



The Colour World of the ǀAkhoe Hai||om:
A QUALITATIVE RESEARCH INTO COLOUR NAMING IN ǀAKHOE HAI||OM

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Abstract

What is the relationship between language and thought? Does one's language determine the way one thinks? For more than fifty years, researchers in the field of linguistics have attempted to answer these intrinsically human philosophical questions by designing experiments involving the codification of colours, due to the inherent biological and therefore linguistic aspects of colour.

The ensuing debate surrounding the interpretation of the data from these investigations created two opposing views. The findings of these researches were seen as being either supportive of the Universalist or the Relativist vision. This division, although not as stark at current date, has had the academic language and cognition investigation in a stand-off. Both the bulk of accompanying polemics and the fact that both sides have a considerable amount of data to support their views, young students bound to libraries have been enticed to pick a side.

To prevent myself from falling into the trap of merely rethinking thoughts of others, I decided to join the throng of researchers investigating colour naming in the field. The Max Planck Institute for Psycholinguistics provided me with the necessary stimuli to undertake a basic colour terms elicitation task for the language of my choice, ǀAkhoe Hai||om.

The results of this task showed a sharp generational divide in both the consistency of basic colour term usage as well as in the amount of basic colour terms used. I further state that the most likely reasons for these changes include both increased exposure to Western culture(s) as well as the legislation of the educational system in Namibia, in the years following the country's independence.

I conclude that as far as these results and my experience in the field go, I chose to step out of the dichotomy. Partly because of its basic assumption on the causality of the biological and linguistic aspects of colour. I wholeheartedly agree with Marc Bornstein (2006), when he states that: "the process of linguistic colour naming. is not a process of whole causality". But mostly and more importantly, because I find that the basic assumptions about language itself need to be re-evaluated.

Keywords

Namibia, Tsintsabis, San, ǀAkhoe Hai||om, colour naming, linguistics, basic colour terms, Whorfian debate.

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This text is dedicated to the members of the Hai||om community in Tsintsabis.

Abbreviations

ADJ.	Adjective
BCT	Basic colour term
BEN	Benefactive
CC	Colour chip
DEM	Demonstrative
DIM	Diminutive
LUF	Leids Universitair Fonds
M	Masculine
MPI	Max Planck Institute for Psycholinguistics
PGN	Person Number Gender
PRIV	Privative
SG	Singular
SOV	Subject Object Verb
WCS	World Colour Survey

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Introduction

When the time came for me to decide which subject I wanted to write my thesis about, I was given the opportunity by the Max Planck Institute for Psycholinguistics (MPI) in Nijmegen to combine my life-long fascination for Khoisan languages and my dedication to be part of the documenting of endangered languages with my personal field of interest language and cognition.

The choice of ǀAkhoe Haiǀom, spoken in northern Namibia, as my research language comes from my experience with this language during my time as a student assistant for the *Dokumentation Bedrochten Sprachen* project (*DoBeS*) at the MPI. The goal of this project was to provide a thorough description, documentation and multi-media compilation of linguistic and cultural materials of this endangered language. My work consisted of transcribing the data gathered by Tetru Heikinnen, Thomas Widlock and Christiaan Rapold. The importance of the documentation work is twofold. Firstly, it can be a useful tool in helping to maintain or revitalize the language in focus, and secondly, it will help to inform future generations about the language diversity and the cultural treasures of mankind.

The MPI's primary goal is to understand how our minds and brains process language. Within the MPI, the Language and Cognition Department is investigating the relationship between language and general cognition, through a shared method of using cross-linguistic data as evidence for universals and cultural specialisations. This department currently has two main projects:

1. the Interactional Foundations of Language project, and,
2. the Categories project.

The Categories project investigates the significance of diverse linguistic categories for human cognition, through cross-linguistic investigation on the codability of common human experiences. This should enable them to address core theoretical questions at the heart of the language - cognition interface. Within this project, I investigated the perceptual field of vision through the analysis of colour naming tasks. The here presented thesis is the output of the data collection, as well as its analysis, gathered in Tsintsabis, Namibia during a five week field trip in January and February 2009.

My thesis demonstrates what terms ǀAkhoe Haiǀom speakers use when asked to talk about two-dimensional abstract colour chips shown in an investigative interview setting as prescribed by the MPI. "The colour world of the ǀAkhoe Haiǀom" was coined by me to represent the resulting terms and their analysis. The analysis showed a sharp generational divide in the way speakers of ǀAkhoe Haiǀom talk about their colour world. This divide is reflected verbally in the number of terms used, as well as in the consistency of the usage of some of these terms. The visual counterpart of these findings also showed a shift in the division of the presented colour space through the difference in basic colour term usage.

These differences raised doubt about the wisdom of using only the verbal outcome of the colour naming task as a way to represent the colour world. This doubt was responsible for the creation of a toolkit (appendices 2 and 3), to enable the reader to *see what was shown*, as well as *how what was seen was talked about*.

The essay itself is structured as follows. Chapter one consists of a thorough outline of the methodology used in the research, where we describe the research's hypothesis and procedures including reflections on the method used. The next chapter has been reserved for elaboration on the research area, giving a short overview of what is meant by ǀAkhoe Haiǁom; i.e., the area, the people and their language. The section on language will be subdivided into grammar and phonetics, i.e.; the consonant and vowel set, and the orthography used, necessary for interpreting the data. Chapter three introduces the result and breakdown of the collected data into basic colour terms (BCT), followed by the resulting colour world for this language in chapter four. Last but not least, the final chapter is kept for the discussion of the research field and the conclusion of our findings.

1. Research Field Colour

This chapter is dedicated to the elaboration on what and how of this investigation. I will not only describe the hypothesis behind the MPI's study, but also give a full overview of breakdown of procedures and their subsequent prerequisites; i.e., the material used and the necessary amount of consultants, the apparatus used for data collection and any the specifics concerning the collection of data itself.

1.1. Hypothesis

The Language and Cognition Group at the MPI developed procedures and stimuli to be used for tasks to investigate the language of perception cross culturally, wherein:

“The goal [...] is to test the hypothesis that some perceptual domains are more codable than others and whether the proximate senses are universally codable – suggesting an architectural constraint on cognition – or whether they are just accidentally so in Indo-European languages, which would open the question of the relationship between language and the senses. To test the hypothesis I have devised naming tasks for the different senses. I will compare response consistency within communities and establish whether some domains are more than others. The domains are:

- (1) vision – colour,
- (2) vision – shape,
- (3) sound,
- (4) tactile texture,
- (5) olfaction,
- (6) taste.

”

Within these domains, I chose to investigate colour within the vision domain, on which the MPI field manual 2007 reads the following about the research task on colour naming:

“Here we are focusing on the codability of colour terms, assuming colour to be more codable across languages than some of the other domains. [...]We also leave aside the Whorfian question of whether colour naming affects colour cognition... [Within the scope of this task] we are solely concerned with the linguistic coding of colour...”

Upon completing the data collection, the following research questions should be answered:

1. What terms are there for abstracted colour (as opposed to colour plus material, colour plus texture etc.)?
2. What form class are colour distinctions made in?
3. In your language, how nameable are colours?
4. How much consistency is there within the speech community for describing colour?

1.2. Procedure

The primary goal of this task is to establish how people talk about colour and what resources the language provides for doing so. In the following sections the procedure and prerequisites for obtaining this information will be presented.

