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COLLEGE OF HUMANITIES

A COGNITIVE SEMANTIC ANALYSIS OF PERCEPTION AND COGNITION EXPRESSIONS IN AKAN

BY

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DECLARATION

I do hereby declare that this thesis is the result of my own original research and has not been presented either in whole or in part for another degree elsewhere. References to other sources of information used in this work have been duly acknowledged.



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DEDICATION

This thesis is dedicated to God Almighty,

My Parents:

Frank C. Moses & Theresa Adjei,

My husband:

Jacob Emmanuel Eshun

&

My children:

Kweku Badu, Kweku Nketsia, Adjoa Kwansema and Kodwo Painstir.

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To God be the glory, great things He has done!!!

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ABSTRACT

This study examines linguistic expressions in Mfantse (Akan) that relate to the basic senses of the body such as seeing, tasting, smelling, hearing and touching. For each sense modality, both the literal and metaphorical expressions were investigated. It adopts the cognitive linguistics approach. Data were gathered from forty native speakers of Mfantse (Central region) in a variety of interview formats and elicitation from stimuli. The data gathered confirmed the empirical validity arrived at in the conclusions of the study.

A significant finding of the study is that the perceptive verbs (PVs) do not only display physiological roles but also demonstrate diverse extended meanings depending on the context in which they occur. The study illustrates that *hwɛ́* (look) involves a durative process. On the other hand, *hú* (see) is a visual activity that occurs 'on the spot' or instantaneously. Sometimes *hú* can be durative where the visual line is directed towards compassion. *Hwɛ́* is volitional while *hú* is both volitional and non-volitional. These two PVs are classified as: intra-psychological (self-philosophies) and social-psychological experiences (interdependency).

The findings from the gustatory expressions show six primary taste sensations in Akan: sweet/pleasant, salty, sour, bitter, congealing, and a semantically derived form, *táblábáá* (lacking taste; bland), in contrast to the five taste forms in English. The study also revealed that from the ethno-cultural background, *dɛ́ẁ* 'sweet/pleasant' can be described as a pleasant taste that includes: +/- sugariness, and non-food related experiences. Also, Mfantse (Akan) expresses different forms of specific perceived sour taste as: *kàẁ*, *fèm̀* and *yèrèyèrèẁ*. Further,

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all the taste expressions revealed metaphorical expressions: Pleasant– gentle/good speech, enough money, sexual enjoyment, flattery and pampering. Bland – improper dressing. Sour– regret, disappointment, bad body odour. Bitter – offensive talk, difficulties in life, excessive judgment, and stinginess. Salty – dishonest.

Results also show that Mfantse (Akan) profiles different semantic ways of representing and interpreting basic and extended meanings of olfactory, auditory and tactile sensory information. The olfactory sense revealed that *mɽfáŕ/nɽká* 'scent' may be understood to conflate good, bad, fragrant, stench and disapproving concepts in portraying odours. Also, the semantics of *ǹká* 'scent' demonstrates that there are few occurrences where *ǹká* 'scent' does not have a negative connotation. Perhaps the non-negative connotation can be explained in the context where the concept of *ǹká* 'scent' needs to be modified with positive adjectives. For extreme odours, Mfantse (Akan) identified specific terms: *sùòǹǹ, kòóò, káńkáń, hùǹtùǹǹ* and *sùkùsùkù* to describe them. Also, *bɔ̀ǹ* 'bad odour' exhibits: bad human body odour, lack of intellectual competencies and general bad odours. The term *húáḿ* indicate good odours. Additionally, the olfactory experience of *hùà* 'to sniff/smell' coded the sense of relaxation, satisfaction, love of, and to detect preference of the odour of an entity. Metaphorical resource show that olfactory experiences in Mfantse indicate: *húáḿ* 'good odour'; 'good mouth talk' – 'good/eloquent speech'; *bɔ̀ǹ* 'bad odour'; 'bad mouth talk' – loud-mouthed or offensive speech; 'bad breath/bad smell in the nose'– hostility, unfriendliness; 'self-matter smells'– bad character. The study identifies two auditory terms: *tsè* 'hear' and *tsíè* 'listen'. Semantically, meanings from these two verbs are contextually different, but they have similar syntactic structures in terms of the arguments they select. Extended meanings of the auditory

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sense display the following: *tsìètsíèè* 'to investigate', *tsíè* 'give a hearing' (legal context), *tsíè no* 'agree'/'permit'; *tsíè nó àsò pá mù*: 'listen without prejudice', *tsíè /tsè… àsɛ́m* 'obedience', *tsíé…ànó* 'act on hearsay'; *à-tsè â ńńtséè*: 'pretence' and *tsè àsó mú*: 'listen to the right information'. Further, the tactile sense employed serial verb construction; *kà…hwɛ́; súóm…hwɛ́;* and *míá…hwɛ́* (touch). These constructions engage the hand for examining physical experiences as well as expressing feelings regarding metaphorical expressions such as comforting, subduing, pleasing, loving, stimulating, intimacy and painful expressions.

