy and the literate, which may indeed be one reason why taxonomic biologists are still accorded such esteem.

But you'll realise of course that this division permeates English language and culture. And that there are real social implications in our use of words. If you use in your everyday speech words like make, want, get, sweat (my home language) instead of words like construct, require, acquire and perspiration, nobody will think that you are a person of any standing! And note too how we use such terms. Terms like 'get' can be used to convey a variety of different meanings with only a slight addition - get up, get off, get over, get to, get on ... get away.' Whereas 'acquire' only leads you on to bigger words. But the important point, need I tell you, is that the low-status words are of Anglo-Saxon origin, while the others are of Latin derivation. I will not embarrass you by reciting the terms for the genitals, but you will note that I could

(if I wanted) indicate those of Latin origin without too much embarrassment!

Where does all this lead? Well, to our understanding of English folk classifications. Take first a typical botanical description. I will give you one, although there will be no prizes for guessing the plant species.

" Tree: 4-6 m in height, occurring in deciduous woodland

Bark: Light green, fissured and cracked

Leaves: Alternate, ovate - elliptic, apex rounded, margin entire, rarely serrate

Flowers: Small, in axillary clusters or cymes

Fruit: Spherical with persistent style, indehiscent "

Well, it's a description of *Msolo*, adapted from Palgrave's (1977) book. And you will note that while all the basic terms here - tree, bark, leaf, fruit - are of Teutonic origin, the descriptive terms are all derived and adapted from Latin terms (Stearn, 1966). But note also that the botanic Latin is not pure Latin but is derived from Latin and Greek words that have been modified and refined for scientific purposes. "Serrate" is from *serra*, Latin for "saw"; "pubescent" from *pubes*, meaning pubic hairs. The early botanists virtually created a new language.

I shall return to Latin shortly. But let me first indicate to you just what is the nature of a folk classification system, and then I will try to say something about the way in which English folk taxonomies have developed, and been modified over the centuries.

The Nature of Folk Classifications

All folk taxonomic systems are essentially comprised of a large number of primary terms which represent the most commonly designated concepts of the animal and plant world. They stand for groupings of organisms that have a certain "natural" or objective standing in the world. In English we have terms like elephant, gull, blackbird, viper, buttercup, badger, perch, cowslip; in Chicheŵa we have terms like *nyalugwe*, *chambo*, *msuku*, *kanyimbi*, *njiwa*, *nyani*, *chinomba*, *tsabola*. Ethnobiologists refer to these terms as 'generic names'. They are usually single terms, and there are lots of them in every language. Such categories are normally incorporated into a higher-level taxa referred to as a 'life-form' category (Berlin, *et al.*, 1974). In English we have snake, beast, fowl, (you'll note I'm using biblical terms), tree, fish, bush and the like, while in Chicheŵa we have *nyama*, *mbalame*, *mtengo*, *njoka*, *bowa*, *nsomba*. These terms - or those rough equivalents - are found in many different languages. Besides these two primary levels there is a third important taxonomic rank, namely, that often the generic categories are subdivided into two or more

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specific categories. In English we have two sorts of celendine, three or four doves and woodpeckers, several kinds of mice, horse and sweet chestnuts, while in Chicheŵa we have two kinds of forest mice *(Grammomys) sonto wankulu* and *sonto wang'ono*, and several allied trees; *mpoloni* and *mpoloni wamuna*. *(Steganotaenia araliacea* and *Heteromorpha arborescens* - both Umbelliforae shrubs) and *thombozi* and *thombozi chipeta (Diplorhynchus condylocarpon* and *Holarrhena pubescens)* being typical examples. In folk taxonomic systems generally the number of genera that are subdivided in this manner are relatively few - and Cheŵa is no exception here.

Now there are a number of interesting features to be noted about such classifications. Firstly, it is very rare to find any taxa which are equivalent to the English terms 'plant' and 'animal' - these terms are absent from almost all folk classifications on which we have details. This is not to say that people do not conceptualize the distinction between the two main types of living organisms, but these are not named categories. It is interesting to note, however, that in Chicheŵa the noun classes to some extent reflect this distinction, for whereas many animals beling to the *munthu* class *a/fisi, a/nyalugwe, a/mende* (or the plural is the same) most members of the *mtengo* category - which includes the majority of plants known to the Cheŵa - belong to the noun class typically referred to by that same term - *mtengo*. Thus we have *mkuyu, mkundi, nsopa mlombwa* (taking the plural prefix *mi-*). Chicheŵa grammatical rules are complex and variable, but this does seem to indicate a differential treatment, in ordinary language, of animals and plants. But importantly, there are no folk terms in Cheŵa that are equivalent to these.

