TSIMSHIAN COLOUROLOGICAL SEMIOTICS

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ABSTRACT. This is a descriptive paper, presenting the semiotic system that the Tsimshian community has built out of the basic oppositions inherent in colour perception. It takes for its theoretical premising infrastructure the biogenetic structuralism of Marshal Sahlins (1976) and the anti anti-relativism of Clifford Geertz (1984) both of which reaffirm the traditional American (Diltheyan) hermeneutic found in the works of Boas, Sapir, and Hymes. It claims that the Tsimshian colour terminology builds on a universal set of material discriminations and relates to a univeral symbolism but is for all that still a unique and consequently precious linguistic-cultural artifact.

1. INTRODUCTION. The goal of this paper is a description of the Tsimshian colour terminology insofar as it is a semiotic system. Part two of the paper lays out the theotretical assumptions on which this paper is based, reviews the Berlin and Kay (1969) contribution to the study of colour terminologies, and proposes a formal, physiologically based, statement of their ideas. Part three presents a collation from the various manuscript and published sources of the colour names for the several local varieties (major and minor dialects) of Tsimshian. This collation appears in a chronological format so as to facilitate interpretation of these data in terms of Berlin and Kay's accumulation model. One of the criteria found to be necessary for establishing membership in the list of basic terms for Tsimshian is relationship to and membership in a colour symbol paradigm.

The colour symbol paradigm is the topic of the fourth and main section of the paper. This paradigm is consistent in time and through all dialects of Tsimshian; as the colour vocabulary developed through the last century and a half, different terms occupied the various points in the paradigm space of the symbol system, but the semantic relationships between these points remained constant. The paradigm relates directly to a larger system of Tsimshian symbols that encompasses kinship, locative adverbs, anatomy, meteorology, and other domains, as well as to the classic art tradition of the North Pacific Coast. It also bears a relationship to putative universal features in colour symbolism.

2. PREMISES. This paper builds on two major assumptions: the naming of colours finds its material basis in common, inherent, photoreception physiology. Colour names, however, are but the matter from which each separate society informs a unique semiotic system, for even physiologists and physicists trained in western science find in colours more meaning than cell firings, angstroms, and saturation.

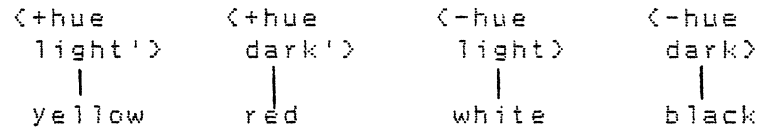
2.1 THE MATERIAL BASIS. Berlin and Kay (1969) and Kay (1975) used a massive array of comparative (anthropological) data to focus the attention of a wide linguistic audience on the commonly held, basic physiological tenets of colour perception and clearly established that these species consistent, inherent, visual aptitudes find expression in strong cross-societal tendencies to name colours in similar and non-random ways. Not only do societies develope colour names for the same foci in the spectrum, but they also accumulate these names in the same order. Berlin and Kay refer to the names for the foci as basic colour terms and to the parallel phases in the accumulation of basic colour terms as stages. Sahlins (1976) and Kay and McDaniel (1978) have given concise descriptions of the correlations existing between the Berlin and Kay data and currently accepted, photoreceptive physiology. See McNeill (1972) and Conklin (1973) for critiques addressing the implied anti-relativism of the Berlin and Kay claims.

The ideal accumulation of basic colour terms follows the sequence presented in items (1) through (5) below.

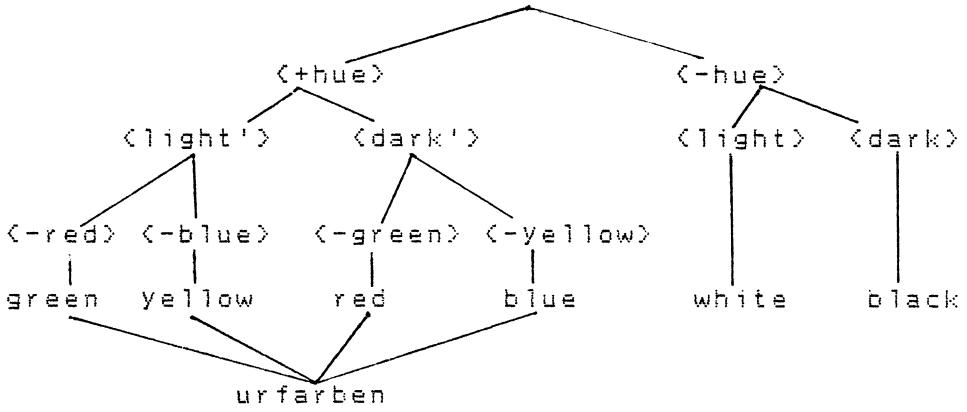
(1) The stage I, two-term, system consists of a simple contrast between <light> and <dark>. The two terms are typically translated as 'black' and 'white' despite the fact that each names a union of several basic colour foci. 'Black' might for example refer to black, blue, purple, brown, and red, while 'white' might include white, pink, yellow, orange, grey, and green.

(2) The stage II, three-term, system adds a contrast between hue and non-hue: <+hue> = 'red', <-hue, light> = 'white', <-hue, dark> = 'black'. 'Red' at this stage also names a union of several foci.

(3) The stage III, four-term, system typically adds either yellow or green. Both yellow and green contrast with red in, among others, a way analogous to the light/dark opposition in the non-hue colours. Red is perceived as 'pure' at a lower brightness (low value + high chroma) than are either yellow or green (Sahlins 1976, Kelly and Judd 1955). Thus red is deep in a sense similar to black's darkness while yellow is bright in a sense similar to white's lightness. This is the basis for the foci unions in the earlier stages.



(4) The stage V, six term, system adds the other primary colours (urfarben):