1.2.1. Material

For elicitation purposes on the vocabulary of colour in a given language, the MPI developed stimuli in the form of a booklet. Showing a subset of the Munsell chips from the World Colour Survey (WCS), this booklet has 80 pages. Each page containing a single colour chip from this subset, and each chip organized in a fixed random order.

The stimulus set is a reduced version of the standardized Munsell chips which are used in the WCS, see chart 1. It samples 20 equally spaced hues at 4 degrees of brightness, all at maximum saturation. The consultants were shown the individual stimuli in the booklet, one page at a time and asked in Hai||om “What colour is this?” *Māa |hüba neba?*

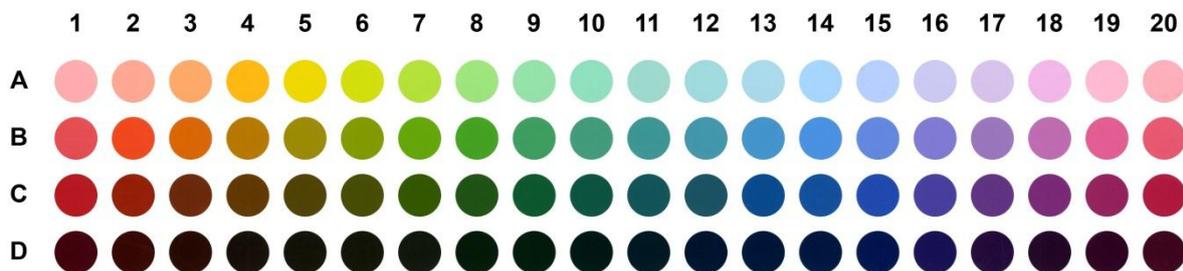


chart 1

1.2.2. Participants

To be able to collect qualitative data, the MPI asked the stimuli to be shown to 12 consultants. I divided this number equally into age groups, one 25 plus group and one group with children between the ages of 7 and 9. Table 1 states the name of the consultant; their age and gender; the name of the tested language and full linguistic background of the consultant. All consultants have been tested for colour-blindness, before the interview¹.

¹ This very simple task consisted of showing 2 colour plates, made up of colour patches of different colours. The plates had to be held approximately 75 cm away from the consultant. Then the consultant was asked to trace (with their index finger) the winding lines between the two x's. The tracing had to be completed within 10 seconds.

ID	AGE	GENDER	LANGUAGE TESTED	FULL LINGUISTIC BACKGROUND	
1	Justini Khaoseb	90	female	Hai om	No other languages; illiterate
2	Frieda Habasas	68	female	Hai om	!Xū; illiterate
3	Auguste	67	female	Hai om	No other languages; illiterate
4	Solastica Thanes	25	female	Hai om	Afrikaans, English, Nama Damara; literate
5	Khota Voorslag Kausab	54	male	Hai om	!Xū; illiterate
6	Amakali	67	male	Hai om	!Xū; illiterate
7	Rosalina	8	female	Hai om	English, Nama Damara; literate
8	Tina	9	female	Hai om	English, Nama Damara; literate
9	Gwendalie	8	female	Hai om	English, Nama Damara; literate
10	Moses	8	male	Hai om	English, Nama Damara; literate
11	Mario	7	male	Hai om	English, Nama Damara; literate
12	Khoes	7	male	Hai om	English, Nama Damara; literate

Table 1

1.2.3. Apparatus

The MPI asked for the responses to be video recorded. I used a handheld Sony DCS-W5, 8 megapixel photo camera, with built in microphone. It was the only affordable solution at the time, but alas made for some poor quality footage.

1.2.4. Data Collection

The colours were presented to the consultants in a fixed random order, showing one colour chip per page. Presenting page 1 and asking for a description of the colour and then proceed to page 2, and so on until all the colour chips have been named. Each consultant's response was recorded in full and coded for word/phrase/construction.

1.3. Ethical Aspects

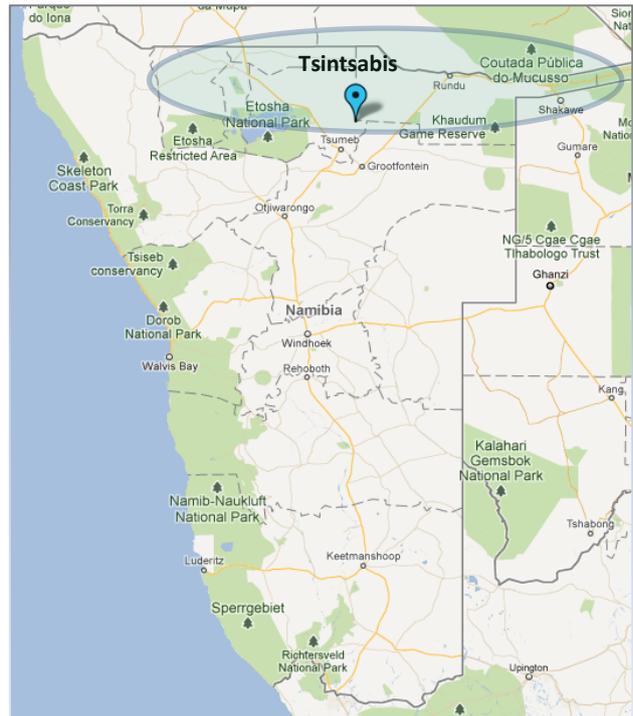
Since all interviews were video recorded and transcribed, I was sure to get explicit permission from both the chief in Tsintsabis and the individual consultants themselves, to use and display these recordings, if necessary, in the light of this thesis.

1.4. Methodological Reflections

I would like to take the opportunity to express our reserve about the usage of abstract colour chips as a method for colour terminology elicitation in trying to grasp the full vocabulary needed to describe the Hai||om colour world, since it holds the underlying assumption that the colour space as was presented by me is an actual representation of the full range of that colour world. An assumption I do not necessarily share.

2. Research Area - ǀAkhoe Hai||om

Our research focuses on the ǀAkhoe Hai||om of Tsintsabis², a rural town in the Oshikoto region of northern Namibia. The town is said to have fewer than 1000 inhabitants, of which approximately 800 are thought to be ǀAkhoe Hai||om. In this research I use the term ǀAkhoe Hai||om to denote both the language as well as the speakers of this language. In the following sections, it is my intention to provide sufficient background information on the people and the language, so as to make the reader more sensitive to the necessity of leaving preconceived frameworks behind when faced, perhaps, with a culture, life style and language as different from the reader's framework on these subjects as ǀAkhoe Hai||om.



map 1

2.1. People

When speaking about the ǀAkhoe Hai||om as a people, they are traditionally profiled as hunter-gatherers and many aspects of their traditional culture have been preserved, despite the political, economic and linguistic marginalisation of their group. Some characteristic features of their culture include healing trance dances, hunting magic and intensive usage of wild plant and insect food, a unique kinship and naming system, frequent storytelling, and the use of a landscape-term system for spatial orientation.

The ǀAkhoe Hai||om live in the savannah of northern Namibia, in an area stretching from the edges of Etosha salt pan and the northern white farming areas as far as the Angola border – and perhaps beyond – in the north and Kavango in the east. An approximation of this area can be found on map 1.

