

RED IS A VERB: THE GRAMMAR OF COLOUR IN CHUMBURUNG

Gillian F. Hansford

Ghana Institute of Linguistics, Literacy and Bible Translation
gillian_hansford@sil.org

Chumburung of Ghana was one of the languages included in Berlin and Kay's seminal World Colour Survey. Their conclusion was that Chumburung had five and a half so called basic colour terms. This present paper looks specifically at the grammar of those colour terms, which was not one of the aspects recorded at the time. An alternative approach is suggested to that of colour *per se*. The secondary colours are also investigated, and it is shown how the division is made clear by the grammar. In an attempt to clarify what are the most basic colours in Chumburung, metaphoric uses and ideophones are also investigated. A brief look is taken at other languages of Ghana in an attempt at historical "reconstruction". This research concludes that the WCS analysis of Chumburung needs to be corrected.

Le Chumburung du Ghana est une des langues citées dans l'œuvre séminale de Berlin et Kay relative aux Termes des Couleurs dans le Monde. Selon cette étude, il y a cinq et demi de termes de base des couleurs en Chumburung. Le présent article met en exergue de manière spécifique la grammaire de ces termes de couleur, un aspect qui était resté occulté lors de l'enquête à ce sujet. Je propose une démarche alternative qui ne se limite pas aux seules couleurs. J'explore également les couleurs secondaires et je démontre comment la division est rendue plus claire par la grammaire. Dans la tentative de clarifier les couleurs saillantes en Chumburung, j'examine également leur emploi métaphorique et les idiophones. Un bref aperçu sur d'autres langues du Ghana permet de tenter une «reconstruction» historique de ces termes. En fin de compte, le présent article souligne la nécessité de corriger l'Etude sur les Termes des Couleurs dans le Monde.

0. INTRODUCTION

It looked like a box of slides - the old kind of transparent photographs of the 60s to be projected onto a screen, each mounted in a two and a half inch square card. This was our first anthropological research project among the Chumburung¹ and it was 1977. All around us were green trees, fading as the dry season progressed, and brown earth. Mud huts with thatched roofs were giving way to houses built of mud blocks with tin roofs, but still fairly colourless. It seemed absurd that we were to do research into the local colour terms when the only colourful items in sight were bright cloths or enamel pans!

Our task was to find 25 men and women to tell us the colour of each of the slides/chips. They were also asked, although I had forgotten the fact, to mark "(a) the best example of the [basic] color[s] and (b) the region of chips that could be called by that color" (Hardin and Maffi 1997, Introduction). The people were to be both young and old, and they received a small remuneration for this task. In general the women knew more colours than the men. One term was unofficially offered by one young man - he translated the colour orange as if it were the fruit, **kukuti**, but no orange in Ghana ripens beyond a greenish-yellow! The result of the survey was plenty of new terms in Chumburung, some of which have bothered us through our language learning and beyond, because we have seldom heard them used again!

¹ Chumburung is spoken in Northern and Volta Regions of Ghana by about 60,000 people or more. There is vowel harmony in Chumburung, with the following vowel phonemes in the +ATR set, i, e, o, u; and the following in the -ATR set, e (=ɛ), ɛ, ɔ, ɒ (=ɔ). The vowel a is in both sets. The letter ŋ is used for phonetic [ŋ] and /ny/ for the palatal nasal. The digraphs ky and gy are pronounced like English ch and j respectively.

Years later, we discovered that we had been part of a large research project, the Worldwide Color Survey (WCS), which followed on from the initial one by Berlin and Kay in 1969. This had aimed at ascertaining in what order the colours first appeared in the world, so to speak, and which ones were the most basic. It was a concomitant to the debate about the Sapir-Whorf hypothesis. The conclusion was that the three most basic colours were red, black and white or more truthfully brightish, darkish and lightish.

The paper to which we had unwittingly contributed dealt with “questions involving the relation of biological and cultural systems” (Kay, Berlin and Merrifield 1991:12). The slides were 320 distinct colour chips arranged randomly. They were from the Munsell color chart (Balee 1997:65) which comprises 40 columns and 8 rows with white at the top and black at the bottom. Focal chips for each of the nine basic colour terms employed were also added. Altogether 110 languages were surveyed.

The Munsell system used the term hue for the colour itself, value for the lightness, and chroma for the saturation or darkness. Another system uses different terminology such as whiteness of hue or blackness of hue, and gray scale. Yet another, “the color triangle” uses shade for anything along the line from color to black, and tint for anything along the line from color to white. Gray is then half-way between white and black, and tone is used for something in the middle of the whole chart! (The World Book Encyclopedia 1979:662-666)

Perception of colour according to Comrie (1981:33) “involves three parameters: hue (correlating with wavelength), brightness and saturation.” Saturation is the depth of colour, or the amount of black in it. Brightness is also called luminosity by others such as Schaefer (1984:131). Most of the literature deals only with hue.

The reason cited by Kay, Berlin and Merrifield (1991:13) for their research is that cultural anthropology has two opposing dogmas. “Radical cultural relativism holds that cultures are not comparable and that culture is independent of biology. Radical biological determinism holds that all the phenomena that we unreflectingly call cultural or social can be reduced to biology.” All this did not interest me, but what we did notice was that most of the colour terms in Chumburung did not appear as adjectives/qualifiers. Most of them were nouns, but even those that did appear as adjectives had roots that were verbs.

Since we conducted our part of the research, we in the Chumburung Language Project have been involved in adult literacy and Bible Translation. Some colour terms have appeared in the translation that we expatriates had not heard before! Passages that required ingenuity by the 6 Ghanaian translators² included the colours used in embroidering onto the curtain in the temple (Exodus 26.31) and the High Priest’s clothes (Exodus 28.5) and certain gem-stones that were placed in little pockets in the breastpiece which the High Priest wore, and which represented the 12 tribes of Israel (Exodus 28). There was a similar but slightly different list of stones in the City of God (Revelation 21), a few of which were a mark of the richness of the town of Tyre (Ezekiel 28), and another set in Job 28. Some of these gem-stones occur in different colours according to the dictionaries, such as “jasper is an opaque variety of quartz, usually red, yellow or brown”! So a choice had to be made; in this particular case it was agreed that jasper was shiny, rather than using a colour term. The translation also revealed ideophones that could be used in juxtaposition with colour terms.

² Isaac Demuyakor, Evans Demuyakor, James Tonkoayuri, Michael Donkor, Bernard Asewie and Isaac Kofi Peni.

That is why this paper seeks to explore the whole issue of how the Chumburung people express colour, and into what grammatical categories such terms fall. I will first look at background material that others have written, and then go on to study some of what might be termed basic colours in Chumburung. Then I will look at the secondary terms, and finally the ideophones. Some comparison will be made with other languages of the area. I will conclude by showing that, with a grammatical analysis of the use of colour terms, I arrive at a different conclusion to that of the WCS for Chumburung.

1. WHAT HAS BEEN SAID IN THE LITERATURE

1.1 IS THERE A WORD FOR COLOUR?

Whilst Chumburung people readily import English words into their conversation, I have not heard a variant of the English word “colour” e.g. “kala” as is used on Bellona Island (Kuschel and Monberg, 1974:218). The only word that might express the overall idea of colour in Chumburung is **ekyeta**, as in,

- (1) **mò atee de ekyeta bweētə**
 its feathers have.STAT colours many
 Its feathers are many coloured.

However this word was given to us late in our programme, and was probably not used by the questioner in the survey of Chumburung colour terms. To say “What colour is it?” one could say, “**Ku du emene?**” “It is what?” and the answer could just as easily be long or heavy, or any adjective or noun, not just a colour. I suspect one could say “**Kemo kudugyi du emene?**” “Its colour/likeness is what?” but this is a tautology. The fact that **kudugyi** meaning “likeness” applies to things other than colour is clear from the story of the bat, who fitted neither the category of the animals nor that of the birds.

- (2) **Fə kudugyi-o si-o, anə a ŋu feyɛ fə moŋ gye kabogyii.**
 your likeness because-of we PAST see that you NEG.STAT be bird
 Because of what you look like, we know that you are not a bird.

Thus, we in Chumburung, like Conklin (1964 [1955], quoted in Lucy 1997:323), had difficulty even in eliciting colour terms, being forced to use such terms as “How is it to look at?” and then eliminating the sort of answers not wanted.