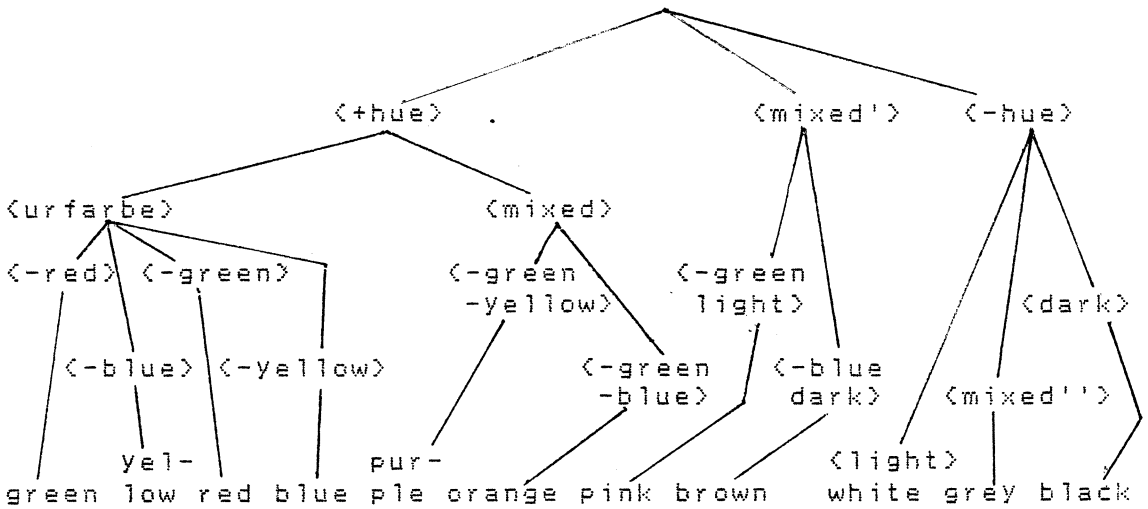


Red and green stand in complementary opposition as do yellow and blue. There are four types of hue responsive cells in the neural pathway between the eye and the brain. These four types form two complementary pairs:

cells receiving yellow	cells receiving green
vs.	vs.
cells receiving blue	cells receiving red

In the presence of green colour stimuli the rate of firing in the red receiving cells is depressed below the basal (non-external stimuli) rate. As a consequence it is physiologically impossible to perceive red and green together as a blend or mixed colour. The same is true of blue and yellow (See, e.g., De Valois and Jacobs (1968), cit. apud Kay and McDaniel (1978:617ff)).

(5) The stage VII, eleven-term, system adds mixed colours, i.e., colours perceived as various types of intersections of urfarben and/or non-hue colours: intersections of two urfarben (=mixed), intersections of one urfarbe and either white or black (=mixed'), and the intersections of white and black, i.e., grey (=mixed'').



The foci for these eleven basic terms stand relative to one another along a light-to-dark axis defined in terms of a brightness values scale: yellow is only slightly less bright than white, brown and purple are almost as deep as black (Berlin and Kay 1969:8f).

	colour term	focal brightness values
light	white	9
brighter	yellow	9-8
↑	pink	8-6
	orange	7-5
	green, grey	7-4
	blue	6-4
	purple	6-2
↓	red	5-3
deeper	brown	4-2
dark	black	1

This physiologically grounded analysis suggests that there may be other possible basic terms. If orange ⟨-blue, -green⟩ and purple ⟨-green, -yellow⟩ can be basic terms, why not the other hue intersections?

	⟨-red⟩	⟨-green⟩
⟨-blue⟩	chartreuse	orange
⟨-yellow⟩	aquamarine	purple

If brown ⟨-blue, dark⟩ and pink ⟨-green, light⟩ can be basic terms, why not the other whitened and blackened hues?

	⟨light⟩	⟨dark⟩
⟨-blue⟩	cream	brown
⟨-red⟩	celadon	olive
⟨-green⟩	pink	crimson
⟨-yellow⟩	coeruleum	ultramarine

There are other possibilities. Why not triple intersections such as purple + white (= lavender) or hued greys such as light blue grey (= smoke)? Perhaps the inventory of conceivable basic colour terms ought to be more than doubled. Perhaps other societies have elaborated their systems by choosing intersections other than those considered basic in English, intersections English does not consistently name, intersections that may have been mistranslated in the data or categorized as non-basic and subsequently left unconsidered.

2.2 COLOUROLOGICAL SEMIOTICS. The biogenetically based system of oppositions found in the perceptual machinery for human colour discrimination provides the building blocks

for cultural/semiotic systems. Communities use the names of colours and their natural opposites, red vs. green, blue vs. yellow, black vs. white, in a manner similar to the use of phones in building a phonology. Out of colour oppositions communities build up meaning-related systems, each relative to and relevant to the particular human beings that created it. The colouretic distinctions are a natural order system. They are the matter out of which societies form symbol paradigms or cultural order systems (colourologies). Sahlins (1976) believes that the greatest contribution of the Berlin and Kay work is that it has laid bare a set of colouretic distinctions upon which linguists can develope useful and insightful descriptions of such colourologies.

3. THE COLOUR TERM DATA. Eleven data sources for Tsimshian vocabularies attest to some twenty-seven names for specific colours. All of these save one are descriptive, i.e., morphologically transparent. The one opaque term in Ga'yak (=grey), but its salience (degree to which it is shared and understood in the speech community) is quite low. It is not, therefore, a better candidate for basic term status than the transparent but highly salient terms. A term's salience value in this discussion will be a function of the number of sources and the number of local varieties (languages, major dialects, minor dialects) attesting to it:

$$\text{salience value} = \frac{\dfrac{\#\text{ of sources attesting term}}{\text{total sources}} + \dfrac{\#\text{ of varieties attesting term}}{\text{total varieties}}}{2}$$

The eleven sources represent eight local varieties: four major dialects and five minor (local community) dialects. The major dialects are Nishga (Boas 1902; Tarpent 1983), Gitksan (Beynon 1920-24; Hindle and Rigsby 1973), Southern or Kitasoo Tsimshian (Tolmie 1877; Dunn 1976), and Coast Tsimshian. The Coast Tsimshian sources document five of the many local community varieties: Port Simpson (Howard 1860; Boas 1891; Schulenburg 1894; Boas 1912), New Metlakatla, Prince Rupert, Kitkatla, and Hartley Bay (the latter four in Dunn 1978).

3.1 TERMS ABOUT COLOUR. The Coast Tsimshian word for colour or coloured is wilge't (pl: wilgige't). Sentences ascribing colour to particular objects have the structure COLOUR-a wilge't-a NOUN:

(1) Xs-p!iya:'n-a wilge'd-a laXa'
like-smoke-connective colour-connective sky
The sky was smoke-blue.

The colour term agrees in number with the noun it modifies:

(2) t!is-t!u:'!tsg-a wil-gi-geda Ga-Xso:'-t
plur-black-connective proclitic-plur-colour
distributive-canoe-their
Their canoes were black.

Within NP's colour terms govern the -m- connective:

(3) Xsp!iya:'n-m-laXa'
a smoke-blue sky

(4) t!ist!u:'!tsg-m-GaXso:'t
their black canoes

There are two lexical items that modify <+hue> and/or <+mixed> colour names:

(5) Lan (=strong, deep), referring to lowered value and heightened saturation, e.g., La'n-m-ma'sk (=crimson (mask = red))

(6) gwa:nks (=pale, faded; also cooked, lit. boiled (gwa:n (=upwelling), -ks (=water))), referring to heightened value and reduced saturation, e.g., gwa:'nks-m-ma'sk (=ochre)

3.2 BLACK AND WHITE. The terms for black (see Table 1) are

(7) t!u:!ts(-k) .955
(For the purposes of discussion the common Coast Tsimshian variant in each instance will represent all its cognates. The number following each term is its salience value.)
(8) ksama'Xs(-k) .234
(9) Ga:X .186

Ga:x means 'raven' or 'black bass.' Ksama'Xs-k means 'dirty' (ksama'Xs (=dirt), -k (=like)). T!u:!ts means 'coal,' 'iron,' or 'rock (spec. volcanic rock used as cooking-stones).' Ksama'Xs-k and t!u:!tsk are etymologically analogous:

t!u:!ts (coal, iron, rock) k

ksamaXs (dirt) like k

If one accepts this etymological analogy, then the salience value of the semantic structure of the colour terms for black is 1.00. This pair is but one of five sets of similarly relatable colour terms that appear to involve calques and that extend colour etymologies to the inter-dialectal Tsimshian community.