According to the Ethnologue website there were 18,400 ǀAkhoe Hai||om speakers in Namibia in 2006, but as with all figures on people and languages of low reputation this count might not be very reliable.

² see map 1

2.2. Language

Linguistically speaking it has been proven hard to reach a consensus of what exactly is denoted by the term ǀAkhoe Hai||om. In the sparsely available material ǀAkhoe Hai||om has been considered a variant of the Khoekhoe language, seen as separate dialects (Haacke et al. 1997), as virtual synonyms of one single variant (Heikinnen, n.d.) or even as a way to denote “a way in which some Hai||om speak their language in the northern part of Namibia” (Widlock, n.d.).

Since the depth of this discussion is of no further importance to this investigation and bears no impact on the results and analysis of this research, I have chosen to adhere to the general classification of ǀAkhoe Hai||om as a Central Khoisan language and a member of the Khoekhoegowab dialect continuum. It is in this same spirit of delineation that I decided to base the content of my grammar and phonology sections only on those features necessary for reading and understanding the analysis of the collected data.

2.2.1. Grammar

In theory ǀAkhoe Hai||om possesses free word order, with the subject-object-verb order (SOV) being the most dominant preference. In keeping with the typological profile of SOV languages, adjectives, demonstratives and numerals generally precede nouns. Nouns are marked by person-gender-number (PGN) markers. Adjectives, demonstratives and numerals, all agree with their head noun, as shown in example (1).

- (1) Mǀa |ǀ-ba nde-ba?
what hair-3SGM this-3SGM
“What colour is this?”

Mǀa is an interrogative used freely in Hai||om, the subject *|ǀ* takes the suffix *-ba*, which is a PNG marker, denoting the 3rd person singular masculine. Here the indirect object *nde*, a *demonstrative*, follows the noun, and is inflected in concord with the head noun.³

When considering the full body of data I noticed some behaviour unusual, to me, in the forming of compounds. Compound structures are highly productive in ǀAkhoe Hai||om and vary widely in the combination of word categories. The possibilities include:

- noun+noun,
- noun+adverb or *vice versa*
- noun+adjective or *vice versa*
- adjective+adjective
- adjective+adverb or *vice versa*
- adjective+suffix
- multiple combinations of the above

³ see Heikinnen, T. (n.d.) *A description of the language of ǀAkhoe Hai//om*, Unpublished manuscript.

The following examples give an overview of these combinations and their glosses as found in the data. The numbers on the right side represent the consultant and the corresponding answer respectively as they appear in appendix 1, *Full overview BCT distribution per colour chip*.

NOUN+ADJECTIVE:

(2)	hom	‡hoa	5.16
	sky	blue	

ADJECTIVE+ADJECTIVE:

(3)	gã	!am	1.8
	thin	green	

(4)	‡gama	gã	11.42
	pink	thin	

(5)	gaisa	!am	1.11
	strong	green	

(6)	half	gaugo	6.44
	half	brown	

(7)	hai	‡hoa	11.48
	grey	blue	

ADVERB+ADJECTIVE:

(8)	hana	!uri	3.66
	actual(ly)	yellow	

ADJECTIVE+SUFFIX:

(9)	‡gama-ro	1.23
	brown-DIM	

(10)	aba-o	1.20
	red-PRIV	

(11)	!am	‡hoa-ba	5.68
	green	blue.BEN	

ADJECTIVE+ADJECTIVE+ADJECTIVE:

(12) |gaisa ||gã !am 4.17
strong thin green

(13) gaugo !nã !am 1.59
brown lighth green

(14) |gaisa !nã !am 4.19
strong light green

(15) |aba !nã †gama 8.33
red light brown

ADJECTIVE+ADJECTIVE+ADJECTIVE+ADJECTIVE:

(16) |aba ||gã !nã †hoa 4.63
red thin light blue

2.2.2. Phonology

This section is dedicated to the ǀAkhoe Haiǁom sound system. I have chosen to follow the orthographic conventions already developed for Khoekhoegowab. The phonemes are represented in tables 2, 3, 4 and 5 below. These tables contain both the orthographic symbols and their corresponding phonetic transcription between brackets. After a thorough literature research, comparing Heikinnen’s and Widlock’s contribution to ǀAkhoe Haiǁom phonology with the more general and theoretical phonological work of Peter Ladefoged (1996), I found ǀAkhoe Haiǁom to have 47 phonemes, consisting of 20 clicks, 14 non-clicks and 12 vowels. However, a complete indepth phonological sketch of the language might show other results where the vowels are concerned.

2.2.2.1. Consonants

There are 34 contrastive manifestations of consonants in ǀAkhoe Haiǁom, 20 of which are produced with an ingressive airstream, a.k.a clicks, and 14 of which are produced with an egressive airstream.

Clicks are doubly articulated consonants. Each click consists of one of four primary articulations called influxes and one of three secondary articulations called accompaniments, which can be even further divided⁴. In ǀAkhoe Haiǁom the combination of influxes and accompaniments results in 20 phonemes, which are represented in table 2.

INGRESSIVE SOUNDS						
CLICK	ACCOMPANIMENT	INFLUX	DENTAL	ALVEOLAR	PALATAL	LATERAL
	VOICELESS	UNASPIRATED		[g [k]]	ǀg [kǀ]	!g [k!]
ASPIRATED			[kh [!ʰ]]	ǀkh [ǀʰ]	!kh [!ʰ]	ǁkh [ǁʰ]
NASALISED	VOICELESS		[h [ŋʰ]]	ǀh [ǀŋʰ]	!h [ŋ!ʰ]	ǁh [ǁŋʰ]
	VOICED		[n [ŋ]]	ǀn [ǀŋ]	!nu [ŋ!]	ǁn [ǁŋ]
GLOTTAL CLOSURE			[[k?]]	ǀ [kǀ?]	! [k!?]	ǁ [kǁ?]

Table 2

⁴ see Ladefoged and Madison (1996), pp. 246-260.

EGRESSIVE SOUNDS								
		BILABIAL	DENTAL	ALVEOLAR			VELAR	GLOTTAL
STOP	PLAIN	b [p]	t [t]				k	
	NASALISED	mb [ᵐb]	nd [ᵐd]					
AFFRICATE	VL			tsh [tʃ]			kh [kx]	
	VD			ndz [ndʒ]				
FRICATIVE				s			x	h [h]
FLAP				r				
NASAL		m		n				

Table 3

2.2.2.2. Vowels

To the best of my knowledge, ǀAkhoe Hai||om has a total of 12 vowel phonemes. These can be divided into monoph- and diphtongs, with a further subdivision into oral and nasal pronunciation. The 8 monophthong vowels are represented in table 4. The 4 diphtongs are found in table 5.

i, ĩ *u, ũ*
e *o*
a, ã

table 4

ai [əi], ãi [ãi] au [əu], ãu [ãu]

table 5

3. Data

This chapter is reserved to present the data as recorded during the fieldwork task. The full body of data comprises both compound and single word structures. I will gradually be stripping the full body of utterances down, in accordance with the theory and procedure prescribed in chapter 1, until all that is left are terms which could be considered BCTs, coupled with their corresponding colour chip as occurred in the booklet. The further discussion of the data is reserved for the chapter on the colour world of the ǀAkhoe Haiǀom.