Davies, Davies and Corbett (1994:37) say that the two basic colour terms of the Dani of Papua New Guinea have been designated by some as light and cool colours on the one hand, and dark and warm colours on the other. However they are taken to task by Wierzbicka (2005:218). She says that they are not color terms but global visual descriptors, and she disputes the whole idea of universal colour terms, saying that Berlin and Kay’s approach is “deeply Anglocentric”. Further she says that “It is not an accident that languages which have no word for “color” have no specific “color” words either. When “color words” emerge in a language a word for “color” emerges, too...” Personally, I take issue with the second statement. For Chumburung, the basic terms may not be colours in the English sense, but secondary ones exist, albeit in a nominal form. However no overall term for colour has emerged. It is also true that there are no overall terms in Chumburung for some other English categories, such as music and reptiles, but there are plenty of different kinds of music and reptiles!

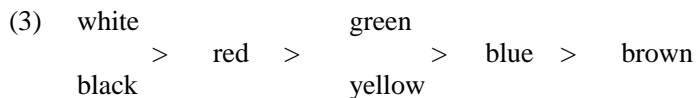
1.2 WHAT HAS BEEN SAID ABOUT COLOUR IN GENERAL

Colour terms are usually expected by the WCS to be adjectives.³ That is, they occur qualifying a noun, as in “the red book”, or as a predicate adjective, as in “It is red.” The class of adjectives “commonly embrace at least the time-stable physical properties such as size, shape, color, texture, smell or taste” (Givon 1984:52).

One of the assumptions of Berlin and Kay (1969, quoted in Kay and Maffi (2000:744)) was that “all languages possess a small set of words (or word senses) each of whose significatum is a color concept and whose significata jointly partition the psychological color space.”

The number of basic categories across the world varies between two and eleven. Those with just two contain black, and either red or white. It should be noted that the term “black” covers all dark plus “cool” colours including blue and green, “white” covers all light or pale colours plus “warm” ones, and “red” tends to be bright colours.

Comrie (1981:34) summarises Berlin and Kay’s findings thus: “...all languages have foci for ‘black’ and ‘white’; if a language has three basic colour terms, then the third has the focus of ‘red’; if a language has five basic colour terms, then the foci of ‘green’ and ‘yellow’ are those added to this list (but if there are four terms, the fourth may be either ‘green’ or ‘yellow’, with no hierarchical preference among these two); six-term colour systems add ‘blue’; seven-term systems add ‘brown’.” He diagrams this as follows:-



Comrie adds, “...if a language has a colour term with focus x , then it also has a colour term for each focus to the left of x in the diagram.” The full eleven are black, white, red, yellow, green, blue, brown, grey, purple, orange, pink and grey, of which the last four can occur in any order. Witkowski (1996:20) adds that typically grey, brown and purple tend to be encoded before orange and pink. Hardin and Maffi (1997, Conclusion) go further: they say that purple “seems to be the derived category that emerges first in a large number of languages,” and orange “the derived category that emerges last.” (The term “derived” is explained a little later.)

Berlin and Kay (1969) divided colours into basic and secondary. Basic terms are “typically single morphemes (i.e. the smallest units of meaning and / or grammatical distribution in languages) while secondary color expressions are often composed of several morphemes” (Witkowski, 1996:219). So in English, red is a basic colour, but pillar-box red would be a secondary term.

Another criterion for basic colours is that “the category they name is not included in another color category.” (Ibid:219) So in English scarlet is a type of red, and is hence not a basic colour.

Terms such as violet refer both to a physical item, in this case a flower, and the inherent colour. Such items can be a fruitful source of new colour terms in a language. Sometimes the reference to the physical item can disappear leaving just the colour. (Ibid:221)

³ Maffi (1990) says that Berlin and Kay (1969) explicitly advocate “The application of methods of philological and internal linguistic reconstruction”, but “being an “adjective” seems to be the authors’ preferential criterion for inclusion of color words in their list of Somali color terms.”

In fact, there were 8 criteria by which basic terms were to be identified in Berlin and Kay (1969). As reversed by Westcott (1970:351) “we must eliminate all terms that are

1. polylexemic
2. included under other terms
3. restricted in reference
4. psychologically non-salient
5. distributionally deviant
6. primarily object-names
7. recent loan words
8. morphologically complex.”

In addition, in each category there is a prototypical / representative / focus shade that most of the native speakers recognise.

The term “primary” has been adopted to refer to six colours that have been established by neurologists, independent of language, which produce a fundamental neural response (FNR) closely relating to English black, white, red, yellow, green and blue. Black and white are sometimes called achromatic colours, in an oxymoronic phrase! Apparently the model which used the term FNR “mistakenly equated these six primary colour sensations with the six classes of cells” in a certain part of the eye. (Kay and Maffi, 2000:746).

The term “composite” was introduced by Kay and McDaniel (1978) according to Kay, Berlin and Merrifield (1991:14), although the idea had been around before. A composite refers to named colour categories that comprise more than one of the primaries. The category black/blue/green would be an example of a composite.

So-called “derived (intersective)” categories (Kay and Maffi, 2008) are experienced as mixtures of primaries. For example pink is made of white and red, and orange is made of yellow and red. Note firstly that these are not necessarily concerned with brightness or saturation. Note secondly that although green is a mixture of yellow and blue, it is not considered as derived, because the neurologists included it in the list of primaries. Note thirdly that here “non-derived” means they are not mixtures of the 6 primaries. It does not relate to the derivation of the colour terms from other morphemes within a language.

1.3 DISSENTING VOICES

Just as Wierzbicka takes issue with Berlin and Kay’s model, so does Lucy (1997:321). One complaint he has is that “in the study of so-called ‘colour terms,’ serious linguistic analysis has been in short supply.”

He cites (Ibid:332) the two factors that contribute to the semantic meaning value of most linguistic categories. The first is the category’s *characteristic referential range*, and the second its *formal distributional potential*, mentioning particularly that what is a verb in one language may be a noun in another. “The ordinary everyday referential use of such terms as *red* was never actually assessed systematically, nor was any attention given to their grammatical status in the language.”

Much use is made by him of the work of Conklin (1964 [1955]) about the Hanunóo of the Philippines. Conklin’s method differed from that of the WCS and “resulted in a set of attributive words referring to all visual qualities other than form or shape of the referent” (Ibid:323). His analysis showed an “opposition between light

and dark... Second there is an opposition between dryness or desiccation and wetness or freshness (succulence)” (Ibid:324). Thus he glosses (Ibid:325),

black as “dark; deep, unfading, indelible”
white as “light; pale, weak, faded or bleached”

red as “dryness or desiccation; desiccated; deep, unfading, indelible”
green as “wetness or freshness; raw; pale, weak, faded or bleached”

As Lucy says (1997:327), “it is the regularities which define his set of four terms, not a set of criteria from outside the language.” Using only the Munsell chips, native speakers would use terms skewed towards our own (Western) expectations, and would not have highlighted these other meanings. In addition “specific cultural associations” would have been missed. What concerns Lucy also is that “nobody has been in the least bit interested in all the data which has been discarded” by the WCS (p337).

1.4 WHAT HAS BEEN SAID ABOUT COLOUR IN CHUMBURUNG

The original forms that were filled out for the World Color Survey for Chumburung were sent off, and in those pre-computer days, no copies kept. However the World Atlas of Language Structures Online has the results of that survey on a map (Kay and Maffi 2008). It gives the number of “Non-Derived Basic Colour Categories” for Chumburung as 5.5.⁴

The conclusion on the results of the WCS for Chumburung was clarified to me in a personal communication by Paul Kay just prior to the publication of Berlin, Kay, Maffi and Merrifield (2010). I have altered the partly phonetic script to match the current orthography used in publications in the Chumburung language (see Footnote 1), and for ease of comparison within this article. Terms mentioned infrequently are not listed here.

Table 1

<i>Term</i>	<i>Gloss</i>	<i>Users</i>
kigyigyii	black/blue	25
kifufuri	white	25
kipipee	red (extended)	25
kakaduro	yellow	24
kebobwæe	green	25
buruu	blue	18
lɔŋkɔnkyuronkyu	purple	21
pawurankyu	purple/pink	19
ese	brown	11

The conclusion was that the first 6 were basic, the next two were derived. **Ese** (whose essential meaning is “soil”) was only used for one chip, although by a high proportion of people. The term **buruu** is the one which is debatable according to the WCS Online.

⁴ I assume that all the given Chumburung colour terms cover the entire color space, because 1) we have no record of anyone being unable to name a colour, and 2) it is not listed as one of the few non-partition languages in Kay and Maffi (2000).