Importantly, the Mfantse data make a contribution towards the concept of perception and cognition predicates normally moving in pairs as state and non-state pairs in Akan. Thus, for the state, we have concrete/non-metaphorical uses and abstract/metaphorical uses for the non-state roles. These play a major role in the range of semantic/pragmatic interpretations that allow for these. It is expected that comparable research will spring up from closely related dialects and in other Ghanaian languages, the Kwa language family as well as African languages in general to bring out similarities and differences in the linguistic analysis of these sensory modalities.

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TABLE OF CONTENTS

DECLARATION i
DEDICATION ii
ACKNOWLEDGEMENTS iii
ABSTRACT vi
TABLE OF CONTENTS ix
LIST OF TABLES xiv
LIST OF FIGURES xv
LIST OF APPENDICES xvi
LIST OF ABBREVIATIONS xvii
CHAPTER ONE 1
GENERAL INTRODUCTION 1
1.1 Background of the Study 1
1.2 Rationale 3
1.3 Objectives of the Study 5
1.4 Research Questions 5
1.5 General Background Knowledge of the Akan Language 6
1.5.1 The Language and People of Akan 8
1.5.1.1 Brief History of the Mfantses 12
1.5.1.2 The Mfantse Dialects Group 13
1.6 The Linguistic Features of Akan 16
1.6.1 Some Phonological Features of Akan 16
1.6.2 Akan Consonants 20
1.6.3 Tones in Akan 22
1.7 The Syntax and Morphology of Akan 24
1.7.1 Tense/Aspect Prefixes (TAM) 29
1.8 Contributions to Knowledge 34
1.9 The Methodology 35
1.9.1 Research Design 36
1.9.2 The Sociolinguistic Status of the Research Districts (Sites) 36

University of Ghana http://ugspace.ug.edu.gh

1.9.3 Data Collection Procedure 38
1.9.3.1 Data Elicitation 44
1.9.3.2 Processing the Data 47
1.9.3.3 Representation of Text Examples in the Thesis 48
1.10 Ethical Consideration 48
1.11 The Structure of the Study 49
CHAPTER TWO 51
THEORETICAL FRAMEWORK AND LITERATURE REVIEW 51
2.1 Introduction 51
2.2 Cognitive Linguistics 51
2.3 Commitments of Cognitive Linguistics 57
2.3.1 Generalisation Commitment 57
2.3.2 Cognitive Commitment 59
2.4 Branches of Cognitive Linguistics 61
2.4.1 Cognitive Grammar 62
2.4.2 Cognitive Semantics 67
2.4.2.1 Conceptual Structure is Embodied 69
2.4.2.2 Semantic Structure is Conceptual Structure 74
2.4.2.3 Meaning Representation is Encyclopaedic 74
2.4.2.4 Meaning Construction is Conceptualisation 75
2.5 Literature Review 77
2.5.1 The Concept of Perception and Cognition 77
2.5.2 The Senses, Perception and Language Use 83
2.5.3 Semantic Meanings of Perception Expressions 85
2.5.3.1 The Semantic Meanings of the Five Basic Senses 85
2.5.3.1.1 Experience Verbs 86
2.5.3.1.2 Active Perception Verbs 88
2.5.3.1.3 The Stimulus Subject Verbs 91
2.5.4 Non-Prototypical Meanings of Perception Expressions 95
2.5.5 Is there a Linguistic Universal Hierarchy of the Senses? 97
2.5.6 Vision 100
2.5.7 Hearing 104

University of Ghana http://ugspace.ug.edu.gh

2.5.8 Touch 105
2.5.9 Smell 107
2.5.10 Taste 110
2.6 Summary 111
CHAPTER THREE 114
THE SEMANTICS OF THE PERCEPTION VERBS *Hwɛ́* and *Hú* 114
3.0 Introduction 114
3.1 The Basic Meanings of the Perceptive Verbs *Hwɛ́* and *Hú* 117
3.1.1 The Experiencer and Activity Notions of Perceptive Verbs (Hwɛ́ / Hú) 123
3.1.2 The Stimulus Notion of the Perceptive Verb Hwɛ̀ in Akan 126
3.2 The Physical Extended Meanings of the Perceptive Verbs *Hwɛ́ /Hú* 127
3.2.1 Intra Psychological Domain 128
3.2.2 Social Psychological Domain 132
3.3 Metaphorical Extensions of the Perceptive Verbs (*Hwɛ́* and *Hú*) in Akan 151
3.3.1 Relation of Vision to Idiomatic Expressions 161
3.4 Summary 171
CHAPTER FOUR 174
THE SEMANTICS OF TASTE (GUSTATORY) EXPRESSIONS 174
4.0 Introduction 174
4.1 Taste Perception 174
4.2 Categories of Taste in Akan 176
4.2.1 The Physiological Functions of Taste in Akan 178
4.2.1.1 Dɛ̀ẁ – Pleasant Taste in Akan 178
4.2.1.2 Dɛ̀ẁ – Pleasant Taste + Sugary 179
4.2.1.3 Dɛ̀ẁ –Non-Sugary Pleasant Taste 182
4.2.1.4 The Stimulus Notion of Determining Good Taste 183
4.2.2 Extended Meanings of Dɛ̀ẁ - Pleasant Taste 186
4.2.2.1 Dɛ̀ẁ - Pleasant Taste Perceived through Emotions or Bodily Feelings. 186
4.2.2.2 Dɛ̀ẁ - Pleasant Taste Perceived through the Pleasure in Participating in Activities 189
4.2.3 Salty Taste 191