3.1. Terms, Glosses and Form Class

The corpus of data consists of 960 utterances. 820 single word utterances and 140 compounds. The original utterances of the consultants have been transcribed in table 6a and 6b. The former contains the answers of the 25 plus group, the latter those of the 7-9 year age group. These tables also include the division of these terms into heads and modifiers and show the actual colour of the corresponding colour chip. Table 3 has been reserved to show the glosses and form classes of the terms. For specifications on the consultants, I refer back to chapter 1 section 1.3.

#	chip	Consultant 1		Consultant 2		Consultant 3		Consultant 4		Consultant 5		Consultant 6	
		<i>modifier</i>	<i>head</i>										
1			!am										
2			gaugo		ǀhai		ǀgama	ǁgã	ǀgama		ǀhai		gaugo
3			ǀaba		pink		pink	ǀhoa !nã	ǀgama		orange		pers
4			ǀhai		ǀhai		pers		ǀhai		ǀhai		ǀhai
5			!huni		!huni		!huni	ǁgaisa	!huni		ǀgama		!huni
6			!am	ǀhai	!am	ǀhai	!am	ǁgã !nã	!am		!am		!am
7			ǀaba		pink		ǀaba	ǁgã !nã	ǀaba		ǀaba		pink
8		ǁgã	!am		!am		!am (be)	ǁgaisa	!am		!am		ǀhai
9			ǀhoa		ǀhoa		ǀhoa	ǁgaisa	ǀhoa		ǀnu		ǀnu

10			‡gama		‡nu		‡nu	!gaisa	‡gama	‡gama	‡nu		‡gama
11		!gaisa	!lam		!lam		!lam	!hai	!lam		!lam		!lam
12			‡nu	!lam	!gaugo		‡gama	!‡gã !nã	‡gama	‡nu !nã	‡gama		‡gama
13			!luri		!hai		!luri		!hai		!luri		!luri
14			!orange		!orange		!huni	!gaisa	!huni		!huni		!huni
15			‡nu		!pers		!pers	!‡gã !nã	‡gama		‡gama		!gaugo
16		!‡gã	‡hoa		‡hoa		!lam	!hai	‡hoa	!hom	‡hoa		‡nu
17			!laba		!pers		!pers	!gaisa !‡gã	!lam	!‡gã	‡gama		!gaugo
18			!lam		!lam		!lam	!‡gã	!lam	!‡gã	!lam		!lam
19			!huni		!huni		!huni	!gaisa !nã	!lam	!‡gã	!lam		!huni
20			!laba-o		!orange		!laba		!laba	!‡gã	!laba		!pink
21			!orange-o		!orange		!orange	!‡gã !nã	!huni	!‡gã	!huni		!huni
22			!gaugo	!‡gã	!lam		!lam	!gaisa	‡gama		‡gama		!hai
23			‡gama-ro		!lam		!pers	!gaisa	‡hoa	‡nu !nã	‡hoa		‡nu
24			!luri	!‡gã	!lam		!lam	!‡gã	‡hoa		‡hoa		‡nu
25			!orange		!orange		!laba	!gaisa	!huni	!‡gã	!laba		!pink
26			!gaugo	!‡gã	!orange		!pers	!‡gã	!laba	!‡gã	‡gama	!pink	!hai
27			‡gama		!pink		!pink	!‡gã !nã	!laba		!hai		‡gama
28			‡hoa		!pers		‡gama	!gaisa	‡hoa		‡hoa		‡nu
29			!gaugo		!orange		!pink	!‡gã	!laba	!hai	‡gama	‡gama	!hai
30			!lam		!lam		!lam	!gaisa	!lam		!lam		!lam

31		gã	!am	gã	!am		!am	gã	!am	gã !nã	!am	!am	!hai
32			orenge		!huni		!huni		!huni		!huni		!huni
33			gaugo		‡gama		‡gama	!aba !nã	‡nu		gaugo		‡gama
34		!am	gaugo		!am		!am	!gaisa	!am	gã !nã	!am		!am
35			!am	!am	!hai		!am	gã	!am		!am		!am
36			gaugo		pers		pers	gã !nã	‡nu		‡gama		‡gama
37			orenge		orenge		!huni	gã	!huni	gã !nã	!am		!huni
38			!aba		!aba		!aba	!gaisa	!aba		‡gama		‡gama
39			!am		!am		!am		!am	!hai !nã	!am		!am
40			!am		!am		‡gama	gã	!am		!am		!am
41			gaugo		‡gama		!am	gã	‡gama		!hai		‡gama
42			!hai		!am		!am	gã !nã	!am	!gaisa	!am	gã	‡gama
43			‡hoa		‡nu		‡nu	!gaisa	!am	‡gama	!am		‡hoa
44			orenge		orenge		pink	!gaisa	!huni	!huni(ba)	‡gama	half	gaugo
45			‡hoa		‡hoa		pers	!gaisa	‡hoa	‡nu	‡gama		‡hoa
46			‡nu		pers	!hai	‡hoa	!hai !nã	‡hoa		‡hoa		‡hoa
47			‡nu		‡nu		‡nu	!gaisa	!am	‡nu !nã	‡gama		‡nu
48			!am	gã	!am		!am	gã	!am	!hai	!am		!am
49			‡hoa		pers		pers	gã !nã	‡hoa		‡gama	half	gaugo
50			!aba		!aba		gaugo	!gaisa	!aba		!aba	!uasa	gaugo
51			!am		‡hoa		pers		‡hoa		‡hoa		‡hoa

52			lam		lam		lam	llgã	‡hoa	lam !nã	‡gama		‡nu
53			‡nu		‡nu	hai	‡hoa	gaisa	‡hoa		‡nu		‡nu
54			‡hoa		‡hoa	uatsi	‡hoa	llgã	‡hoa		‡hoa	half	hai
55			orange		!huni	ora	!uri	llgã	lam		orange		!huni
56			‡hoa		‡hoa		‡hoa		‡hoa		‡hoa		hom
57			lam		‡hoa		lam	gaisa	‡hoa		‡hoa		‡gama
58			pink		orange		pers	gaisa !nã	laba	laba	‡hoa		!huni
59			gaugo		!huni	ora	!huni	gaisa !nã	lam		!huni	half	gaugo
60			laba		pink		pers	llgã	laba		orange		gaugo
61			‡nu		‡nu	hai	‡nu	gaisa	lam		‡nu		‡hoa
62			lam		lam		lam	llgã	lam		lam		lam
63			gaugo		pers		pers	laba llgã !nã	‡hoa		‡hoa		gaugo
64			‡nu		pers	hai	‡hoa	gaisa !nã	‡hoa		‡hoa		‡nu
65			‡nu		‡nu		‡nu	gaisa	‡gama		‡nu		‡nu
66			lam	lam	hai	hana	!uri	hai	‡hoa		lam	hai	lam
67			gaugo		lam		pers	hai !nã	laba		‡hoa		gaugo
68			lam	llgã	lam		lam		lam	lam	‡hoa(ba)		lam
69			lam		lam	ora	lam	gaisa	lam	‡gama	‡hoa(ba)		lam
70			orange		orange		pers	llgã	laba		‡gama		gaugo
71			orange		laba		laba	llgã !nã	laba		laba		pink
72			!huni		!huni		!huni	gaisa	!huni		orange		!huni