A quick look at the basic terms shows that the first five appear to have a prefix **kV-**. Four of these fit neatly into one of the Chumburung noun classes where the vowel in **kV-** can be **e**, **i**, **o**, or **u**, and there is some element of reduplication in the root. The word for yellow, **kakaduro**, is in fact borrowed from Asante, and although its first two letters look like the prefix of another noun class in Chumburung, that is not actually the case. No account seems to have been taken of the grammar of these terms, because this was not asked for in the survey.

2. THE BASIC COLOURS IN CHUMBURUNG

What interests me is the data that is actually in the WCS, but which is obscured because there were no questions as to how the terms were used or what their grammatical categories were. The fact is that the most basic colours in Chumburung are realised by verbs rather than adjectives. They seem to be three: to be ripe (or red), to be light (or white), and to be dark (or black). They fit the notion stated in Kay, Berlin and Merrifield (1991) that basic colours are typically single morphemes. However the derivative adjectives are typically reduplicative.

We will look at the three most basic Chumburung colours first, but I will not deal with black and white first because red gives a fuller example of the patterning that occurs. “Green” will be added because it follows some of the patterning thus demonstrated.

2.1 RED

Starting with **pee**, anything from red to orange, we have:-

- (4) **amango k_o a pee**
mangoes some PAST ripen
Some mangoes are red.
- (5) **Kiferi a kyo kedabedabe na ki i pee.**
moon PAST become.big big.one so-that it PRES reddens
The moon is large and red. GT36

There is also metaphorical extension. This follows a criterion additional to Berlin and Kay’s, and proposed by Westcott (1970), that is metaphoricity.

- (6) **f_o akat_o a pee**
your eyes PAST ripen
you are serious (G. Hansford 2005:153)
- (7) **Kakat_opee ne an_e de an_e e d_o.**
seriousness which we have.STAT we. PRES weed
We are weeding seriously. (Song 62)

Making this verb into an attributive adjective, the root is a reduplicated form **pipee** as in

- (8) a. **amango pipee nee** b. **mf_o pipee** c. **atan_e pipee**
mangoes red COP oil red money red
They are red mangoes. palm oil gold

- (9) **sɛsɛ pipee**
 person red
 a European (GT120) or a pale African

If Chumburung people want to say that something is red, i.e. a state, rather than using the verb to indicate a process, it is possible to say “it is like red-one.” An adjectival nominal is used, formed by the addition to the adjective of a nominal prefix which agrees in class and number with the noun it qualifies (K. Hansford, 1990:156, 191, 252). Hence:

- (10) **kyan̄sɛ du kipipee fɛɛ**
 bowl be.STAT red-one very
 The bowl is very red.

- (11) **ɔɔ ya sɔɔ kyan̄n̄gare, kem̄o a du n̄ɛ kipipee**
 he.PAST go-to buy cockerel, it TOP.PAST be EMPH red.one
 he went to buy a cock, it was red (Song 58)

Hence what would be a predicate adjective in English is realised as a nominal form in Chumburung. In a more complex expression, we have a nominal form with an adjective modifying it.

- (12) **saadonis n̄ɛ ku du kipipee kafwɛɛ na kifufuri-o**
 sardonix which it be.STAT red-one small and white.one-CT
 sardonix which is a little bit red and white (Exo 28.17)

Apart from **fɛɛ** and **kafwɛɛ**, this nominal form for a colour cannot have a non-colour adjective like **soswɛɛ** ‘long’, or **timaa** ‘good’, to qualify it, but we shall see later that ideophones can qualify them.

2.2 WHITE

For the next basic colour, I will take the verb **fwiiri** which means ‘to whiten’ from the wider and probably essential meaning ‘to wash, boil or bubble’.

- (13) **Bam̄o a pure lowɛ-ɔ na b̄o fwiiri at̄o n̄ɛ baa b̄o**
 they PAST bury finish-CT and they whiten.SUBJ things which they.PAST use-to
kwii-o.
 dig-CT

When they have finished burying, they wash the things they dug with. KT63

- (14) **kipɛn̄pɛn̄ a fwiiri ayii-o**
 heat PAST whiten trees-the
 The trees were made white by the heat.

We even have a juxtaposing of two verb colour forms in:

- (15) **ne mò ya ñu feyε lɔ puŋnese ne o te mò kuŋu-ro-o**
 and he COND see that sore swollen which it sit. STAT his head-in -CT
ya pee fwiiri
 TOP.PAST redden whiten
 and if he sees that the sore is swollen and reddish-white (Lev 13.43)

There is also the metaphorical extension,

- (16) **mò kakpɔnɔ a fwiiri**
 his/her heart PAST whiten
 he/she is innocent (G. Hansford 2005:165)

When this verb is changed into an adjective, it becomes reduplicated as **fufuri**.

- (17) a. **ipwii fufuri** b. **waagya fufuri** c. **atanne fufuri**
 hair(s) white cloth white money white
 grey hair (Snider 1990) white cloth (ES21) silver

When moved to a predicate position, it becomes a nominalised form.

- (18) **waagya du kifufuri**
 cloth be.STAT white-one
 the cloth is white

2.3 BLACK

For the third basic colour, there is the verb **biri** ‘to get dark’, which does not even occur in the WCS list for Chumburung. It is a derivative from Asante (see Section 6.1).

- (19) a. **mò mɔrɔbɔ se a biri** b. **mò kayɔwɔrɛ a biri**
 his nose on PAST darken my body PAST darken
 his nose is dirty (Primer 1) my body has blackened (Job 30.28)
- (20) **ketɔ a biri-lo**
 thing PAST darken-in
 it has got dark (of weather or night)

But the corresponding adjective, which does occur in the WCS list, has no relation to **biri**. Generally it is **gyigyii**, but occasionally it can be **tuntun**, derived from Asante (see Section 6.1). Both these are reduplicative in form.

- (21) a. **ketaaɔɔ gyigyii** b. **waagya gyigyii**
 board black cloth black
 blackboard a black cloth
- (22) a. **ifwii gyigyii** b. **kabɔ tuntun**
 hair(s) black animal black
 black fur a black animal

- (23) **sanne kēmaa ne ɔ moŋ du kigyigyii-o**
 sheep every which it NEG.STAT be black-CT
 every sheep which is not black (Gen 30.33)
- (24) **seṣe gyigyii e taare a o kyuwowi mō kayowore**
 person black PRES able that he change.SUBJ his body
waa kafufuri aaa
 do black Q
 Can a black person change his body to white? (Jer 13.23)
- (25) **baa waa kadwii gyigyii na kapipee, na abreṣe-ɔ**
 they.PAST make medicine black and red-one, and elders-the
a bō bure akato-rō
 PAST use-to smear eyes-in
 They made black and red medicine for the elders to smear their faces. KT72
- (26) **baa sa mō waagya fufuri, ne akwaaregyi-o mō buŋ**
 they.PAST give him cloth white and lion-cubs-the also wear.STAT
atuŋtuŋ
 black-ones
 They gave him a white cloth and the lion-cubs black ones. ES21

There is also a combination of colours, where a nominal form is modified by an adjectival form of a colour term,

- (27) **abu ne ba tēε kaaneleyoŋ ne a du feye**
 stones which they.PRES call that carnelian which they be.STAT like
apipee gyigyii-o
 red-ones black-CT
 carnelians which are blackish red (Rev 21.20)

I have not found any metaphoric extension for black, nor any idea, as in English, for example that it was a black day, or he was in a black mood, with the general meaning of something bad.

Thus we see that the three most basic colour terms in Chumburung are derived from verbs, and often seem to express a process rather than a state of being.⁵ Further, two of them, red and white, follow another criterion additional to Berlin and Kay's, proposed by Westcott (1970), they are polytypic, that is they are each used in many parts of speech.

From those same two verbs, an adjectival form can be constructed, then an adjectival nominal, but whilst these forms exist for black, they do not derive from the verb.

⁵ I note that languages where the colour is not expressed as a verb can also have colour terms which suggest a process rather than a state of being as on Bellona Island (Kuschel and Monberg 1974). Here the changes can be to the body as a result of sunshine, tattooing or diseases, to stages of growing plants and fruits, to usefulness of objects, or to weather conditions.

(28) V -> Adj -> Adj Nom

In Berlin and Kay's evolutionary scheme, "90% of the languages at this stage of colour classification are spoken in Africa." (Maffi 1990) But this does not mean that a language stays at that stage.

2.4 GREEN

Of the remaining primaries, only green seems to fit the grammatical patterns so far established for adjectives. The term **bɔbwɛ** could mean green or fresh (if meat, fish, eggs, yams or faeces), but this has no verbal form.