Secondly, folk taxonomies have not only a shallow hierarchy, essentially of three levels, but it is also a discrepant one. There are for instance few intermediate categories between generic and life-form terms, and many generic categories are unaffiliated to any of the main life-forms. In a study of the plant classifications of one Mayan-speaking community in Mexico, for example, one anthropologist (Berlin, *et al*, 1974) found that they had four basic life-forms which can be broadly translated as 'trees', 'herbs', 'grasses', and 'vines'. Out of a total of 471 generic categories approximately 75 per cent were incorporated into one or other of these four basic categories, leaving about 100 generic forms unaffiliated. In many folk classifications there is often a residual category - somewhat equivalent to *chirombo* (or *chikoko* in Yao) that incorporates some of these discrepant generics. The taxonomic hierarchy of folk classifications is therefore not a systematic one.

Thirdly, many of the terms in folk classifications are polysemous, their meaning varying according to context. Quite generally a generic is a single term that applies both to a group of plants or animals, and to a specific species. In some Amerindian languages the term for a life-form category is often also a generic term. Amongst the Shoshoni, for example, the word for 'eagle' also means 'bird'. And there is some evidence that the English word 'tree in its original meaning not only stood for trees universally but for a

specific kind of habitat and the generic "oak".

Fourthly, and as one would expect, many classes of organisms of interest to the biologists are given very scant treatment in folk taxonomies. The English generics toadstool, fern, worm, beetle cover a multitude of species known to present biologists, and their Chicheŵa equivalents are the same, although it is worth noting that the Chicheŵa have a detailed classification of edible fungi and rodents.

Fifthly, in case one should get the idea that folk taxonomies are all ad hoc and highly unsystematic, I should note that the classificatory proclivities of pre-industrial people typically do not end with the ordering of a specific domain, like that of animals or plants. People classify all aspects of life: there is a colour classification; people are divided up into various social categories; there is a recognition of different kinds of planets or minerals; space is divided up and given values; individuals are classified according to their temperament, and time, too, has its categories. To people like us Europeans all these aspects of human experience are distinct and unrelated. Given industrial production, and the high degree of economic and intellectual specialization that modern society involves we do not look upon the world as a 'totality' of interrelated things. For us, there are no real connections between colours, or people's temperaments and animals and plants, though we may link them descriptively or metaphorically. But with the culture of more pre-industrial people classification does not stop with the ordering of specific domains like colour or plants; there is often a more complex and systematized mode of classification that unites into a symbolic totality almost all aspects of human experience. As an example I will mention the symbolic classifications of one American Indian community, the Navaho, who have a complex symbolic classification organized around spatial categories (Levi Strauss, 1966). When we talk about totemism, or geomancy or astrology, we are simply (and somewhat misleadingly) looking at classificatory symbolism from one particular aspect. Anyone who looks at Culpeper's Herbal will see the influence of the medieval conceptions of the world on this study. What's important about this is that it indicates that many pre-industrial people do not see our opposition between man and nature; what happens in the social world affects 'nature', and vice versa. Thus there is often an ecological perspective in the culture of pre-literate people even though mediated through religious symbolism.

Chewa Classification of Plants

But let me return to the classification of plants and the Chewa. As I said, there'sno term for 'plant' here, but the plant kingdom itself is ordered through four basic categories:

Mtengo which is a general category for trees and woody plants.

Chitsamba which can be roughly translated as 'shrubs' - although often associated with regenerating *Brachystegia* type trees.

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Maudzu: grass-like plants, and including often small lilies.

Bowa: edible fungi.

Some plants fit very uneasily into these primary categories. If you ask a local person what sort of plant, say, a balsam is, or whether it is a 'tree', *mtengo* - he or she is or will be hesitant, and probably conclude that it is a *Maluwa* (flower) - significantly tending to use the plural. So in a sense *Duwa* (or *Luwa*) can take on the role of a general plant category, although herbs with inconspicuous flowers remain essentially unaffiliated. Intermediate categories are relatively few in Chicheŵa, but the terms which are used to designate a group of plant generics are of interest because they mainly have a functional rather than a purely taxonomic significance. Two examples:

Telele: a term that specifically denotes the cultivated hibiscus but which is used generally as a category to cover all plants whose leaves are utilized in the preparation of a specific kind of relish, referred to by the same name.