73			‡nu		!am		!am	gaisa	!am		‡nu		‡nu
74			!am	gã	!am	uatsi	!am	gã	!am		!am		!am
75			‡nu		‡gama	hai !nã	!am	gaisa	!am	aba	‡nu		‡nu
76			‡nu		!am	hai !nã	!am	gaisa !nã	!am	hai	‡nu		‡nu
77			!am	gã	!am		!am	gã	!am		‡gama		!am
78			aba		pink		aba	gã	aba		aba		orange
79			‡gama		‡gama		gaugo		‡gama		‡gama		gaugo
80			gaugo	gã !nã	‡gama		‡gama	hai	‡gama		‡gama		

Table 6a

#	chip	Consultant 7		Consultant 8				Consultant 9					
		modifier	head	modifier	head	modifier	head	modifier	head	modifier	head	modifier	head
1			!am		!am		!am		!am		!am		!am
2			!am		!am		‡gama		!am		‡gama		‡gama
3			pers		pink		pers		pers		pink		pers
4			!uri	gã	pink		!uri		pers		!uri		!uri
5			!huni		!huni		!huni		!huni		!huni		!huni
6			!am		gã !am		!am		!am	gã	!am		!am
7			aba		orange		pink		aba		aba		aba
8			!am	gaisa	!am		!am		!am		!am		!am
9			‡hoa		‡hoa		‡hoa		‡hoa		‡hoa		aba
10			‡nu		!am		‡nu		‡nu		‡nu		‡gama
11			!am		!am		!am		!am		!am		!am

12			‡nu		‡gama		‡nu		!uri		‡gama		‡gama
13			!uri	gã	pink		!uri				!uri		!uri
14			!huni		orenge		orenge		!huni		orenge		!huni
15			pers		‡gama		pers		pink	gã	pink		pers
16			‡hoa		‡hoa		‡hoa		!am		‡hoa		‡hoa
17			pers		‡gama		‡nu		pers		pink		‡hoa
18			!am		!am		!am		!am		!am		!am
19			!am		!am		‡nu		!am		!am		!huni
20			!aba		!aba		!aba		!aba		!aba		!aba
21			orenge		!huni		orenge		orenge		orenge		pers
22			!am		‡gama		!am		!am		!am		!am
23			‡hoa		!am		‡hoa		‡hoa		‡hoa		‡hoa
24			‡hoa		‡hoa		‡hoa		!am	gã	!am		‡hoa
25			orenge		orenge		orenge		orenge		pink		pink
26			pink		pink		orenge		pers	gã	!am		!hai
27			pink		orenge		pink		orenge		pink		orenge
28			‡hoa		pers		‡hoa		‡hoa		‡hoa		‡hoa
29			pink		pink		pink		pers	gã	pink		pers
30			!am		!am		!am		!am		!am		!am
31			‡hoa		‡hoa		!am		!am	gã	!am		!hai
32			!huni		!huni		!huni		orenge		!huni		!huni

33			pers	aba !nā	‡gama		pers		‡gama		‡gama		‡gama
34			!am		!am		‡hoa		!am		!am		!am
35			!am		!am		!am		!am		!am		!am
36			pers		pers		pers		‡gama		pink		‡hoa
37			orenge		!huni		orenge		orenge	gā	pink		orenge
38			pers		aba		pink		aba		pink		‡hoa
39			!am		!am		!am		!am		!am		!am
40			!am		!am		!am				!am		!am
41			‡gama		‡gama		‡gama		‡gama		‡gama		‡gama
42			!am		!am		!am		!am	gā	‡gama		!am
43			‡nu		‡hoa		‡hoa		pers		‡nu		!am
44			orenge		orenge		orenge		orenge		pers		orenge
45			‡hoa		‡hoa		‡hoa		‡hoa		‡hoa		‡hoa
46			pers		‡hoa		pers		‡hoa		‡hoa		‡hoa
47			‡nu		‡gama		!am		‡gama		‡nu		‡gama
48			‡hoa		!am		!am		‡gama	hai	‡hoa		hai
49			‡hoa		pers		‡hoa		pink	gā	‡hoa		‡hoa
50			aba		aba		orenge		aba		aba		aba
51			‡hoa		‡hoa		‡hoa		‡hoa		‡hoa		‡hoa
52			‡nu		‡nu		‡hoa		!am	gā	‡hoa		pers
53			‡hoa		‡nu		‡hoa		!am	gā	‡hoa		‡hoa

54			‡hoa		‡nu		‡hoa		‡hoa		‡hoa		‡hoa
55			!am		!am		!am		!huni	gã	!huni		!am
56			‡hoa		‡hoa		‡hoa		‡hoa	gã	‡hoa		‡hoa
57			‡hoa		‡hoa		‡hoa		‡hoa		‡hoa		‡hoa
58			pink		!huni		orenge		orenge		pers		hai
59			!am		!am		!am		!huni		!huni		!am
60			pink		pink		pink		pink		pink		pers
61			‡nu		‡gama		!am		‡nu		‡nu		‡nu
62			!am		!am		!am		!am	gã	!am		!am
63			pink		pers		pers		pink		pink		‡hoa
64			pers		‡gama		pers		pers		pink		‡hoa
65			‡nu		pers		!am		‡nu		‡nu		‡gama
66			‡hoa		pers		‡hoa		!am	gã	‡hoa		hai
67			pers		‡gama		pers		!am		aba		aba
68			!am		‡hoa		!am		‡gama		!am		!am
69			!am		!am		!am		!am	gã	!am		!am
70			pink		pink		orenge		orenge		pink		pers
71			orenge		orenge		pink		orenge		aba		aba
72			!huni		!huni		!huni		!huni		!huni		!huni
73			‡nu		‡hoa		!am		!am		!am		!am
74			!am		!am		!am		!am	gã	!am		!am

75			!am		‡hoa		!am		!am		!am		!am
76			!am										
77			‡hoa		‡hoa		‡hoa		!am		pers		hai
78			aba		aba		pink		aba		aba		aba
79			‡gama										
80			‡gama										

Table 6b

#	TERM	GLOSS	FORM CLASS
1	!am	green	adjective
2	!huni	yellow	adjective
3	!nā	light	adjective
4	!uri	white	adjective
5	gā	thin, not in copious amounts, bland	adjective
6	aba	red	adjective
7	gaisa	strong, in copious amounts, lively	adjective
8	hai	grey	adjective
9	hom	sky	noun
10	‡gama	brown	adjective
11	‡hoa	blue	adjective
12	‡nu	black	adjective
13	gaugo	brown	adjective
14	half	half	adjective
15	hana	real(ly), actual(ly)	adverb
16	ora	unripe	adjective
17	orange	orange	adjective
18	pers	purple	adjective
19	pink	pink	adjective
20	-o	privative (PRIV)	suffix
21	-ro	diminutive (DIM)	suffix
22	-ba	benefactive (BEN)	suffix

Table 7

In the full data set, 19 recurring terms and three suffixes were found. As can be seen in table 7, the occurring form classes are adjective, noun and adverb. The majority of terms are adjectives, which are responsible for 17 of the words. The noun */hom* is used twice, once in a compound and once as a single word utterance. The adverb *hana* occurred only once, as a modifier of a compound.