(29) a. **wɔrɛ bɔbwɛ** b. **kakɪŋgi bɔbwɛ** c. **trapɔ bɔbwɛ**
 book green fish green new-mother green
 a green book fresh fish mother with a new baby

(30) **fɔ ɛ kpa mɛnaŋ mɛnaŋ, fɔ i gyi agyokuri bɔbwɛ**
 you COND.PRES want quick quick, you FUT eat yamheaps green
 If you are in a hurry, you will eat unripe yams. (Proverb 38)

(31) **ɔ maa kpa kiyee deŋase-ɔ, amɔ keɔbɔbwɛ.**
 He NEG.PRES want meat cooked-the, rather raw-one.
 He doesn't want cooked meat, but raw. (1Sa 2.15)

In fact **keferaa bɔbwɛ** 'leaf green' was also offered as a colour term in the survey. Other forms include the following. Note the plural forms, agreeing with the noun.

(32) a. **kiyii-o du keɔbɔbwɛ** b. **ɛfa du ɛbɔbwɛ** c. **aferaa du abɔbwɛ**
 tree-the be.STAT green-one grass be.STAT. green-ones leaves be.STAT green-ones
 the tree is green grass is green (A & K 31) leaves are green

However the opposite of **pee** 'red', when it describes fruit, is not **bɔbwɛ** 'green' but **bunbun** 'unripe' as in

(33) **amangoɔ bunbun**
 mangoes unripe
 unripe mangoes

Looking at the range of entities which can be called **bɔbwɛ** 'green' in Chumburung, we see that they can be meat, fish, eggs, yams, faeces, grass and leaves, but not fruit. Since several of these can also be dried, I suggest that the essential meaning of **bɔbwɛ** is 'not dessicated but has water in it.' Its opposite would be **wɔresɛ** 'dried', as in **ɛfa wɔresɛ** 'dried grass', **kayii wɔresɛ** 'a dried tree', **sweere wɔresɛ** 'dry ground' or **kakɪŋgi wɔresɛ** as in the following proverb:-

(34) **Bo maa nyɔŋ kakɪŋgi wɔresɛ, amɔ kabɔbwɛ.**
 They NEG.PRES coil fish dried, rather green-one.
 They do not coil up a dried fish, but a fresh one.

So **bɔbwɛ** 'green', partly fits the structures of earlier mentioned colour terms, but neither derives from a verb, nor does it seem to be a process.

2.5 ADJECTIVES IN CHUMBURUNG

We need next to look at the issue of reduplication, and especially within adjectives. K. Hansford in his draft thesis (1988:305) divides qualifiers in Chumburung into various kinds, one of which is adjectives. He lists examples such as,

Table 2 *Examples of simple forms*

dabe	‘big’
bɔye	‘bad’
timaa	‘good’
demaŋte	‘great, many’
suyo	‘kind of’
safuraa	‘off white’

Examples of reduplicative forms

dabedabe	‘very big’
baŋbaŋ	‘different’
deɗaa	‘old’
fufuri	‘white’
pipee	‘red’
soswee	‘long’

We see that the attributive adjectives of colour so far mentioned, including **gyigyii** ‘black’, and **bobwæ** ‘green’, follow this reduplication pattern.

2.6 ANOTHER APPROACH

There is another way of looking at the whole issue. We could consider that we have two oppositions, one of which relates to cleanliness and one to ripeness. This would give us:-

- (35) **biri** black as ‘dirty’ **pee** red as ‘ripe’
fwiiri white as ‘clean’ **buŋbuŋ** green as ‘fresh’

Looking at the phrases which incorporate **fwiiri** in a metaphoric sense, in addition to the examples in Section 2.2, we find,

- (36) a. **Mò kuŋu-ro a fwiiri.** b. **Eyee a fwiiri mone se.**
His head-in PAST whiten Bodies PAST whiten you(pl) on.
He is innocent / sincere. You are horrified. (Jer 2.12)
- (37) **Kakponɔ-rɔ fufuri ne Wuribware e kpa.**
Heart-in white that God PRES want
A pure heart is what God wants. (Song 154 from a Christian tape.)

We have seen in Section 2.3 that **biri** can mean ‘dirty’, but **gyigyii** is never used that way. This explains why there seem to be two terms for black.⁶

But **buŋbuŋ** ‘unripe’ (of fruit), is something that contrasts with ripeness which is when something becomes more watery. This fits the suggestion given by Lucy that many such terms are not true colors but a measure of “luster, texture or degree of succulence” (Hardin and Maffi, Introduction:17). Casson (1997) notes that the English words green, grow and grass all descend from Indo-European ***ghre-** meaning ‘to

⁶ My theory is thrown into total confusion by an incident which occurred in a town where there was no diesel grinding machine, otherwise known, because of the noise, as a **nikaa-nikaa**. There the children had been pounding cassava and were covered in flour. However they are not deemed dirty using the word **biri**, but they were white, **fwiiri**!

grow, become green'. Stanlaw (1997:256) notes that for Japanese, both green and red are used when they are "talking about things plainly grown".

This parallels the Hanunóo in the choice of oppositions, but is quite different in the details. For Hanunóo, green was wet and red was dry! And instead of dark and light, Chumburung has clean and dirty.

My oppositions would imply therefore that just as English has seen a shift in some terms from brightness to hue (Casson 1997, p238), so Chumburung has seen a shift from something inherently biological to colour/hue. However the fact that only fruit use the word **buᅇbuᅇ**, leads me unfortunately to reject this approach for Chumburung. Rather what I suspect has happened is that based on the emergent grass in the early part of the rainy season, and its greenness, **boᅇwæ**, has become the prototypical item as *per* Lakoff (1987) within a set of other items such as fish, with the extended meaning of 'freshness, newness, and succulence.' 'New mother' would then be a further extension from that idea.

2.7 NOMINALS WITH INHERENT COLOUR

Some objects have an inherent colour and can be either be used to dye things or spoken about as a means of comparison. Note that **kyipee** and **kyefuri** are both extensions of the colour terms, red and white.

(38) **na m ba kpaᅇgya bo nywæ toᅇ kemaᅇ damenaᅇ**
and I bring.SUBJ camwood use.to dye place every nicely
and I will dye everywhere red with camwood (Jer 22.14)

(39) **Mone eᅇboᅇ du nee feᅇ kyipee-o i te mone se, ...**
Your sins be.STAT EMPH like red-cotton-the TOP.STAT sit you on, ...
Your sins are like scarlet ...

(40) **amaᅇ mo i gyeᅇ mone a mon' fwiiri feᅇ kyefuri-o. ...**
but I FUT wash you so you(pl).SUBJ whiten like white.cloth-the ...
but they shall be as white as snow ...

(41) **abu ne ba teᅇ e krisopraso ne a du**
stones which they.PRES call that chrysoprase which they be.STAT
abobwæ feᅇ efa-o
green-ones like grass.CT
Chrysoprase which is as green as grass. (Rev 21.20)

2.8 CONCLUSION ABOUT THE BASIC COLOUR TERMS

I conclude that the following forms of the basic colour terms exist.

Table 3

<i>English</i>	<i>verb</i>	<i>adjective</i>	<i>adjectival nominal</i>	<i>predicative</i>
red	pee	pipee	kipipee	du kipipee
white	fwiiri	fufuri	kifufuri	du kifufuri
black	biri	gyigyii / tuᅇtuᅇ	kigyigyii / kituᅇtuᅇ	du kigyigyii
green, fresh		bobwæ / buᅇbuᅇ	keᅇbobwæ / kibuᅇbuᅇ	du keᅇbobwæ

If we take into account the presence of metaphoric extensions of meaning of only the verbs corresponding to red and white, we might deduce that the first *two colours* in Chumburung were red and white, and that black and green were the next to be added. This would put Chumburung in a system that was initially not recognised by Berlin and Kay (1969), although it did appear in Witkowski (1996:220). There, however, the two are said to be black and either white or red. If this hypothesis were correct, Chumburung would differ, in that it is red and white which are the most basic of basic colours.

Or it might appear from the table above that there are *three basic colour terms* in Chumburung because they are each realised as a verb, with a derivative reduplicated form as predicative adjective. But in the case of black, the adjective does not derive from the verb.

In the case of green, we find a reduplicated form as an adjective but no verb at all. But we could accept all four terms since they pattern in the attributive and adjectival nominal forms. This would be supported by the alternative approach. This would give us *four basic colours*. I note also that these were the only colours which were given by every one of the 25 informants in the WCS.