Mwana wa mphepo: a term focussed on *Cyphostemma* plants, but one used to cover a variety of plants associated with a complaint of the same name, for which the plant provides a remedy.

This pragmatic bias is very evident in Chicheŵa classifications, as Bruce Hargreaves (1976) suggests in one of his articles, and again I give two examples. The first is the well-known term *Nyama*, which is applied both as a category to cover all mammals and larger reptiles, and as a term for 'meat'. It is a highly complex term, and in specific contexts some of the larger mammals - hyena, leopard for example - will be excluded from it, and described as *Chirombo* - another complex category which can be roughly glossed as a "useless living thing". The latter term, as such, covers a variety of organisms. The second example of this utilitarian emphasis in Chicheŵa classification is the term *Bowa* - which also has a double meaning. In some contexts it could be used as a generic term for the larger fungi, but essentially it means *"edible* fungi", and a woman will explicitly describe an inedible *Russula* or *Amanita* as *'Sibowa chirombo'*. It's not a *bowa* but a "useless thing". This is an important point because anthropoligists generally have overlooked or even denied the functional significance of folk categories.

Changes in English Folk Classification

Now if you look historically at English folk classifications - and we're returning now to the Latin issue - you will see that originally they were very similar to contemporary Chicheŵa. The basic "animal" categories were "beast", "fowl" (a term that covered birds, bats and butterflies, i.e. it meant "flying things"), "snake" (which comes from the Teutonic verb "to creep" - and was also a wide category) and "bug" (the original meaning of which had connotations with ghosts, apparitions, and objects of terror). The term "bird" did not become a general category until about 1600. Its original mean-

ing was a 'young bird' or nestling, particularly the young eagles; but with time it replaced "fowl" and both took on different meanings. The basic "plant" categories were "tree", "bush" and "herb". There was no general category for "fungi", only the terms "mushroom" and "toadstool", applying to the edible and inedible varieties respectively. All these terms were essentially of Teutonic tribal origin.

Significantly there were no terms in the early period to signify the two main groups of organisms; both the terms "animal" and "plant" are late-comers to the English language - and both, of course, derived from Latin. The term "animal" comes from "anima" meaning "breath" or "life essence", and did not become evident in English till around 1600. At that time a writer had to point out to ordinary folk the distinction between animal and beast. He wrote (1594):

> "Many men by reason of ignorance of the Latin tongue think that an animal is a beast, whereas it signifieth a living thing."

"Plant" comes essentially from the Latin term "planta", to sprout, and again did not become widely used in English until the 16th century when various herbalists like Turner began to use it *(plantes)* as a general category to cover herbs, shrubs and trees. Some general categories of the earlier period, like *gomme* (used by Chaucer as a term equivalent to herb and tree) we know little about; it survives today only in the word "gum", but it is probable that it was a term of the same taxonomic status as the Chichewa name *Mpira* (which applies to many latex-producing plants).

After 1600 many other taxonomic concepts derived from Latin entered into English folk classifications - "vegetable", "quadruped", "fungi", "reptile" (like the Teutonic word snake, this was derived from the verb "to creep). The term "quadruped" (four-footed) had an interesting history. For a while it replaced "beast" as a life-form category in English - and there were several scientific texts entitled the "History of the Quadrupeds" - but when it became evident that the distinction between mammals and reptiles and amphibians was important, it was displaced by the term "mammal". This term, derived from the Latin *mammae* meaning "breasts" did not become a part of the common language until well into the 19th century.

Now in all these changing developments in English folk classifications there are *three* kinds of processes going on which are important to distinguish. The *first* I have already tried to indicate, namely, the important influence that Latin has had on English culture generally and implicitly on folk classifications. The *second* is related to a general theory put forward by the American anthropologist Brent Berlin (Berlin, *et al*, 1972), that accompanying the more general development in the social and technical complexity of a society there has been an elaboration and growth of folk classifications. He has applied this theory both to the development of colour categories and to ethnobotanical nomenclature. With regard to the latter, his theory is briefly this. That in early human communities generic terms had primacy, and although one human community,

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the Tasmanians, appear to have lacked general life-form categories, in most small-scale societies three primary taxonomic levels (noted earlier) are developed. Over time, two other levels emerge: named intermediate categories begin to articulate concepts between the life-forms and the generics (these, interestingly, may initially be covert), and specific categories may be subdivided giving rise to various taxa. He sees the latter as especially associated with the cultivation of crops. In the final stage of development in the classification, terms like "animal" and "plant" become named categories.