TABLE 1. BLACK

COAST TSIMSHIAN	SOUTHERN TSIMSHIAN	NISHGA	GITKSAN
1860 *touts*	1877 *toatz*		
1891 *t'ō'otsk*			
1894 *dōuzk*		1902 *t'ō'tsk^{u}ɬ*	
1912 *t!ū°tsk*			1924 *do·ts*
1978	1976 *ksá·maχsk*	1983 *t'u·čk^{ω}*	1973 *t'uuts'xω*
HB *t'u·'t^{s}k*			
t'o't^{s}k			
ksamáχs			
K *ɬu·'t^{s}k*			
ɬu'usk			
PR *Ga·χ*			
t'u·'t^{s}k			
Ga·χ			

(HB = Hartley Bay, K = Kitkatla, M = New Metlaktala, PR = Prince Rupert)

The terms for white (see Table 2) are

(10) mo:ks(-k) .955
(11) t'iyo:'L-k .117
(12) adi .117
(13) !noL .117

The Gitksan terms adi and 'noL mean respectively silvery and bright. The Southern Tsimshian term t!iyo:'L-k means snow-like (t!iyo:'XL (=snow), -k (=like)) as does the Coast Tsimshian term mo:ks-k (mo:ks (=snow)). These latter terms exhibit a calque-like inter-relationship. As a result the salience value of the common etymology, snowy, is 1.000.

TABLE 2. WHITE

COAST TSIMSHIAN		SOUTHERN TSIMSHIAN	NISHGA	GITKSAN
1860	mox	1877 moax		
1891	mâks			
1894	mauksh		1902 mā'k·s	
			mäs-	
			mas-	
1912	mâks			1924 ma^{u}ESXum
				'mas
			m-LT mą:s-	'adi
				'nɔ·ɬ
1978		1976 t'iyó·ɬk	1983 ma·ksk^{w}	1973 maaxwsxw
HB	moks			
	moksk			
	mo·ksk			
K	mo·ks			
	mo·ksk			
PR	mo·ks			
	mo·ksk			

3.3 URFARBEN. The terms for red (see Table 3) are

(14) mas-k 1.000
(15) (Xs-)iLe:'-tk,
mas-g-m-iLe:'-tk .630

The terms built on iLe:' all mean blood-red: iLe:' (=blood), -tk (=like), Xs- (=like), masg (=red), -m- (connective).

The term mas-k relates to Coast Tsimshian mas-X and Southern Tsimshian mi!is, both meaning breast. One Kitkatla respondent explained that the term refers to the colour of irritation in the breasts of a mother nursing her child.

TABLE 3. RED

COAST TSIMSHIAN	SOUTHERN TSIMSHIAN	NISHGA	GITKSAN
1860 mish 1891 mESk 1894 meshk	1877 misk	1902 mîs- mas- mES- iLä'êL iLä'ê	
1912 mESk itä'°tk			1924 ma·s^{u} itɛt^{u}s
1978 HB mask Xsʔitté·tk K mask PR mask masgmʔité·	1976 mask	1983 mask^{w} ʔité·ʔetk^{w}	1973 masxw ihlee'etxw

M-LT
mis-ʔáus 'ochre'
sand

The terms for green (see Table 4) are

(16) miLi:'-tk .938
(17) ksi-miLi:'-tk .354
(18) blaG-m-lop .118

The term miLi:'-tk means "like bile" (miLi:' (=bile), -tk (=like). The terms ksi-miLi:'-tk, Xsi-miLi:'-tk, and Xs-mLi:'-sk refer to a pale chartreuse, i.e., a blend or intersection of green, yellow, and white. The Tsimshhian focus for the common term (16) is also a green-yellow blend high in the brightness scale. Nevertheless Tsimshian speakers consider that the ksi- prefixed term refers to a distinct colour. They sometimes translate this term as "watery green." The prefix ksi- does have the meaning "watery." It can also mean "from out of" (Dunn 1978:50). But in colour terms it often translates as simply "like." The 1860 ethnographer may have in fact collected this term, but it is clear from his transcriptions, quismichleet and cusmichleet, that he considered it a word compounded of the terms for yellow (michleet) and blue (quisquash or cusquass).

The term blaG-m-lop, translating as "moss-green," literally means "mossy rock" (blaG (=moss), -m- (connective), lop (=rock).

As with black, white, and red, the salience value of the common etymology for green is 1.000.

TABLE 4. GREEN

COAST TSIMSHIAN		SOUTHERN TSIMSHIAN	NISHGA	GITKSAN
1860	quismichleet			
	cusmichleet			
1891	mɛtlḗitk			
1894	milthītk			
1912	mɛłī́ºtg			1924 mełatᵘ
1978		1976 miłi·tk	1983 miłátkw	1973 mihlatxw
HB	miłí·tk			
	ksimiłí·tk			
	Xsimiłí·tk			
	bḷaGmló·p			
K	miłí·tk			
	Xsm̩łí·sk			
M	Xsm̩łí·sk			
PR	miłí·tk			

The terms for yellow (Table 5) are

(19) !yina-q!almo:'s .425
(20) Xs-!ya:na-q!almo:'s .225
(21) !ya:na-ky'a:'m .225
(22) miLi:'-tk .350

The term reported in the 1978 source means crab-shell yellow (yina- (=inside of) = !ya:na- (=excrement of), q!almo:'s (=crab), q!al- (=empty) = tXal- (=drags against), mo:s (=thumb). The use of the Xs- (=ksi-) prefix calls attention to the fact that the colour yellow, as the colour green, is a pale, watery shade. The Southern Tsimshian term has the same etymology: !ya:na (=excrement of), ky'a:m (=crab). The Tsimshian terms for yellow also involve calque-like relationships.

The 1860 and 1891 sources indicate that the term miLi:'tk formerly named a union of green and yellow hues. These data indicate an exception to the Berlin and Kay claims about the colour accumulation sequence since both sources list a term, the present, common term, for blue (see Table 6). The Nishga and Gitksan sources cited likewise report a term for blue but no term for yellow.