How are we to decide which is the correct answer? One way would be to postulate certain morphemes that were once in Chumburung, but have been dropped. Such postulates might include any of the following:-

1. a verb ***gyii** which meant 'to become black'
2. a verb ***tuŋ** which meant 'to become black'
3. a verb ***bwæ** which meant 'to become green'
4. a verb ***buŋ** which meant 'to be unripe'

I will deal with ***tuŋ** in Section 4.3 where I show that it is both an ideophone and a noun, and in Section 6.1. that it is cognate with an Asante adjective. I will deal with ***buŋ** in Sections 6.1 and 6.2 where I show it is cognate with an Asante adjective but is in a reduplicated form in other related languages.

Even at this point, I tend to go with the *four basic colour* idea. A look at the secondary colours will add further evidence.

3. SECONDARY COLOURS

The four colour terms so far discussed were verbs with derived adjectival forms. The remaining colour terms are nouns, and are used as similes in a different kind of construction.

We look first at the remaining two primaries, yellow and blue. It will be remembered that the results of the WCS suggested that they were also basic for Chumburung, but I classify them as secondary. Although yellow is a colour that is given in the chart in 1.2 as a possible for appearing in a language just before or just after green, I will deal with blue first because it uses a slightly different construction from the other secondary colours.

3.1 THE **du** CONSTRUCTION - BLUE

Various qualities such as smallness or length, not just colour, are predated by the verb **du** 'to be'. Clearly **buruu** 'blue' is a borrowed word, but it was known by most people, even the old women. It might well have originated from the English for the cube one used to put in washing to bleach it, known as "Reckitt's Blue" and

possibly used as mascara.⁷ In English, the word ‘blue’ would be employed as a noun, for example, “Have you got any blue to go in the washing?” Berlin and Kay discount “recent loan-words” from the basic colours. The reason why I am discounting **buruu** from the Chumburung basic colours is not that it is a loan, but because it is not a verb. At the time we did the survey, this appeared to be a noun placed before the referent in associative relationship, but we believe it is now being grammaticalised into an adjective placed after it.

- (42) **buruu wɔɾɛ**
 blue book
 a blue book

But in the Bible translation we have both,

- (43) a. **Ba buruu isurii a fɔ bɔ waa** b. **ba ife buruu bɔ ɲure**
 Use.IMP blue cotton that you use.to.SUBJ make use.IMP thread blue use.to tie...
 Make ... with blue cotton.. Tie... with blue thread...

We also have,

- (44) a. **sanne ifwii ne baa nywæ buruu-o** b. **safiro ne ku du buruu-o**
 sheep hair that they.PAST dye blue-CT sapphire which it be.STAT blue-CT
 blue wool a sapphire

We see that although the colour term is being employed in a predicate, it is still inherently a noun without a prefix.

3.2 THE **du feye** CONSTRUCTION

Most of the other secondary terms are also nouns rather than adjectives, and hence appear before the noun they are qualifying. They can also occur in the **du feye** construction meaning ‘to be like’. [**fɛɛ** is a dialectal variant of **feye**.]

3.2.1 YELLOW

One of the things that yellow is likened to is ginger, **kakaduro** which, as has been said, is a loan from Asante. This is a root readily available in the market and used for flavouring, especially in more recent years, iced lollipops! It was named by 24 of the 25 respondents.

- (45) a. **wɔɾɛ-ɔ du feye kakaduro** b. **kakaduro wɔɾɛ**
 book-the be.STAT like ginger ginger book
 the book is yellow a yellow book

So it appears that this word for yellow is not an adjective in Chumburung because it occurs as a noun in associative relationship with the head noun which follows. We also have other words for yellow, which are noun phrases.

⁷ Maffi (1990) attests that this kind of blue is also used in Somali on the other side of Africa as a colour term!

- (46) a. **wore-ɔ du feye kyaase mfɔ** b. **wore-ɔ du feye nkyone mpu**
 book-the be.STAT like chicken fat book-the be.STAT like dawa-dawa flour
 the book is yellow the book is lemon yellow

3.2.2 PURPLE

Having dealt with the six primaries, let us turn to the colours said to emerge next, purple and brown. Some of the conclusions of Merrifield *et al* are that: “(1) green/blue may persist, undissolved, even after brown, purple or both have been accorded basic colour terms and (2) there appears to be no fixed ordering to the temporal appearance of brown and purple.” Purple in Chumburung is a long word. Although I deem it to be secondary, 21 of the 25 respondents named it. I believe this is because it is such a striking and singular example of purple in the Chumburung environment, that it just has to be picked on to describe other similar items.

- (47) a. **wore-ɔ du feye lɔŋkɔnkyuronkyu** b. **lɔŋkɔnkyuronkyu wore**
 book-the be.STAT like purple purple book
 the book is purple a purple book

This long word, which syntactically is a noun, could be made up of rabbit-water-in-water, but it has two dialect forms, **nyanŋkpaŋkyuronkyu** / **nyɔŋkɔŋkyuronkyu** which is said to be a plant with purple flowers and edible fruits. **Nyɔŋkɔŋ** is a curved knife, and **nyanŋkpaŋ** is possibly a word for God. The colour covers purple - mauve - maroon. An example from the Bible is,

- (48) **gaanet ne ku du fe lɔŋkɔnkyuronkyu ne kipipee te-ro-o**
 garnet which it be.STAT like purple which red.one sit.STAT-in-CT
 garnet which is purple and red

To show how differently various colour terms are used, we have the following rather long expression, which was on occasion shortened. (Ideophones will be dealt with later.)

- (49) **sanne ifwii ne baa nywæe buruu-o,**
 sheep hair(s) which they.PAST dye blue-CT
 wool which they dyed blue
- (50) **na emo ne i du fe lɔŋkɔnkyuronkyu-o,**
 and those which they be.STAT like purple-CT
 and those which are purple
- (51) **na emo ne e ya pee kpeye kpeye kpeye-ɔ**
 and those which they PAST redden ID-CT
 and those which are very red
 blue, purple and red thread

3.2.3 BROWN AND GREY

As for brown, not surprisingly, we found a number of possibilities, **kuntunŋkuruŋ**, **nkyone nkyu** and **ese**. The first is a dark cloth formerly used by elders at funerals, and occurs as a noun preceding the referent. The second is made by adding water to dawa-dawa flour. The third means ‘earth’, and although it was offered

by 11 people on our survey, it has not appeared in any texts or the Bible as a colour term. Also offered on occasion were **efa woresɛ** ‘dried grass’ and **keferaa woresɛ** ‘dried leaf’.

- (52) a. **kuntun̄kuroŋ wɔrɛ** b. **wɔrɛ-ɔ du feyɛ kuntun̄kuroŋ**
 brown book book-the be.STAT like brown
 a brown book the book is brown

There is also **kɔdwɛɛ** which is sieved ash for making soap (see also Section 3.2.4).

- (53) **ɛkpaŋa nɛ emɔ kudugyi du feyɛ kɔdwɛɛ-ɔ**
 horses which their colour/likeness be.STAT like ash-CT
 brown horses

Nsɔ ‘ash’ was given for ‘pale blue’, but one could argue that it is really a light grey. Our language helper gave its meaning as ‘off-white.’

3.2.4 OTHERS

The two pinks are **pawuraa nkyu** ‘powder water’, which was cited by 11 respondents, and **kefɔɔ** for which I have no etymology, but it looks like a noun. Neither of these showed up in any further literature or research!

There are two further words for red. According to criterion 2 of Berlin and Kay, they will not be basic colours because they are included in red. One is **prembogya** ‘frog’s blood’. We were told that this is the colour of a kind of bead worn around the neck, but it is no longer obtainable. When a colour term, it uses the **du feyɛ** form,

- (54) **mò akatɔ-rɔ a tɔrɛ sɛ nɛ feyɛ kibu nɛ ku du feyɛ**
 his face PAST shine on EMPH like stone which it be.STAT like
 diki-o na prembogya kibu-o
 mirror-CT and frog’s.blood stone-CT
 his face shone like jasper and carnelian

The other word for red is **kiriŋ / kyiriŋ** which is from Hausa **baÅÅiriŋ**. (Ghanaian Hausa does not use the implosive Å of Nigeria, and converts an implosive to a palatal). Abrahams (1962) says **baÅ** is black, very dark blue or very dark green, and **Åiriŋ** is jet-black. The first two examples that we have in Chumburung are elicited ones. In the first example it is an adjective, and in the second an adjectiviser morpheme has unaccountably been added!