And *thirdly* there has been the important and quite fundamental influence of scientific taxonomy itself, which is primarily associated with the writings of the Swedish naturalist Carl Linnaeus, whose *Species Plantarum* (1753) is taken as the official starting point for plant nomenclature. Now when the name Linneaus is mentioned it is usually in connexion with naming, with the invention of the *binomial* system, the giving of plants (and animals) two terms, not one as in the generics of folk classifications. But this is only a reflection of a more fundamental shift of emphasis to the way of looking at plants that emerged in the 17th and 18th centuries, mainly through the work of herbalists. There was, as it were, a shift of focus. The major change was the realization that in "grouping" plants - and with increasing knowledge this is what the herbalists were systematically trying to do - the important criteria was not the general morphology of plants, whether they were shrubs or vines, or their use, but the structure of the flowering parts. Linnaeus in fact called his own classificatory method the "sexual system" (and for his explicit discussion of sex his books were banned in many places), and he classified plants simply on the number of stamens and styles a particular plant possessed. But even more important, he took and refined the concept of genus, which as one botanist has noted is "as old as folk science itself". When a friend of mine tells me that there are two kinds of *Mpoloni* - both good medicines - *Mpoloni* and *Mpoloni wamuna*, I doubt if he realises that he is articulating the generic concept or using the binomial system. There was no radical break, then, as Brent Berlin suggests, between folk and scientific classifications. But by combining a refined generic concept with a focus on the flowering parts, and by adopting the Latin of contemporary herbalists as the language of scientific classification, Linnaeus wrought a near-revolution in taxonomy. But even so, it is well to remember that almost all the generic terms utilized by Linnaeus in compiling his *Species Plantarum* (which include description of some 7300 species) are drawn from the folk taxonomic systems of the ancient Greeks and Romans, as codified by such herbalists as Dioscurides and Theophrastus. One only has to look at a book of plants' names to realise the degree to which scientific nomenclature has relied on folk taxonomies for the coinage of generic terms. *Viola, Scilla, Orchis, Cassia, Lilium, Cycas* are all ancient Greek or Latin names of plants, while *Angraecum, Kalanchoe, Datura, Ailanthus, Aloe, Brassica* are generics from the folk taxonomies of other cultures. Of the remainder a surprising number are named after botanists.

This shift of forms I mentioned is concretely illustrated if

one compares the perspectives of the two contemporary experts or specialists in the plant field - the botanist and the person who is usually the most knowledgeable about folk classifications - the *Ng'anga* or diviner-herbalist. If I should show some roots of *Dicoma kirkii (palibe kanthu)* or *Cyphostemma zombense (mwana wa mphepo)* to a botanist and asked for an identification, I doubt if there would be one in a hundred who could tell me what it is. Yet I wouldn't trust any *Ng'anga* who couldn't give me a positive response immediately. But you can imagine what they would say at Kew if you sent them along a pile of roots and asked for identifications! Conversely, if you showed the flowers of these plants to a botanist you *ought* to get an identification - if he (or she) is a botanist worth his salt - but you would stump most *Sing'angas*. Yet a woman *Ng'anga* I know to whom I showed a specimen said to me: "Bring me more leaves and the *root* and I'll tell you what it is!"

Finally, what is the relationship between scientific and folk classifications with regard to their content? Well, inspite of Rodney Wood's pleading, there is a surprisingly high degree of correspondence between the two, but by no means the one-to-one correspondence as implied by some plant dictionaries. In a recent analysis (1979) I made of the way the Navaho Indians classify insects I found a very close relationship between their classification and that of entomologists. And Brent Berlin and his associates, in their study of a Mayan community in Mexico, found that there was in fact a one-to-one correspondence between folk generics and biological species in about 61 per cent of the generic plant taxa examined by them.

So I trust that what I have had to say this evening has convinced you that there is not a "great divide" between folk and scientific classifications, and that folk taxonomies and names have an intrinsic interest in their own right.

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