TABLE 5. YELLOW

COAST TSIMSHIAN	SOUTHERN TSIMSHIAN	NISHGA	GITKSAN
1860 mich-leet 1891 mɛtlē'itk 1978 HB ʼya·naqalmó·s yinaqalmó·s Xsʼya·naqalmó·s K yinaqalmó·s M yinatXalmó·s	1976 ʼya·naḵʷá·m	M-LT x̱s-laʼa-qalmo·s	

The terms for blue (see Table 6) are

(23)	gwisgwa:'s(-k)	1.000
(24)	Xs-p!iya:'n	.127
(25)	bilutxw	.127

The common term gwisgwa:'sk means "like blue-jay" (gwisga:'s (=blue-jay), gwis- (=coat), gwa:s (=borrow), -k (=like)). The term Xsp!iya:'n, meaning smoke-blue (Xs- (=like, watery), p!iya:'n (=smoke), is, as are the other Xs-/ksi- prefixed terms, a pale, high-value colour. The Gitksan term bilutxw is a loan word from English.

TABLE 6. BLUE

COAST TSIMSHIAN	SOUTHERN TSIMSHIAN	NISHGA	GITKSAN
1860 quisquash cusquass			
1891 kuskua'sk			
1894 kuskua'sk		1902 gusgwâ'ôsk^{w}L gusguâ'ôsē	
1912 gusgwa'sk			
1978 HB gwisgʷá·sk xsp̓iyá·n	1976 gʷisgʷá·sk	1983 kʷiskʷó·skʷ	1973 bilutxw gwisgwoosxw
K gʷisgʷá·sk PR gʷisgʷá·sk			

3.4 MIXED COLOURS. The terms for brown (see Table 7) are

(26) (Xs-)loGa-lo'p
(27) !ya:na-t!o'!tsk

The more general loGalo'p, meaning literally "rotten rock" (loGa- (=rotten), lop (rock)), has a morphological structure directly parallel to the Coast Tsimshian !ya:nat!o'!tsk, meaning, "rust," literally "like excrement of iron" (!ya:na (=excrement), t!o!ts (=iron), -k (=like)). The latter is probably a calque of the former. The term loGalo'p refers to a union of brown, orange, purple, and their mutual intersections. The term !ya:nat!o'!tsk refers to a union of brown, ochre, and orange in Hartley Bay and to a union of brown, fuchsine, and purple in Kitkatla and Metlakatla.

TABLE 7. BROWN

COAST TSIMSHIAN	SOUTHERN TSIMSHIAN	NISHGA	GITKSAN
1894 srloqlâ'p			
1978		1983 x̌sloqaló'opkw	
HB loGaló́p			
ýa·na'tó't^{s}k			
yinat'ó'ts^{s}k			
K loGaló́p			
yinat'ó'ts^{s}k			
M loGaló́p			
yinat'ó'ts^{s}k			

The terms for purple and lavender-pink (see Table 8) are

(27) kshmushksk
(28) x̌s-ma:'!y-tk
(29) Xs-waX-La:'s(-k)

The first two are simply glossed "purple;" the last is glossed "pink" but actually refers to the lavender colour of huckleberries just as they begin to ripen. The three terms also show evidence of a calqueing phenomenon:

ksh-	mushk (=red?)	-sk
x̌s-	ma:'!y (=berry)	-tk
Xs-	waXLa:'s (=huckleberry)	-k
watery-	berry	-like

TABLE 8. PURPLE/PINK/LAVENDER

COAST TSIMSHIAN	SOUTHERN TSIMSHIAN	NISHGA	GITKSAN
1894 kshmushksk			
1978 HB χswaχɬá·s		1983 x̌smá·ýtkʷ	
χswaχɬá·sk			
K χswaχɬa·́sk			
M χswaχɬá·sk			

The Hartley Bay source reports an apparently recently developed term for orange:

(30) Xs-t!aX-t!o'X (Xs- (=watery, like), t!aXt!o'X (=orange, the citrus fruit), t!aX- (iterative), t!oX (=suck))

There are two terms for grey:

(31) !ya:na-t!i:'bn (=sealion excrement), reported only in Hartley Bay

(32) Ga'yak (from Hartley Bay and Metlakatla) = Gaya:'k (from Southern Tsimshian)

Term (32) is the only colour name in the Tsimshian data that is not descriptive.

4. TSIMSHIAN COLOUROLOGICAL SEMIOTICS. The Tsimshian colour terminology has a number of intriguing characteristics. The terms are descriptive; their etymologies are generally transparent; speakers consciously manipulate and elaborate them. Despite this, or perhaps because of this manipulation and elaboration, the etymologies have a high degree of interdialectic salience and consistency. The terms' semantic structures transcend dialectal differences in lexical material and conform to specific morphological patterns for each Wortfeld. The word-fields are in fact calque-sets:

BROWN

```
!ya:na - t!o'!ts - k      excrement - lava - like
                                      iron
                                      coal
  loGa - lo'p                rotten - rock
```

YELLOW

```
  yina - tXalmo:'s       inside     - crab
  yina - Galmo:'s        inside     - crab
!ya:na - ky!a:'m         excrement - crab
```

GREEN

```
     miLi:' - tk                bile - like
Xs - mLi:'  - sk     watery - bile - like
```

WHITE

```
  mo:ks - k      snow - like
t!iyo:'L - k     snow - like
```

BLACK

```
t!u:!ts - k     lava - like
                iron
                coal
ksama'Xs - k    dirt - like
```

LAVENDER/PURPLE/PINK?

```
 Xs - waXLa:'s - (k)     watery - elderberry - (like)
 xs - ma:!y          .   watery - berry
ksh - mushk     - sk     watery - red?       - like
```

MOSS/BROWN?

```
blaG - m - lo'p        moss - connective - rock
 loG - a - lo'p     rotten - connective - rock
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BLACK/PURPLE?

```
ksa...ma'Xs  - k          dirt     - like
ksh - mushk - sk     watery - red - like
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In the following discussion I use the terms Wortfeld (lexical field) and Sinnfeld or Wortdecke (conceptual field) according to Trier's interpretation of field theory (Trier 1934; Ohman 1953). A lexical field is a word and its conceptual cognates; a conceptual field is a mosaic of lexical fields tied together in semiotic paradigm. I will also use the Tsimshian term, gistXalt!m'tk (=stencil or pattern), to refer to Wortfeld-specific morphological models.