(17) hom	‡hoa	5.16
sky	blue	
(18) hom		6.56
sky		
(19) hana luri		3.66
actual(ly) yellow		

3.2. Basic Colour Terms

Looking at the head terms per colour chip and age group, 12 words were left, namely, *!am, !huni, !uri, !aba, !hai, †gama, †hoa, †nu, gaugo, orange, pers* and *pink*. All of these fit the MPI criteria for the terms to be taken into further consideration as a BCT. They are:

- (1) monolexemic,
- (2) non-context specific,
- (3) not included in the range of another term, and
- (4) highly salient.

The colour chip and its corresponding BCT consistency is shown in table 4.⁵ The differences noticed in consistency for the BCT across age groups, made me decide to show an overview separating the overall, 25+ and 7-9 results.

#	COLOUR	OVERALL	25+	7-9
1		!am	!am	!am
2		†gama	†gama/gaugo	†gama/!am
3		pers	pink	pers
4		!hai	!hai	!uri
5		!huni	!huni	!huni
6		!am	!am	!am
7		!aba	!aba	!aba
8		!am	!am	!am
9		†hoa	†hoa	†hoa
10		†nu	†nu/†gama	†nu

⁵ For a full overview of the BCT distribution, presented in split results for the age groups, we refer to appendix 1.

11		!am	!am	!am
12		‡gama	‡gama	‡gama
13		!uri	!uri	!uri
14		!huni	!huni	!huni/orenge
15		pers	‡gama/pers	pers
16		‡hoa	‡hoa	‡hoa
17		pers	pers	pers
18		!am	!am	!am
19		!am	!huni	!am
20		aba	aba	aba
21		orenge	!huni/orenge	orenge
22		!am	!am/‡gama	!am
23		‡hoa	‡hoa	‡hoa
24		‡hoa	‡hoa/!am	‡hoa
25		orenge	aba/orenge	orenge
26		pink/orenge	aba/ hai/‡gama/ ‡hoa/gaugo/orenge/pers	pink
27		pink	‡gama/pink	pink/orenge
28		‡hoa	‡hoa	‡hoa
29		pink	aba/ hai/‡gama/ gaugo/orenge/pink	pink
30		!am	!am	!am
31		!am	!am	!am

32		!huni	!huni	!huni
33		‡gama	‡gama	‡gama
34		!am	!am	!am
35		!am	!am	!am
36		pers	‡gama/pers	pers
37		orenge	!huni	orenge
38		aba	aba	aba/pink
39		!am	!am	!am
40		!am	!am	!am
41		‡gama	‡gama	‡gama
42		!am	!am	!am
43		‡nu/‡hoa	‡nu/‡hoa/!am	‡nu/‡hoa
44		orenge	orenge	orenge
45		‡hoa	‡hoa	‡hoa
46		‡hoa	‡hoa	‡hoa
47		‡gama	‡nu	‡gama
48		!am	!am	‡hoa/!am
49		‡hoa	‡hoa/pers	‡hoa
50		aba	aba	aba
51		‡hoa	‡hoa	‡hoa
52		‡nu/‡hoa	!am	‡nu/‡hoa

53		‡hoa	‡nu	‡hoa
54		‡hoa	‡hoa	‡hoa
55		!am	orenge/!huni	!am
56		‡hoa	‡hoa	‡hoa
57		‡hoa	‡hoa	‡hoa
58		orenge	!huni/ aba/‡hoa/orenge/ pink/pers	orenge
59		!am/!huni	!huni	!am
60		pink	aba	pink
61		‡nu	‡nu	‡nu
62		!am	!am	!am
63		pers	‡hoa/pers/gaugo	pink
64		pers/‡hoa	‡hoa	pers
65		‡nu	‡nu	‡nu
66		‡hoa	!am	‡hoa
67		pers/ aba	gaugo	pers/ aba
68		!am	!am	!am
69		!am	!am	!am
70		orenge	orenge	pink
71		aba	aba	orenge
72		!huni	!huni	!huni
73		!am	‡nu/!am	!am

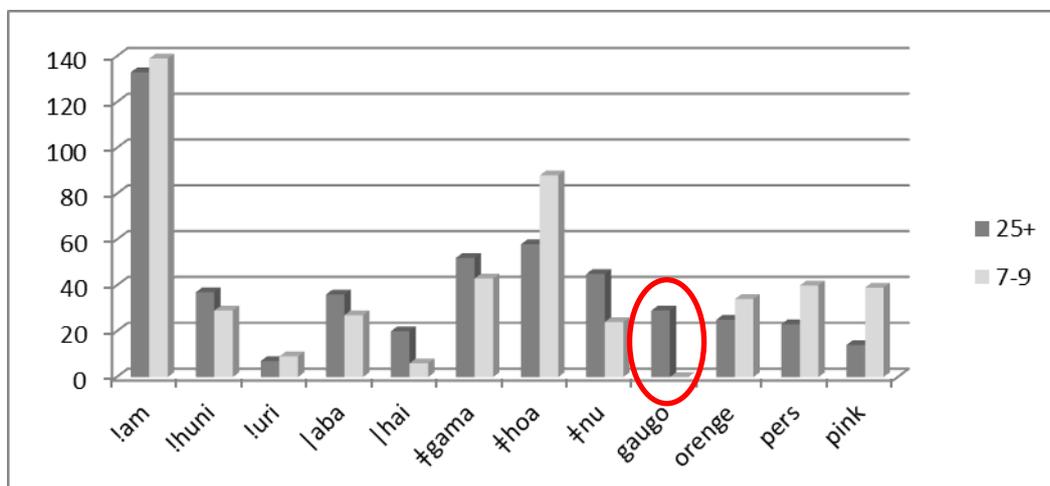
74		!am	!am	!am
75		!am	‡nu	!am
76		!am	‡nu	!am
77		!am	!am	‡hoa
78		!aba	!aba	!aba
79		‡gama	‡gama	‡gama
80		‡gama	‡gama	‡gama

Table 8

When considering table 8 seven colour chips prove to pose a problem to reach a single BCT answer based on the consistency of occurrence across consultants. These are:

- #26: pink/orence
- #43: ‡nu/‡hoa
- #52: ‡nu/‡hoa
- #59: !am!/huni
- #64: pers/‡hoa
- #67: pers/!aba

The division into age groups showed another difference. I noticed that the term *gaugo* did not survive the consistency check in the overall view. Graph 1 shows the start-off set of the 12 BCTs and their difference in overall occurrence across age groups, leaving us with 11 BCTs, *am*, *!huni*, *!uri*, *!aba*, *!hai*, *‡gama*, *‡hoa*, *‡nu*, *orence*, *pers* and *pink*



4. The †Akhoe Hai||om Colour World

In this chapter it is my intention to give the reader a both a verbal and a visual look behind the scene of the †Akhoe Hai||om's perception of the colour world as presented by me during the interview. It is imperative to remember this colour world was investigated through the form of presenting a two dimensional booklet, filled with a single colour chip per page. I will start by answering the research questions for which this particular task was developed by the MPI and mention the peculiarities as they occurred. When applicable, I will refer the reader to appendices 2 and 3 for the accompanying visual representation of these peculiarities. They consist of a gradual build up from chart 1 through the means of showing the colour chips linked to a specific colour term group per overall, 25+ and 7-9 groups.

4.1. What terms are there for abstracted colour (as opposed to colour plus material, etc.)?

There were 12 recurring head terms used to describe the abstracted colours as presented in the booklet.