- (55) a. **wɔrɛ kiriŋ / kyiriŋ** a. **kabɔ kiriŋ-se**
 book red.brown animal red.brown-adjectiviser
 a reddish brown book a reddish brown animal

I recently checked out some of the oddities in colour terms with our main translator and he rejected any version of **kiriŋ** with **du** or **du feyɛ** in it, but gave me the following.

- (56) **wɔrɛ-ɔ a waa kiriŋ / kyiriŋ**
 book-the PAST do brown
 the book was brown

Robins (1985:57) and Kay and Maffi (2000:746). They are mostly Nouns or Noun Phrases.

Table 4

English	Chumburung	Part of speech	Literal gloss	Predicative
blue	buruu	N/Adj	Reckitt's blue	du buruu
yellow	kakaduroo	N	ginger	du feye...
yellow	kyaase mfɔ	N P	chicken fat	du feye...
yellow	nkyone mpu	N P	dawa-dawa powder	du feye...
purple	lɔŋkɔŋkyuronkyu, nyankpaŋkyuronkyu/ nyɔŋkɔŋkyurunkyu	N	rabbit water-in-water, small plant with purple seeds	du feye ...
dark brown	kuntun̄kurun̄	N	dawa-dawa water	du feye...
dark brown	nkyone nkyu	N P	dawa-dawa water	du feye...
brown	kodwee	N	ash for making soap	du feye...
pale blue	nsɔ	N	ash	
pink	pawuraa nkyu	N P	powder water	du feye...
reddish	prembogya	N	frog's blood	
reddish brown	kirin̄, kyirin̄	Adj	Hausa, baran̄ , jet black	waa
very pale pink	kefɔ	?N		
pale, off-white	safuraa	Adj		waa

In the case of Chumburung, we do not have such large text data bases available as there are for Russian, French and English with millions of words.⁸ Fortunately for us, the method of elicitation which was used with the chips seems to be one of the two best methods. According to Corbett and Davies (1997:218), of the many methods which they researched, “Only the elicited list measure reliably distinguishes basic from non-basic terms, and only frequency in texts discriminates within the basic term inventory and correlates with the hierarchy” as suggested by Berlin and Kay. However, to repeat, a grammatical analysis of the morphemes of the basic terms given by the WCS for Chumburung suggests that there are not 5.5 but only 4 basic terms. Secondary terms are distinguished from the basic ones by the fact that they are nouns to which the object is likened by the expression **du feye** meaning ‘is like’, but this was only apparent by looking at the grammar. Although in this Section, and in the list above, I have ordered these terms in a certain way, this does not and cannot reflect the frequency in texts because we have relatively few. If we were to take the number of chips that were ascribed a certain colour term, this would also not reflect their actual usage.

Having looked at the basic and secondary colours in Chumburung, let's move on to investigate those ideophones which modify colour terms.

⁸ We have just under 200 texts, but they often amount to only a page or two each. The total number of words in the database is about 120,000. We also have over 100 songs, totalling about 10,000 words, and lists of about 300 proverbs and about 100 riddles. That is why, in this paper, we have also taken terms from translation of the Bible, trying to indicate where this has occurred.

4. IDEOPHONES AS COLOURS

Ideophones are one class of adverbs, although sometimes they seem to be adjectives. Chumburung is very short of standard adverbs, examples including:-

- (61) **na ɔmɔ-ɔ baa kɛmɔ-ɔ akwaŋku**
and this.one bring.SUBJ this.thing uselessly
and this one brought this uselessly

- (62) **ɔ mɔŋ yɔ Aburikyire daa**
he NEG.PAST go.to Europe ever
he/she has never been to Europe

As Lucy (1997:341) says, “If modern linguistics has shown anything, it is that an apparent deficiency in one aspect of a referential system is reliably compensated for by relative elaboration somewhere else in the system.” The deficit in adverbs in Chumburung is made up by a plethora of ideophones. It is arguable whether the ideophone qualifies the verb or the whole predicate or even the preceding adjective. Some ideophones are short words and some are made of two or more duplications of one morpheme, such as the following given by K. Hansford (1990:199).

- (63) *Simple* *Reduplicative*
kirrr ‘very hot’ **kyeke kyeke kyeke kyeke** ‘very small’

- (64) **Fo maa nya a fo uŋ na bware da-rɔ**
you NEG.FUT get that you work.SUBJ and rain beat.SUBJ-in
gburi gburi gburi gburi.
ID.noise
You won't get a chance to work before the rain beats down.

- (65) **kibugyii ne ke e da kpuriŋ-o**
darkness which it FUT beat ID
deep darkness

Moving on to talk about ideophones of colour, Schaefer (1984:127) distinguishes between marked and unmarked ideophones in Emai of Nigeria. It seems that in that language there are three basic colours, and although he does not tell us which colours they are, they also are verbs. He lists 3 ideophones each of which only occurs with one of the basic colours, and he calls these marked. These three all relate to brightness (or luminosity). The other two ideophones, he says, stand for muted and faded. I find his terms rather confusing because he gives neither specific translations nor examples. I therefore deduce that the ones he terms “muted” are not very bright, and the ones he terms “faded” are saturated. He does not detail any colours other than the three basic ones. Let's look therefore at the Chumburung ideophones of colour.

4.1 RED

The normal way to intensify red when using **kipipee** is given in 3.1. The adverb **fɛɛ**, ‘very’, (not to be confused with the dialect variants of **feye/fɛɛ** ‘that’,) is

In the following example the ideophone is used to modify an adjective.

- (75) **Awore gyigyii diki diki a da kibugyii bo muruwaa mō.**
 clouds black ID PAST beat darkness cause.to surround him
 Clouds and thick darkness surround him.

All of these ideophones seem to be related to the saturation of the colour, whether black or green. There is also a form of **tuŋ** ‘blackness’ which is a noun, as in the following riddle which is also an example of an intransitive verb functioning as a passive,

- (76) **tuŋ maa ŋu-ro**
 blackness NEG.PRES see-in
 Darkness you can’t see into. (The answer is: a woman’s heart!)

We shall see that **tuŋ** seems to derive from Asante.

4.4 CONCLUSION ABOUT IDEOPHONES

Interestingly all phrases with **biri** or **fwiiri** plus an ideophone can be negated, but you cannot say ***Kwadu moŋ pee kōwō**. “Bananas are not very red.”

All the ideophones which occur in connection with colours in Chumburung, do so qualifying the three basic colours which are expressed as verbs. In fact they are all intensifiers which produce shades, that is to say they refer to the saturation of the colour, or tints, which refer to brightness. To say that something is a little bit red for instance, one would use the ordinary adjective **kafwee**, ‘little, few’. However two of the ideophones, in examples 68 (**kōwō**) and 73 (**tuŋ**), can also be used in modifying nominalized colour terms.

Since all three verbs have ideophones, we could use this fact to strengthen the proposition that *the three most basic colours* in Chumburung are red, white and black. Can we get more clues by looking at the wider culture?

5. COLOURS AND CULTURE

Do Chumburung colour words relate strongly to their culture? The secondary colours tend to be comparisons with plant material. As Stanlaw (1997:253) says, “If all people know “plant X,” then the secondary term “colour of plant X” carries more information than some hypothetical abstract colour name.”

In southern Africa I understand that the Zulu have many words for green, such as shiny and wet, or dry and brittle which can be applied to other items. Although the Chumburung are traditionally farmers, we have not found any such examples. Nor have any ideophones emerged that relate to **bobwee** ‘green’.

In central Australia, a dry land of sand and rocks, Wierzbicka (2008:411-2) distinguishes four categories of what the Walpiri see: those that are conspicuous against a background; those that shine, often in the distance; those that are not the same all over, such as flecked things; and those that look like something in the environment such as smoke. (I have simplified what she writes.) None of them, she says, are truly “colour terms”. “Walpiri-speakers appear to be less interested in describing and identifying objects on the basis of some visual characteristics than in

noting some striking features of their surroundings (and possibly alerting others to them).”

In terms of the ritual domain of expressive culture (Bolton 1978:300), one example I could think of for Chumburung was during the annual Yam Festival. In this, the first yam of the new harvest in each locality is mashed, as distinct from pounded, and some of it is coloured reddish-orange with palm wine. A little “white” yam and “red” yam is put on the shrine of the local god, and the rest is offered to participants. This occurs in many groups in Ghana, and I have asked members of several of them what the symbolism is, and they don’t know. What is certain, at least for Chumburung, however, is that the two colour terms are basic ones.