Each Tsimshian colour term set is a Wortfeld characterized by such remarkable etymological homogeneity and lexical heterogeneity as to suggest that the Tsimshian community has incorporated lexically diverse materials into the several lexical fields for colour by making the diverse lexical materials conform to rigidly conceived, specific gistXaltikt!m'tk or morphological stencils for each Wortfeld. The gistXaltikt!m'tk have three elements: a conceptual etymology (stem), an abstracting-nominalizing suffix (Cf. Dunn 1983), and a proclitic that marks pale or faded colours (low chroma, high value). In the models that follow, the stems appear in upper case letters and expressed as their English equivalents. An "abs" indicates the abstracting suffix in its variants: -k, -sk, and -tk. The word "faded" represents the several proclitics: ksi-, Xsi-, Xs-, xs-, yina-, !ya:na-, and loGa-. The discussion below establishes mosaic relationships between nine of the colour lexical fields. The gistXaltikt!m'tk for these nine terms are

white = SNOW-abs

black = EARTH-abs

red = BREAST-abs
(pale)-BLOOD -abs

green = (pale)-BILE-abs

blue = BLUEJAY-abs

yellow = pale-CRAB

brown = pale-EARTH-abs

lavender = pale-BERRY-abs

orange = pale-ORANGE

The individual gistXaltikt!m'tk share two general characteristics: (1) the abstracting-nominalizing suffix is typical of colour terms, being absent only in those terms that have a low salience value and are thus presumably of

more recent origin, (2) the dark (Lan) terms are unmarked by proclitic, while such marking defines those terms that name "faded" (gwa:nks) colour. The usual proclitic ksi- (also Xsi-, Xs-, and xs-), meaning "like", "watery", "from out of," is clearly relatable to the term gwa:nks (=cooked; gwa:n (=upwelling), -ks (=water)).

The semantic transparency of the colour lexical fields, their consistent morphological patterning, and their marked/unmarked interrelationships indicate that the colour indices, i.e., the etymological stems of the terms, have more than value as colour reference points. They are as well symbols. Their symbolic value lies not in what they name as colours or colour indices, but in the logical, paradigmatic relationships that tie index to index. It is this system of relationships that is the Tsimshian colourological conceptual field.

4.1 THE TSIMSHIAN COLOURS AS WORTDECKE. The marked vs. unmarked pattern establishes a division of colour terms into strong vs. faded or "cooked" colours. The "cooked" colours are marked with one of a set of proclitics which set is a lexical field in its own right:

Lan	gwa:nks	field of marks
black		
red		(ksi)
blue		
	brown	yina, !ya:na, loGa
	green	(ksi)
	yellow	yina, !ya:na
	lavender	ksi
	orange	ksi

The ksi- proclitic is calque for/of the other proclitics in the field of marks: ksi (= from out of), yina (= inside of), !ya:na (= excrement of), loGa (= rotteness of). The field of marks therefore indicates an analogical relationship between faded, paled, cooked, rotten colours and the insides of things on the one hand and, by complement, an analogical relationship between strong, raw, fresh colours and the outsides of things on the other. The black vs. brown opposition stands as the model exemplar: black (=iron, lava cooking stone); brown (=inside of iron, excrement of iron, rust, rotten rock).

The colour indices corroborate the analogy. The stems for red are blood and breast, while the index for green, red's physiological complement, is bile. The former refer to, relatively speaking, peripheral body fluids and anatomical features; the latter refers to the visceral body fluid:

red:green::dark:light::peripheral:visceral

The index for blue is the bluejay, an air creature or ts!u:!ts (=birds, bats; also = penis); the index for blue's physiological complement, yellow, is the crab, a shore waters creature or amge:'ka. Bird is to crab what breast is to bile: out in the air vs. down in the quiet (inside) water = peripheral feature vs. visceral fluid. See Casad and Langacker (1985) for another example of the semantic extension and specialization of a morphologically marked inside vs. outside dichotomy.

The colour indices also name major categories of life forms: the breast-red/bile-green pair relates to properties of !ye!tsk (=land animals), while the blue/yellow pair segregates ts!u:!ts (=flying animals) and amgeeka (=littoral animals).

The final pair of terms names a fourth category of creatures, ma:i (=berries), and a further semantic elaboration of the inside vs. outside contrast. Orange, whose index is the citrus fruit, names a "foreign berry," while lavender, whose index is the huckleberry, names an indigenous fruit.

In summary the colourological system contains four pairs of complementary terms which name four categories of living beings and their contrast with unliving beings. The paradigm associates the nonlife vs. life contrast with the dark (strong) vs. light (cooked) dichotomy and with the outside vs. inside opposition (See Figure 1).

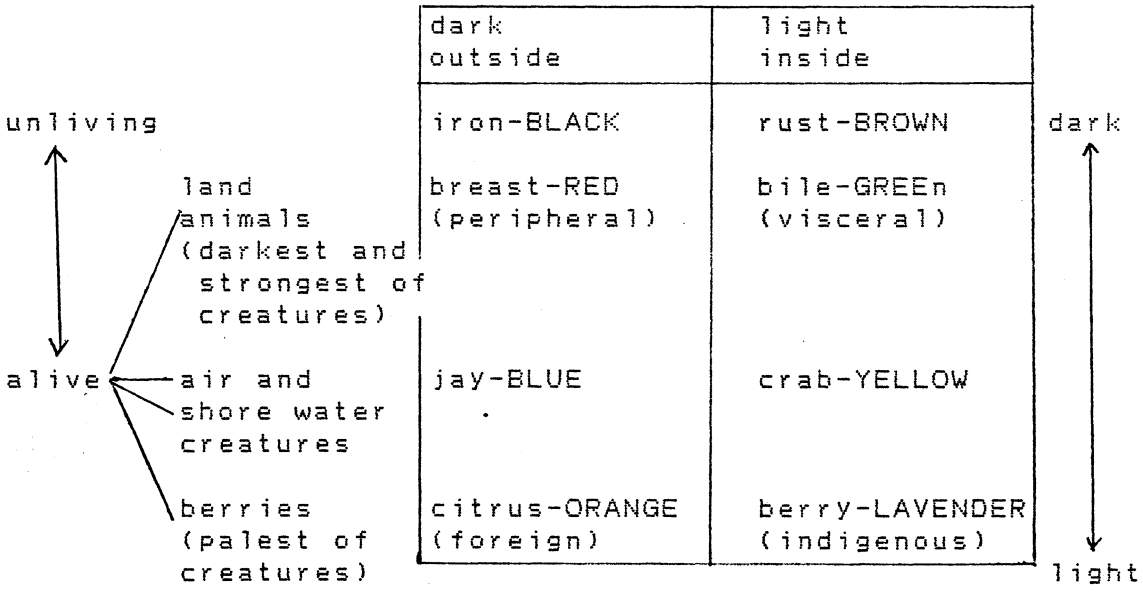

Figure 1. The Tsimshian Field of Colours.