1. !am
2. !huni,
3. !uri,
4. |aba,
5. |hai,
6. †gama,
7. †hoa,
8. †nu,
9. gaugo,
10. orange,
11. pers and
12. pink.

When considering the data presented in table 8, I noticed two inconsistencies. Firstly, one of the terms, *gaugo*, for denoting the abstract colours did not make it to the overall consistency usage for the BCTs. Moreover, this term is strictly used by the 25+ group.⁶ Secondly, the terms *orange*, *pers* and *pink* had a very low consistency rate within that same group, notwithstanding the usage of the terms by these consultants. These obvious loan words from no such problems in the 7-9 group. These differences can be viewed in appendix 2A, B and C; BCT 9 through 12.

⁶ See appendices 2A, 2B and 2B and the ensuing discussion in chapter 5

4.2. What form class are colour distinctions made in?

In ꞤAkhoe Hai||om I found three word classes for making colour distinction in, adjective, adverb and noun. The majority of terms, however, were found in the adjectival class. This is the only form class used in the BCT group.

4.3. In your language, how nameable are colours?

There is no indication in the data which would point to any difficulty on the consultants' part in naming colour terms in the visual colour space presented by the booklet. They seemed to know and able to apply 11+ terms.

4.4. How much consistency is there within the speech community for describing colour?

Of all 960 utterances, only 158 were compounds (16,46%). Most of these (14,27%) were used by the 25+ age group and held the most complex forms. The 7-9 age group favoured two word compounds, except for a single instance (8.33).⁷

In table 9, an overview is found for the maximum % of consistency in BCT per colour chip. The colour chip numbers: 26, 43, 52, 59, 64 and 67 are left out, because these consist of equally divided consistency across terms named by the consultants for this specific colour chip. This leaves 74 BCT instances for observation. These percentages show the loan words to have a less high consistency than the rest of the words. *Pers'* highest percentage is 42, *pink* peaks at 50% and *orange* at 58%. On the other side of the spectrum I find *!am* to be the most used, 27 recurring instances, and most consistently high percentage receiving BCT. Furthermore, *!am* is the only term with 100% consistency across, 8 recurring instances. Again, use appendix 2A, B and C and the corresponding BCT # for a visual representation of the differences this posed across the overall, 25+ and 7-9 data.

⁷ See table 6b. The 8 is used to denote consultant 8, the 33 refers to the colour number.

BCT	25%	33%	42%	46%	50%	58%	67%	75%	83%	92%	100%
lam			55		19, 77	22, 73, 75	31, 48	42, 68, 76	34, 40	8, 35, 69, 5, 72, 56	1, 6, 11, 18, 30, 39, 62, 74
lhuni						14			32		
!uri							13				
aba					38, 71		7	50, 78	20		
hai			4								
‡gama		47		2		12, 33		41	79, 80		
‡hoa		66			24, 49, 53	23	28, 46	9, 16, 57	45, 51, 54		
‡nu						10	61, 65				
gaugo											
orenge	58	70			25, 37	21, 44					
pers		17, 63	3, 15, 36								
pink			27, 29		60						

Table 9

I briefly touched upon the generational gap between the differences in consistency, on which I now want to elaborate further. Firstly there was the issue of the use of *gaugo*, which seemed to be used by the 25+ group exclusively. Secondly, the loan words *pink* and *pers* were used twice as much with the children as with the adults, with higher consistency to boot. *Pink*, an English loan word is the least consistent term of all, which leads me to believe this a more recent addition to the BCT lexicon of the ‡Akhoe Hai||om. *Pers* and *orenge*, respectively Afrikaans and English in origin, have higher consistency percentages, but still score poorer than the other terms. For this purpose, I created appendices 3A, 3B and 3C to see how the colour world would look, if I treated the loanwords as suspicious enough to bar them from being considered a BCT. This conversely would leave 8 BTC terms beginning with a click consonant. If and how important this is, would be a nice subject for further investigation.

What is seen in appendix 3B, is that when compared to appendix 2B, the colours are distributed more evenly. There are still some colours though, which pose a difficulty with the 25+ group. Namely; 3, 10, 17, 22, 24, 26, 29, 43, 44, 58, 67, 70 and 73. However, when looking at appendices 3A and 3B, the overall picture of the

colour space not only looks more evenly distributed, there is also one extra colour chip with a single highest consistency BCT. For appendices 2C and 3C, the extraction of loan words from their colour space leaves 64 named colour chips. In addition to 9 double or triple BCTs mentions for one colour chip, there are 7 voids (3, 25, 27, 29, 44, 60 and 70), making for an incomplete colour space as found on the MPI chart.

When looking at the consultants behind the data, I found that the only consultant in the 25+ group who didn't use the term *gaugo* was the 25 year old main consultant Solastica Thanés. She was the only consultant to have received schooling after Namibia's independence in 1990, and the subsequent international bilateral aid for education policy from Germany in 1991. Next to that, Solastica's loan word use was more similar to the 7-9 group. The 7-9 group benefitted from the ten years' later enforced Namibian Education Act, in which all children up to the age of ten have a legal right to receive schooling. The new independent Namibia also instated English as the official language in favour of Afrikaans. All of these findings lead me to believe that the colour world of the ǀAkhoe Haiǀom is one in transit, for which I claim that the generational divide stems for new education systems and the increasing intense exposure to English.

This analysis shows that amongst ǀAkhoe Haiǀom speakers in Tsintsabis, Namibia, younger speakers tend to be more specific in describing colour using loan words than older speakers. Older speakers have heard of these loan words and are able to use them, but they tend not to be able to use them as consistently as younger speakers. On the other hand, older speakers know one term more than the younger speakers. Variation in the number of colour terms within the same community has been observed elsewhere (e.g. Kay 1975; MacLaury 1991 and De Sousa 2011). It is not uncommon for younger people to have finer colour category distinctions, however, normally the number of basic colour terms' tendency to increase due to intensification in societal complexity or cultural contact is noticed with younger instead of older people. In the case of ǀAkhoe Haiǀom the older consultants coined 12 basic colour terms, the younger group only 11. I conclude that the most likely reasons for these changes include rapid sociological development and both the Westernization as well as the legislation of the educational system in Namibia, in the years following the country's independence.

5. Discussion and Conclusion

Although the MPI explicitly stated it had no wish to enter into the Whorfian debate with the findings of their research task on the elicitation of perception in the field of colour within the domain of vision, the issue of the debate is important to my personal motivation to participate in this research. This is why in this chapter I will take the time to give a concise version of the history of the colour debate, from the emergence to current date. Afterwards, I will state my own ponderings about the linguistic relativity *debacle*.

What is the relationship between language and thought? Does one's language determine the way one thinks? These intrinsically human philosophical questions have been responsible for a broad array of scholarly research. In the academic discipline of linguistics, this question gave birth to one of the most popular and controversial theories on this matter: the theory of linguistic relativity a.k.a. the Sapir–Whorf hypothesis. It supposes a direct causality between a linguistic phenomenon and a phenomenon in the realm of thought or behaviour. Neither Sapir nor Whorf proposed the actual hypothesis. This was the work of two major critics on the theory, Robert Brown & Eric Lenneberg, who posited that in order to prove such a causality one would have to be able to directly correlate linguistic phenomena with behaviour.