Also, during periods of mourning, people wear cloths that are dark red and / or black. In recent years, during the so-called second funeral for the life of a Christian, a white cloth with a small black pattern is worn to express thanksgiving. These three colours are the basic ones.

In English we have special words for colours of horses: roan, piebald, and so on. That is, they are “restricted in reference” which is criterion 3 of Berlin and Kay (also called “contextualised terms” in Kuschel and Monberg). There do not seem to be any specific colour terms that apply to animals in Chumburung, and the animals they do keep are few in comparison to pastoralists. Where these are needed, basic colour terms are used, as in,

(77) **Owure-nyin̄kpeŋ a naate am̄ abaa se a pee bæe**
 Chief-knows.all POSS cow that shoulder on PAST redden or?
 The shoulder of God’s cow is red, isn’t it?

(78) **Owure-nyin̄kpeŋ a naate am̄ mfeŋ moŋ biri aaa**
 Chief-knows.all POSS cow that here NEG.PAST blacken Q
 Isn’t the shoulder of God’s cow black?

In Sudan, for example the Dinka or the Mursi, there are no colour terms other than cattle-colour terms. Turton (1980:324), in trying not to accept a totally cultural relativist position for the Mursi, says that what is happening is that the people are using cattle as “an effective model, or cognitive set, or system of differences, for discriminating between universal colour categories.” Echoing Levi-Strauss’s famous quote, he says that cattle colours are “good to think with”. One example would be red, which is used for cattle that are “brown with a preponderance of red; reddish-brown.” Informants were well able to name colours that diverged from those found in cattle such as commercially produced colour stimuli. Again there is no word for “colour”. He stresses that it is the contrasts between the cattle colours which are used as a model (p322) and the patterns are also significant.

In contrast, in Jur Modo, also of Sudan but not a culture where cattle are of paramount importance, stones in the Bible had to be translated thus: ruby: laterite powder, emerald: the colour of the glossy starling, diamond: striped, agate: speckled, jasper: the colour of a freshwater mussel (Janet Persson: personal communication).

So we see that where Chumburung use colours in ritual and in areas where others might have special colour terms, Chumburung uses *three basic colours*.

6. OTHER GHANAIAN LANGUAGES

Is there any way to further resolve the dilemma as to whether Chumburung has a two, three or four basic colour system? We could look at dominant or related languages and see what their systems contain.

6.1 A DOMINANT LANGUAGE

Historically Chumburung people, along with people who spoke other Guang languages, had been incorporated into the Ashanti kingdom, but the Guang were driven out by the Jwabeng people living in Brong-Ahafo State, that is north of the current Ashanti Region around 1740, and migrated north. Asante Twi is thus a major source of borrowing for Chumburung, see K. Hansford and G. Hansford (1989). I found the following, using Berry's (1960) English to Asante dictionary, and then Christaller's (1933) Asante to English dictionary.

Table 5

<i>English</i>	<i>Asante</i>	<i>Part of speech</i>	<i>Literal gloss</i>
red	bere	v	to redden, to grow, become or make red or yellow, ruddy, yellow. Bere sika to polish gold etc., ripen, to grow ripe
red, yellow	kɔkɔ / kɔkɔ	adj	derived from kɔkɔ , means yellow ripe plantains, the husk is yellow, the substance inside, especially when boiled, is red
white	fuw/fiw	v	to shoot up
white	fufu	adj	white
black	biri	v	to grow, be or make black, dark or dirty
black	tumm, tuntun	adj	very black
green	ebun	adj	green, unripe
blue	bru	adj	queen's blue, indigo blue, blue starch

Asante Twi (then spelled as Tshi) was one of the languages listed in Berlin and Kay. Westcott (1970:357) says that it has "red as its only 'true' color". But others including Welmers, disagreed.

It would appear to me that Asante Twi has the three colours red, white and black realised as verbs, and Chumburung has a similar system; that Chumburung has borrowed **kɔkɔ** from Asante and used it differently; and that 'blue' dye arrived in Ghana fairly early in the colonial period!

A native speaker of Asante Twi, a linguist herself, confirmed to me that the word for black which appears above as an adjective, **tumm**, is actually an ideophone and can occur as an emphatic to the verb form **biri**, as in Chumburung (Grace Adjekum, personal communication).

We also see that there are in Asante Twi unreduplicated forms that match the forms ***buŋ** and ***tuŋ** that were postulated for Chumburung in Section 2.8 (postulates 2 & 4). I do not have access to historical manuscripts to show how colour terms have developed in these languages, unlike English where brightness terms were replaced by hue terms over several centuries.

6.2 OTHER RELATED LANGUAGES

The Gonja people came into the country in the 1600s and moved eastwards along with various Guang people, from whom they are reputed to have borrowed their language. I have taken the following from Rytz (undated).

Table 6

<i>English</i>	<i>Gonja</i>	<i>Gloss</i>
red	pere, kepeper (without object)	to be red
white	fuli (verb), fuful	white, righteous
black	biri	to get dark
black	lembir	black
green	bunbun	green, raw, fresh
blue	-	

It would appear that Gonja has a similar system to Chumburung in that the three colours, red, white and black, are verbs, but that Gonja has another slightly different word from **biri** for black if used as an adjective, namely **lembir**. It seems to be derived from the verb, but is not like the Chumburung.

So Asante, Chumburung and Gonja seem to have very similar systems with three colour terms which are verbs, and one which is somewhat different.

Other Guang languages have been studied by Snider (1990:282), although not all colours are given in his comparative word list.⁹ I have here interpreted his phonetic symbols, for convenience. These are all North Guang languages. Again we see that white and red are common to all, but black is not always the same. This would back up my two colour hypothesis in Section 2.8.

Table 7

<i>Language</i>	<i>white</i>	<i>black</i>	<i>red</i>
Chumburung	fufuri	jiji	pipe
Krachi	fufuri	bibi	pipe
Nawuri	gu-fufuri	gi-lembiri	gi-pipe
Gichode	i-fufuri	bibiri	i-pibara
Gonja	ku-fulful	lembir	pipir

On a different page, Snider (ibid:292) also lists terms for 'be black', 'be white' and 'be red', but has not linked **biri** 'be black' with **jiji** 'black'.

He also gives 'to be white' and just 'red' for a wider set of Guang languages, both North and South. I do not know whether the reason why black is not included is because it varies too much across languages.

Table 8

<i>Language</i>	<i>be white p57</i>	<i>Language</i>	<i>red p59</i>
Proto-Guang	*fuli	Proto-Guang	*pVpV
Gonja	fuli	Gonja	pipir

⁹ In a personal communication Snider says, "When I originally gathered the data, I chose only the words that John Stewart had chosen when he gathered his lists for Krachi, Nkonya, Awutu, and Larteh." It should be added that wordlists, of necessity, reflect the grammar of the person making the list rather than the language being elicited.

Chumburung	fwiri	Chumburung	pipe
Krachi	fufuri	Krachi	pipe
Gichode	fu:li	Gichode	i-pibira
Nawuri	fuli	Nawuri	gi-pe
Nkonya	fuli	Nkonya	i-pe
Larteh		Larteh	ɔ-he
Cherepong		Cherepong	a-hi
Gwa	fuli	Gwa	
Awutu	furi	Awutu	e-hehe
Efutu	firi	Efutu	

Here the only reduplicated form for ‘be white’ is Krachi, and I suspect Snider has actually got the adjectival form. For ‘red’ as an adjective, it looks as though he has got the verb form for Nawuri and Nkonya. But more importantly we see how the Southern Guang languages use quite a different word.

Snider does not list green at all, but rather ‘unripe’, as follows:-

Table 9

<i>Language</i>	<i>unripe p284</i>
Chumburung	bumbun
Krachi	bɔmbɔ
Nawuri	bumboli
Gichode	bumboli
Gonja	bumbun

It would seem that this may have derived from the Asante adjective **ebun**. As my husband pointed out, whereas there might be a verb for ‘to be unripe’, it is impossible for something ‘to unripen’, so there would never be a verb ***bun**.

6.3 AN UNRELATED GHANAIAN LANGUAGE

Another language of Ghana, although unrelated to Chumburung, in this case one for which we have the results of the WCS in Kay, Berlin, Maffi and Merrified (1997:42), is Konkomba. They cite the following as basic colours, to which I add details from the entries in the Konkomba Dictionary (Steele undated).