4.2 HYPOTHETICAL DEVELOPMENT OF TSIMSHIAN COLOUROLOGY. The simplest colour system in use by the Tsimshian is the three member set of the North Pacific Coast classic art

style. From the Tsimshian perspective this set includes two painted (=t!mmi:'sk) colours, red and black, and the unpainted ground. Although the unpainted ground is usually yellow cedar, the Tsimshian refer to it as white in colour. This may explain the absence of yellow as a fully salient colour term; the term mo:ksk may have referred until recently to a union of white and yellow. The t!mmi:'sk or painted colours are the unliving, earth black and the living, blood-breast red. The classic art style outlined figures in black, filled in internal detail in red, and left the inner spaces unpainted. This use of colours confirms their outside vs. inside symbolic values. See Baines (1985) for another study of the use of colours in an artistic tradition to confirm a colourological analysis. The three colour system of the classic art uses the colouretic distinctions of a stage II terminology to build a traditional colourological system in which the Tsimshian symbolic values of colours have already been established (See Figure 2).

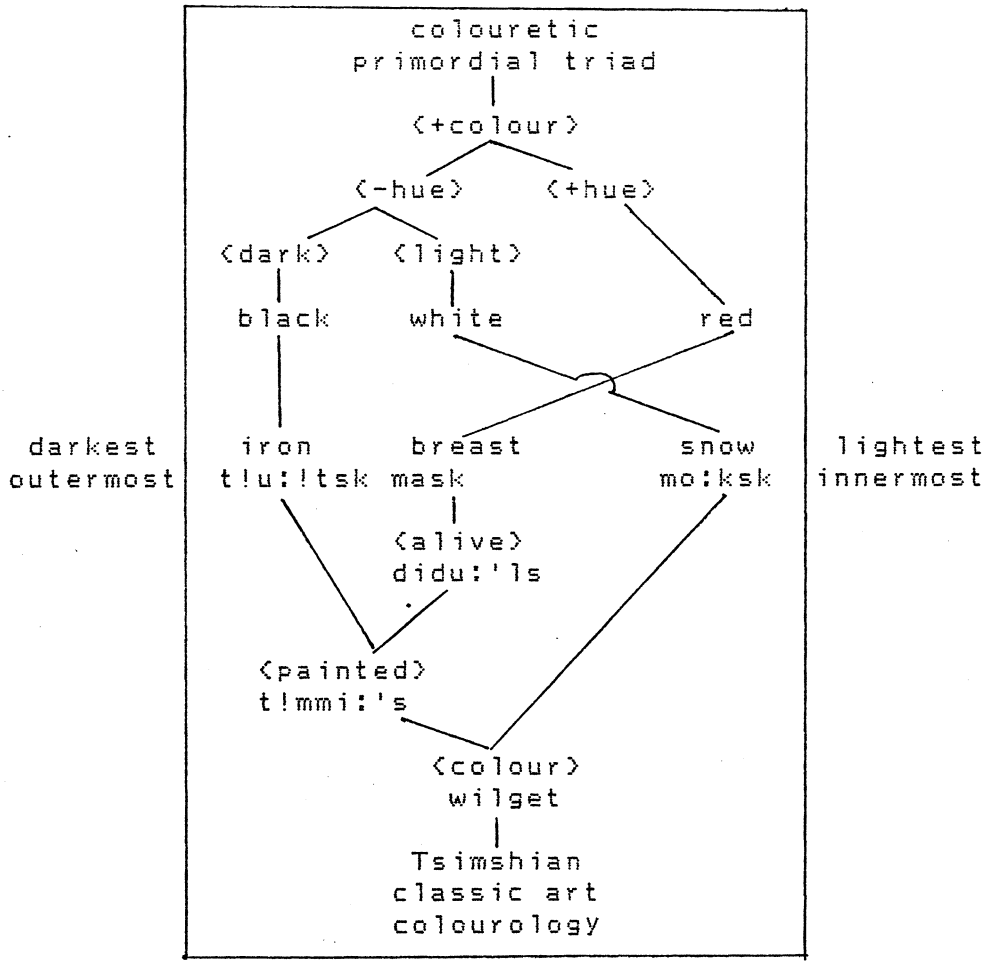

Figure 2. Tsimshian Colourology Informing Stage II System.

The five most salient terms (with gistXalt!m'tk salience values of 1.000), black, white, red, green, blue, might represent another stage in the development of the Tsimshian colourology. The outside to inside, dark to light, and unliving to living parameters are clearly evident in such a system. Here the didu:'ls (living) colours consist of the outermost (tXa!a:'Xt) blue and the innermost (ts!a:Y) green mediated by the intermediate (tkwidzo:'Xt) red. This highly salient, five term system informs the colouretic matter of a stage V terminology (See Figure 3).

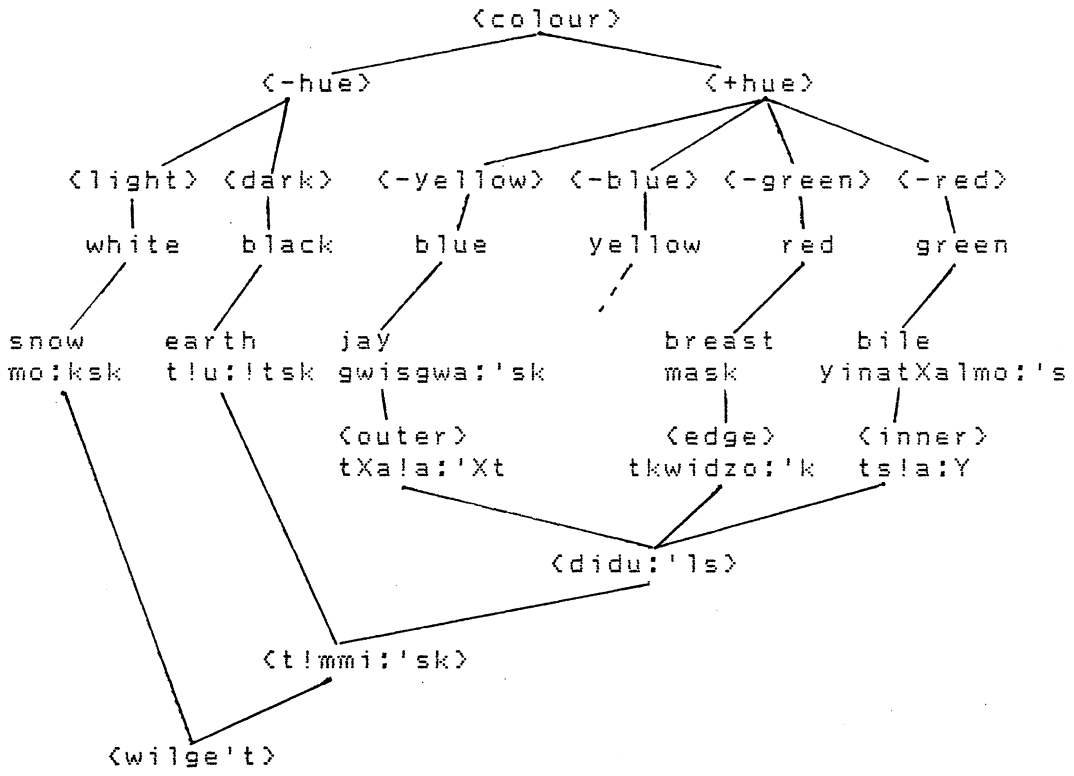

Figure 3. A Tsimshian Five Term System.