In 1953, they formulated the theory of linguistic relativity, based on the works of Sapir and Whorf as having two tenets,

- (i) "The world is differently experienced and conceived in different linguistic communities" and,
- (ii) "Language causes a particular cognitive structure".

These two tenets were later developed by Roger Brown into the so-called "weak" and "strong" formulation respectively:

- (i) "Structural differences between language systems will, in general, be paralleled by non-linguistic cognitive differences, of an unspecified sort, in the native speakers of the language" and,
- (ii) "The structure of anyone's native language strongly influences or fully determines the worldview he will acquire as he learns the language".

Once Brown & Lenneberg postulated this thesis, they started to devise ways to denounce it, because to them the objective reality denoted by language was the same for speakers of all languages. They devised tests to show how different languages codified the same message and whether these differences in codification could be proven to affect behaviour.

Because of the inherent biological, and therefor supposedly linguistic, aspects of colour, they designed a number of experiments involving the codification of colours. This led to the research and publication of "Study of Zuni Colour Terms and Colour Memory" in 1953 and "Study of English Colour Terms and Colour Memory" a year later. These studies proclaimed a correlation between the availability of colour terms for specific colours and the ease with which those colours were remembered in both speakers of Zuni and English,

and that this correlation had to do with properties of the focal colours having a higher codability than less focal colours, and not with the effects of linguistic relativity.

Along those same lines, Berlin and Kay published a study of colour terminology across languages in 1969. Their conclusion was that there are universal typological principles of colour naming and that these are determined by biological factors, with little or no room for linguistic relativity related effects. This study heralded the beginning of a long line of tradition of using the semantic domain of colour naming as an object of investigating linguistic relativity, and split the camp in two. On one side the Universalists, claiming that the universality of our biology dictates the constrictions of colour naming; on the other the Relativists, claiming that the wide variation in colour terminology cross-linguistically implies a more culture-specific phenomenon.

The main critique of the Relativist side, from researchers such as: John Lucy, Anna Wierzbicka and Stephen Levinson, consists of debunking the proof of universality acclaimed by the WCS and its followers by arguing that some of the basic assumptions made by the Universalists; e.g., all languages have a category for colour, which can be unequivocally defined with the ones found in Indo-European languages - are unsupported and hence corrupt the data stemming from those basic assumptions and mindsets.

To Lucy it "sets up a procedure which guarantees both their discovery and their form...[and]...it does not really even matter whether the researchers involved are open-minded and consciously willing to recognize relativism as a possible outcome – because the universalist conclusion is guaranteed by their methodological assumptions". For Anna Wierzbicka the assumption of the existence of colour terms as concepts themselves gives food for thought. In her 2008 article "Why There Are No 'Colour Universals' in Language and Thought" she notes that "... the absence of a word does not prove the absence of a concept. Even if it is true that the absence of a word does not prove the absence of a concept, how can I prove the presence of a concept for which there is no word? And if we want to search for human universals, should we not try to rely, as far as possible, on concepts which are lexically recognized in all languages, rather than those which happen to be lexicalized in English?". Stephen Levinson's research into the colour terms of Yélî Dnye even brought about a revision by Kay on the BCT-theory. Levinson found regions of the color spectrum for which Yélî Dnye has no name, and which were not subsumed by larger composite categories. He stated that: "Yélî Dnye is a language where a semantic field of color has not yet jelled", and thus one not open to universal constraint."

So where do I stand in this debate? Are languages based on a common universal pattern underlying all languages or do languages indicate diversification rather than universality? To me, fifty odd years of the "does not - does too" game points to a fundamental misunderstanding about language itself, rather than to one view being "(more) correct" than the other. In my opinion, this misunderstanding sprouts from unchallenged assumptions and subsequently raises the question of which assumptions should be challenged and which other adhered to.

For clarifying this point I would like to refer to Gilbert and his paper “Universal Critique” in which he poses the following: “Could it not be possible that a specific set of characteristics could be considered universal, and are noticeable within the function of the linguistic practice itself, rather than within the restricted field of the comparative study of the properties of different languages?” A statement pointing in the same direction has been made by Marc Bornstein (2006) in his contribution to the colour debate: “the physics of colour, the psychophysics of colour discrimination, and the psychology of colour naming are not isomorphic.[...] The colour spectrum clearly exists at a physical level of wavelengths (inter al.), humans cross-linguistically tend to react most saliently to the primary colour terms as well as select similar exemplars of these primary colour terms [and that] the process of linguistic colour naming, which adheres both to universal patterns but demonstrates individual uniqueness.”

What I am trying to clarify here, is that I find the research up until now has been too focused on the formal properties of language and to what extent these properties support universality or expose diversity. This type of research operates on a set linguistic template for the organisation and application for a specific language, since it is built on the form, the formal units and their inter-relational organisation; instead of actually taking an more accepting approach to understanding a the world view of another culture. What if linguistic research assumed the following take on language?

Man as a living organism has learned to perceive the world linguistically throughout evolution and his perception of the world is thus a linguistic construct, which conversely can only be deconstructed linguistically. Since the world can only be known through language and since the perceived world is a linguistic construct and mankind’s prerogative, i.e., to transfer information through the tool of language, does this not make perception a universal ability. The *Umwelt* is finite and bound and the only way for mankind to transcend it, is through imaginative expansion as a result of the usage of language. The specific relation of the tool operating person and the object being manipulated is reality constructive. Objects are learned to be perceived and expressed linguistically, within the linguistic framework of a specific culture. The perceptions are conceptualised as an object expressed by a physical tool (sounds, signs, and symbols) and made to be manipulated as tools as well as concepts of a cognitive nature. Language does not invent the world; it opens possibilities and constructs concepts and objects as people use their legacy of tool handling. It would enable us to see the cultural specific construction of a human of “his/her” perception of the world through the mediation of the tool called language, which is universally diverse in its own nature.

Let’s not forget the primordial fact that the central function of language is the transference information, and/or the choice to withhold that same information. This means that for any linguist to truly be able to say anything on the cognitive properties of the brain and how it relates to a specific language or not, this linguist should either be a linguist investigating his/her native language or a linguist who is willing to learn to *communicate* in that language. To learn a new language is by definition adapting the knowledge of one’s

own language and its inherent cultural frame work onto another. When taking in an investigation would then presume the following assumptions:

1. there is universality in the human body, its functionalities and its abilities,
2. there is universality in the ability to use language as a tool to describe our inner and outer worlds,
3. methodological procedures are necessary for a western schooled researcher to open a door into understanding the world view of other cultures, and
4. the moment language learning or investigation is afoot, so is cultural contamination (which is fine, because language is forever evolving).

In the light of this particular investigation, this would mean that the colour term elicitation is a jump off point and not an end to a means. Consequently, the verbal and visual representation of the ǀAkhoe Haiǀom colour world as presented in this thesis could then be used as a tool to start an intercultural dialogue about colour between any non-ǀAkhoe Haiǀom and ǀAkhoe Haiǀom mother tongue speaker. I would like to conclude this paper by asking the reader to realize that notwithstanding the limited two dimensional colour space and its biases, this is how the ǀAkhoe Haiǀom talk about and see this colour space. And that taking some time to experiment with appendices 2 through 3, maybe even doing the test to compare results, brings us closer to understanding each other's worlds.

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