Table 10 Konkomba colours

<i>English</i>	<i>WCS</i>	<i>Adjective</i>	<i>Verb</i>	<i>Gloss</i>
black/blue	bɔmbɔn	bɔmbɔŋ	bɔnn	1. To make black, become black 2. be black, dark, dirty
white	pipi(i)n		piin	be white
red/yellow	maman	(li)mamaln	man	be red
green	ŋaankal	(li)ŋaankal		
yellow	diyun	nkoonyon		

Again we find that there are verbs for black, white and red/yellow, and that the adjectival or nominal forms of them are reduplications.

So the dominant language of Ghana, languages related to Chumburung, and at least one unrelated one all have the three basic colours red, white and black as verbs. It must be clear by now that I have dropped my idea that there are only two basic colours in Chumburung, and think that there are three basic colours, or four if we were to add green.

6.4 THOSE POSTULATES

Returning to my postulates in 2.8, I have shown evidence for postulates 2 & 4 (***tuŋ** and ***buŋ**) in Sections 6.1 and 6.2. It is also remotely possible that the term **kibugyii** ‘darkness’ in examples 65 and 74a derives from **ke-bo-gyii**, it-is-black, which gives us a possible for ***gyii** as in postulate 1, but this would make **gyii** a noun. I have found no evidence that there was once a verb for ***bwæ** “to become green” as in postulate 3.

7. CONCLUSION

I contend therefore that, if we only talk about hues, then the most basic colours in Chumburung are only three, red, black and white, and that they are verbs. This might or might not be backed up by the presence of metaphoric uses in two of them, red and white. In addition it might well be backed up by the presence of ideophones in all three.

Because green follows the grammatical patterning of the most basic three colour terms even though it is not a verb, I believe we should take it that the basic colours in Chumburung are four, not the 5.5 that were proposed by the WCS. There is therefore a clear division between basic and secondary, since the latter are comparisons with objects. The secondary terms are, in the main, marked by the **du / du feye** construction, and this is an open class with potential for the future. They are nouns which can also be used as if they were adjectives by placing them before the noun being qualified. Purple may have emerged early, orange has not yet done so.

It seems, however, that long ago, the Chumburung may have been more interested in the freshness, ripeness, cleanness or dirtiness of objects than in their colour. Which takes me back to the scene of fading green trees and brown earth that I mentioned at the beginning when we first did our colour survey.

ABBREVIATIONS

CT	Clause Terminal	PAST	Past
COND	Conditional	POSS	Possessive
EMPH	Emphatic	PRES	Present~Future
COP	Copula	Q	Question particle
IMP	Imperative	STAT	Stative
FUT	Future~Present	SUBJ	Subjunctive
NEG	Negator	TOP	Topical

REFERENCES

- Abrahams, R C. 1962. Dictionary of the Hausa Language. University of London Press
- Balee, William. 1997. Classification, in *The Dictionary of Anthropology*. ed. Thomas Barfield, Blackwell Publications, Oxford
- Berlin, B. and P Kay. 1969. Basic Color Terms: Their Universality and Evolution. Berkeley: University of California Press
- Berlin, Brent, Paul Kay, Luisa Maffi and William Merrifield. 2010. *World Color Survey*. University of Chicago Press
- Berry, J. 1960. English, Twi, Asante, Fante Dictionary. Macmillan & Co.: London
- Bolton, Ralph. 1978. Black, White and Red all over: The Riddle of Color Term Salience. *Ethnology* Vol XVII No 3 July, University of Pittsburgh: Pennsylvania
- Casson, Ronald W. 1997. Color shift: evolution of English color terms from brightness to hue, in Hardin and Maffi
- Christaller, J.G. 1933. Dictionary of the Asante and Fante language. Basel Evangelical Missionary Society: Basel
- Comrie, Bernard. 1981. *Language Universals and Linguistic Typology*, Basil Blackwell: Oxford
- Conklin, H.C. 1964 [1955]. Hanunóo color categories. In Del Hymes (ed.) *Language in Culture and Society. A Reader in Linguistics and Anthropology* (pp189-192) New York: Harper and Row (From *Southwestern Journal of Anthropology* (1955. 11(4):339-344)
- Corbett, Greville G. and Ian R L Davies. 1997. Establishing basic color terms: measures and techniques, in Hardin and Maffi
- Davies, Ian, Christine Davies and Grenville Corbett. 1994. The basic colour terms of Ndebele. *African Linguistics and Cultures* 7.1: 36-48
- Givon, T. 1984. *Syntax: A functional-typological introduction*, John Benjamins Publishing Company, Amsterdam/Philadelphia
- Hansford, Gillian F. 2005. My eyes are red: Body Metaphor in Chumburung. *Journal of West African Languages* XXXII 1-2 West African Linguistic Society
- Hansford, Keir Lewis. 1988. A Grammar of Chumburung. Preliminary version of thesis submitted for a Ph.D. at the School of Oriental and African Studies, University of London
- Hansford, Keir Lewis. 1990. A Grammar of Chumburung. Thesis submitted for a Ph.D. at the School of Oriental and African Studies, University of London
- Hansford, Keir L. & Gillian F. 1989. Borrowed Words in Chumburung, in *African Languages and Cultures* 2.1.39-50. London: School of Oriental and African Studies, University of London. (Paper originally presented at the 16th Colloquium on African Languages and Linguistics at the University of Leiden, Holland, 1986)
- Hardin, C.L. and Luisa Maffi (eds). 1997. *Color Categories in thought and language*. Cambridge University Press.
- Kay, Paul and Chad K. McDaniel. 1978. The Linguistic Significance of the Meanings of Basic Color terms. *Langua* 54: 610-646
- Kay, Paul, Brent Berlin and William Merrifield. 1991. Biocultural Implications of Systems of Color Naming. *Journal of Linguistic Anthropology*, Vol 1 Issue 1 June.
- Kay, Paul, Brent Berlin, Luisa Maffi and William Merrifield. 1997. Color naming across languages, in Hardin & Maffi.
- Kay, Paul and Luisa Maffi. 2000. Color Appearance and the Emergence and Evolution of Basic Color Lexicons. *American Anthropologist* 101(4)
- Kay, Paul and Luisa Maffi. 2008. Numbers of Non-Derived Basic Colour Categories, in Haspelmath, Martin & Dryer, Matthew, S. & Gil, David, & Comrie, Bernard (eds). *The World Atlas of Language Structures Online*, Munich: Max Planck Digital Library, chapter 132. Available online at <http://wals.info/feature/132>.
- Kuschel, Rolf and Torben Monberg. 1974. "We Don't Talk Much About Colour Here": A Study of Colour Semantics on Bellona Island. *Man* n.s. Vol 9, No 2
- Lakoff, George. 1987. *Women, fire and dangerous things*, University of Chicago Press
- Lucy, John. 1997. The linguistics of "color", in Hardin and Maffi
- Maffi, Luisa. 1990. Somali Color Term Evolution: Grammatical and Semantic Evidence. *Anthropological Linguistics*, Vol 32 Nos 3-4 Fall and Winter
- Robins, R.H. 1985. *General Linguistics. An Introductory Survey*. Longman: London & New York
- Rytz, O. (Undated) *Gonja-English Dictionary and Spelling Book*, Institute of African Studies, University of Ghana, Legon

- Schaefer, Ronald P. 1984. Toward an understanding of some ideophones of color in Emai. *Journal of West African Languages* 14.2:125-134
- Snider, Keith L. 1990. *Studies in Guang Phonology*. Thesis submitted for a doctorate at Leiden University.
- Stanlaw, James. 1997. Two observations on culture contact and the Japanese color nomenclature system, in Hardin and Maffi
- Steele, Mary. (compiler but not stated). undated but about 1979. *Konkomba – English, Likaln – Likpakpaln Dictionary*, Tamale, Ghana: Ghana Institute of Linguistics, Literacy and Bible Translation
- The World Book Encyclopedia. 1979. World Book - Childcraft International, Inc; Chicago
- Turton, David, 1980. There's no such beast: Cattle and Colour Naming among the Mursi. *Man New Series* Vol 15 No 2 pp320-338, Royal Anthropological Institute
- Westcott, Roger W. 1970. Bini Color Terms. *Anthropological Linguistics* Vol 12 No 9, Indiana University
- Wierzbicka, Anna. 2005. There are No "Color Universals" But There Are Universals of Visual Semantics. *Anthropological Linguistics*, 47.2
- Wierzbicka, Anna. 2008. Why they are no 'colour universals' in language and thought. *Journal of the Royal Anthropological Institute* 14.2
- Witkowski, Stanley R. 1996. Color Terminology. *Encyclopedia of Cultural Anthropology*, Ed. Levinson and Ember