The current colourological system found in Hartley Bay is probably a fairly recent development and shows evidence of considerable systematization of the already established symbolic parameters. It comprises a nine member paradigm. I take membership in this paradigm to be part of the definition of "basic colour term" in that community. Colours divide into painted colours and unpainted ground. The unpainted ground is white. The painted colours divide into earth colours and living colours. The earth colours are black, i.e., iron, and its paradigmatic opposite, the inside of black, i.e., rust-brown. The living colours divide into air creature, land-animal, berry, and water creature colours (See Figure 4).

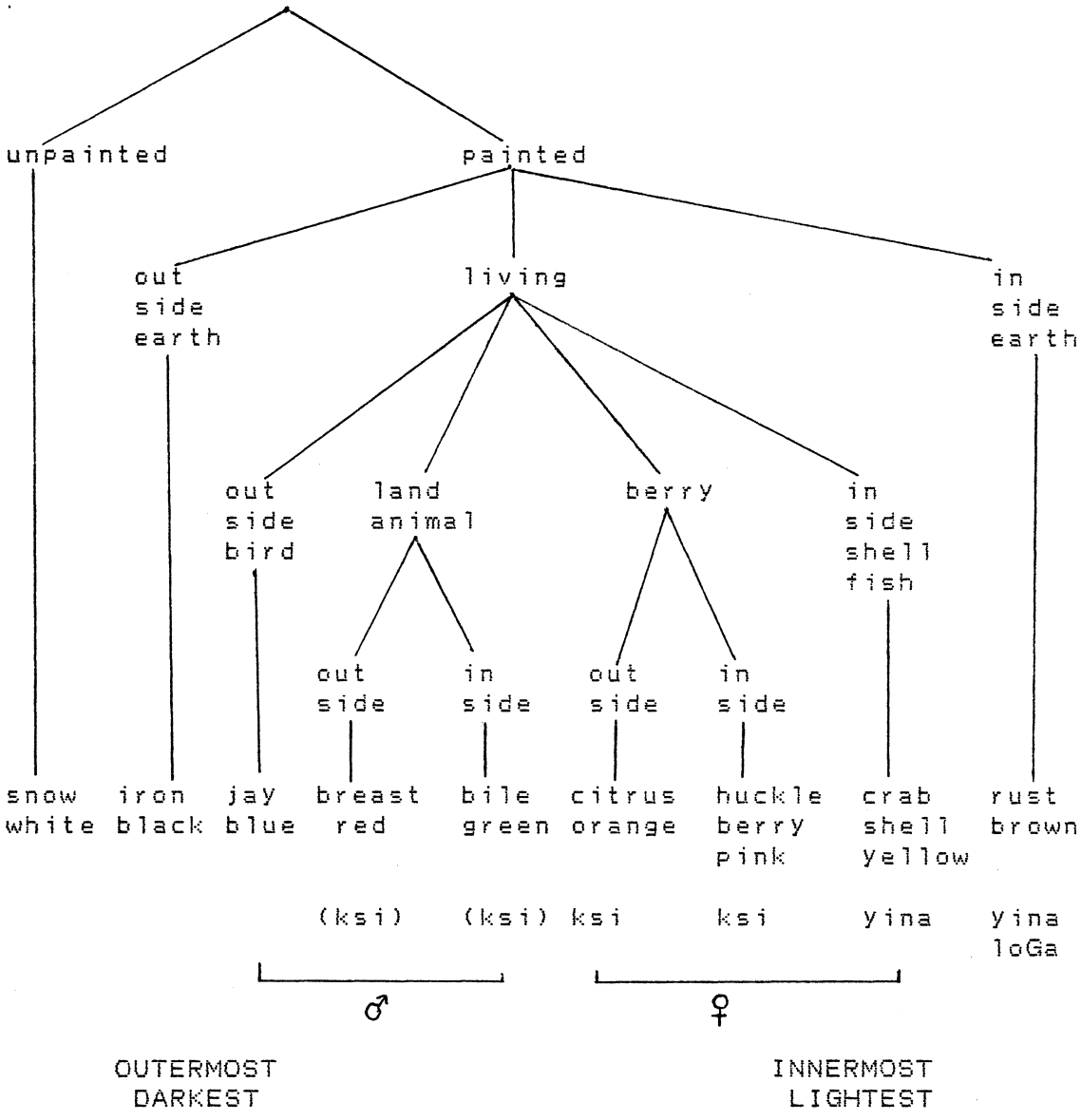

Figure 4. Contemporary Tsimshian Colourology.

The proclitics Wortfeld (ksi, yina=!ya:na, loGa) marks the paleness of colours in scalar fashion: the strongest colours, black and blue, have no mark; the next paler colours, red and green, are intermittently marked with ksi, the least intense of the inside markers (=from out of); the next paler set, orange and lavender, consistently bears the

ksi mark; the palest, yellow, has the yina/!ya:na mark, a more intense inside indicator (=inside of, excrement of). At the peripheries of the Sinnfeld stand two contradictions. Brown, which is as strong as blue and red, has the most intense inside marks, yina/!ya:na and loGa (rotten). While it is an inside/pale colour relative to its etymological opposite, black, it is nevertheless stronger than any of the other pale colours, all of which carry less intense inside markers. At the same time white stands as a complementary contradiction. The paradigm associates life with pale, inside, and death, i.e., nonlife, with strong, outside. Yet white, the palest of colours, is associated with outside and death.

The three strongest of the living colours, blue, red and green, relate symbolically to male oriented pursuits, the hunting of birds and land animals, while the three palest of living colours, yellow, lavender and orange, relate to female oriented pursuits, the gathering of berries and shell-fish.

4.3 WIDER SYMBOLIC ASSOCIATIONS. The symbol paradigm of the domain of colours has analogies in other Tsimshian conceptual fields. The kinship terminological system identifies persons as outside and inside various categories such as house and lineage (Dunn 1984). The elaborate system of local proclitics gives special emphasis to this same distinction (Boas 1911:300-312) as do the anatomical, meteorological, and calendrical domains.

The Tsimshian colour symbols relate in interesting ways to certain claims about universal symbolism. Levi-Strauss' strong-raw-honey vs. weak-cooked-ashes paradigms (1964; 1967) come immediately to mind. Turner's discussion of the symbolism of the primeval colour triad, black, white, and red (1966), finds echoes in the Tsimshian data. He finds widespread associations of red with maternal blood, with the obtaining of animal food and thus with the male productive role in the sexual division of labour, and of black with bodily dissolution and the cessation of consciousness, with fertile earth, and with inactivity. He also finds that "among the earliest symbols produced by <human beings> are . . . colours representing products of the human body whose emission, spilling, or production is associated with a heightening of emotion (1966:80)." Sahlins (1976) suggests that colours may have a universal symbolism rooted in some way in the physiology of colour perception. Thus red may be widely associated with strength and health in contrast to yellow and green which might connote illness and weakness; red might symbolize sexual strength whereas green and yellow often evoke notions of impotence. Green might represent the strong, raw, and fresh as opposed to the weak, ripe, rotten

yellow. Sahlins claims further that these symbols will always parallel the physiological oppositions between red and green, yellow and blue, black and white.

5. SUMMARY AND CONCLUSIONS. The Tsimshian colour terminology in addition to being a colour naming device is also a tightly organized paradigm of colour symbols, a conceptual field, that transcends major and minor dialect boundaries. It builds on the logical relationships between its component lexical fields. Each lexical field in the colourology has its own morphological gistXalt!m'tk, calque stencil. Each gistXalt!m'tk integrates dialectically diverse lexical material so as to conform to a monolithic semantic structure. Each gistXalt!m'tk contains a descriptive stem, i.e., each is morphologically complex and transparent to etymological analysis. Each colour is named in terms of an entity that best exemplifies it; each descriptive stem is a prototypic index. The paradigmatic relationships between the prototypic indices encode a system of symbols. The Tsimshian colour terminology builds on the type of common colour naming tendencies identified by Berlin and Kay and others, but there is much more to the Tsimshian terminology than Berlin and Kay colouretics.

The relationships between colour names and their prototypic indices are salient, even in the contemporary acculturated speech community. Not so with the symbol system! It is the product of structural analysis. While the latter is in no wise salient, the inferred symbolism is intriguing because it informs the whole recoverable history of the development of the Tsimshian colour terminology. Each addition to the terminology has conformed to a paradigm of symbols already in place. Each addition has given increased clarity and focus to the pristine paradigm. The real history of the terminology is the same thing as the evolution of the conjectured symbolism.

The ongoing systematization of the colour terminology uses an overt set of colour indices and a proclitic marker wortfeld to associate colours with several other dimensions and categories of the Tsimshian interpretation of reality. The colour symbolism aligns death with darkness, strength, the raw, the masculine, the outside; it aligns life with light, the faded/fading, the cooked, femininity, the inside, softness, fragility. Light and pale pastel colours are the soft, delicate, feminine, living insides of the world. Bold colours are the hard, strong, unyielding, unresponsive, masculine outer crust of reality. Symbol laden as they are, Tsimshian colours are not only good to see, they are good to feel and think, for they have the potential to evoke deep-seated, cultural, multidimensional, phatic responses.

WORKS CITED

Baines, John. 1985. Color Terminology and Color Classification: Ancient Egyptian Color Terminology and Polychromy. AA 87:282-297.

Berlin, Brent, and Paul Kay. 1969. Basic Color Terms. Berkeley and Los Angeles: University fo California Press.

Beynon, William. 1920-24. Hazelton Dictionary. Metlakatla, Alaska: Archives of the Metlakatla Bilingual-Bicultural Programme.

Boas, Franz. 1891. Comparative Vocabulary of Eighteen Languages Spoken in British Columbia. Report VI on the North-Western Tribes of Canada. London: British Association for the Advancement of Science. pp. 140-163.

---------. 1902. Tsimshian Texts. Bureau of American Ethnology Bulletin 27.

--------. 1911. Tsimshian. Bureau of American Ethnology Bulletin 40. pp. 283-422.

--------. 1912. Tsimshian Texts, New series. Leyden: E. J. Brill.

Casad, Eugene H. and Ronald W. Langacker. 1985. 'Inside' and 'Outside' in Cora Grammar. IJAL 51:247-281.

Conklin, Harold. 1973. Color Categorization. AA 75: 931-942.

De Valois, R. L., and G. H. Jacobs. 1968. Primate Color Vision. Science 162:533-40.

Dunn, John A. 1976. Southern and Coast Tsimshian Comparative Word List. Victoria: Archives of the Linguistics Division of the British Columbia Provincial Museum.

--------. 1978. A Practical Dictionary of the Coast Tsimshian Language. Ottawa: Canadian Ethnology Service.

--------. 1983. Coast Tsimshian Non-Basal Suffixes. Anthropological Linguistics 25:1-18.

--------. 1984. Tsimshian Grandchildren: Redistributive Mechanisms in Personal Property Inheritance. Jay Miller and Carol Eastman, eds. The Tsimshian and Their Neighbors. Seattle: University of Washington Press. pp. 36-57.

Geertz, Clifford. 1984. Distinguished Lecture: Anti Anti-Relativism. AA 86:263-78.

Hindle, Lonnie, and Bruce Rigsby. 1973. A Short Practical Dictionary of the Gitksan Language. Northwest Anthropological Research Notes, volume 7, number 1.

Howard, W. A. 1860. Notes on the Northern Tribes Visited in 1854. Washington: Archives of the Office of Anthropology of the Smithsonian Institution.

Kay, Paul. 1975. Synchronic Variability and Diachronic Change in Basic Color Terms. Language and Society 4:257-270.

Kay, Paul and C. K. McDaniel. 1978. The Linguistic Significance of the Meanings of Basic Color Terms. Language 54:610-646.

Kelly, Kenneth L., and Deanne B. Judd. 1955. The ISCC-NBS Method of Designating Colors and a Dictionary of Color Names. Naitonal Bureau of Standards Circular 553. Washington: U. S. Department of Commerce.

Levi-Strauss, Claude. 1964. Le Cru et le cuit (Mythologiques I). Paris: Plon.

--------. 1967. Du miel aux cendres (Mythologiques II). Paris: Plon.

McNeill, N. B. 1972. Color and Color Terminology. JL 8:21-34.

Ohman, Suzanne. 1953. Theories of the Linguistic Field. Word 9:123-34.

Sahlins, Marshal. 1976. Colors and Cultures. Semiotica 16:1-22.

Schulenburg, A. C. Graf von der. 1894. Die Sprache der Zimshian-Indianer in Nordwest-Amerika. Braunsweig: R. Sattler.

Tarpent, Marie-Lucie. 1983. Morphophonemics of Nishga Plural Formation. John E. McLaughlin, ed. Studies in Native American Languages II. Lawrence: University of Kansas. pp. 123-214.

Tolmie, W. Fraser. 1877. Vocabulary of the Kittistzoo Dialect of the Tsim-si-ann. Contributions to North American Ethnology 1:143-151. Washington: U. S. Geographical and Geological Survey of the Rocky Mountain Region.

Trier, Jost. 1934. Das sprachliche Feld. Neue Jahrbucher fur Wissenschaft und Jugenbildung 10:428-49.

Turner, Victor. 1966. Colour Classification in Ndembu Ritual. Michael Banton, ed. Anthropolgocial Approaches to the Study of Religion. New York: Praeger. pp. 47-84.