University of Ghana http://ugspace.ug.edu.gh

4.2.4 Sour Taste 193
4.2.5 Bitter Taste 198
4.2.6 Insipid/Bland Taste 199
4.2.7 Congealing Taste 201
4.3 Metaphorical Extensions of Taste Expressions in Akan 202
4.3.1 Pleasant Taste Metaphors in Akan 202
4.3.2 Metaphors of Bitterness in Akan 211
4.3.3 Metaphors of Sourness 216
4.3.4 Metaphor of Blandness 218
4.4 Summary 218
CHAPTER FIVE 221
THE SEMANTICS OF OLFACTORY, AUDITORY AND TACTILE EXPRESSIONS 221
5.0 Introduction 221
5.1 Smell/Odour (Olfactory) Expressions in Akan 222
5.1.1 Basic Expressions of Smell in Akan – Physical Notions 223
5.1.2 Extended Meanings of the Olfaction Senses in Akan 244
5.2 Auditory (Hearing/Listening) Perception in Akan 248
5.2.1 The Physical Experience of the Auditory Sense 248
5.2.2 Extended Meanings of the Auditory Senses 252
5.3 Perceptions of Tactile/Haptic (Touch) Expressions in Akan 260
5.3.1 The Sense of Touch 261
5.3.2 The Basic Notion of Touch in Akan 263
5.3.2.1 Physiological Experiences of the Tactile Sense 265
5.3.3 Metaphorical Experiences of the Tactile Sense. 268
5.4 Summary 272
CHAPTER SIX 274
SUMMARY AND CONCLUSIONS 274
6.0 Introduction 274
6.1 Summary of Findings 275
6.1.2 Findings of the Semantics of Taste (Gustatory) Expressions 277
6.1.3 Findings of the Semantics of Olfactory, Auditory and Tactile Expressions 279

University of Ghana http://ugspace.ug.edu.gh

6.2 Projections for Future Research /Theoretical Implications 283

6.3 Concluding Remarks 284

REFERENCES 320

6.1.1 Findings of the Semantics of Perceptive Verbs Hwɛ́ and Hú 275

University of Ghana http://ugspace.ug.edu.gh

LIST OF TABLES

Table 1.1 Dialects of Akan and the Number of Speakers.....10

Table 1.2 Akan Oral Vowels with Examples 19

Table 1.3 The Consonant Chart of Akan.....21

Table 1.4 A Table Representing the List of the Consultants……41

Table 2.1 The Basic Perception Verbs in English 93

Table 2.2 Extended Meanings of Vision 102

Table 2.3 Metaphorical Meanings in Smell Perception 108

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LIST OF FIGURES

Figure 1.1 Language Map of Ghana 7

Figure 1.2 Dialect Distribution of Akan Group in Ghana……..…….....12

Figure 1.3 The Mfantse Dialects Distribution in the Central Region of Ghana. 15

Figure 2.1 Subfields of Cognitive Linguistics 62

Figure 2.2 Instantiation Schema 65

University of Ghana http://ugspace.ug.edu.gh

LIST OF APPENDICES

APPENDIX I – INTERVIEW QUESTIONS.....285

APPENDIX II – SAMPLE TEXT WITH GLOSSES.....291

APPENDIX III – ETHICAL APPROVAL.....314

APPENDIX IV – CONSENT FORM.....315

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LIST OF ABBREVIATIONS

1	First person
2	Second person
3	Third person
ABAK SP	Abakrampa Speaker
ADJT SP	Adjumako Takyiman Speaker
AMPJ SP	Ampia Adjumako Speaker
ASB SP	Asebu Speaker
ATA SP	Atakorase Speaker
CAUS	Causative
CCM	Conditional clausal marker
CL PART	Clausal particle
COMP	Complementizer
COMPL	Completive
COND	Conditional
CONJ	Conjunction
CONS	Consecutive
CP	Complementizer Phrase
COP	Copula
DCM	Dependent Clause Marker
DEF	Definite
DEM	Demonstrative
DW	Dwendama Speaker
FOC	Focus marker
FUT	Future

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HAB	Habitual
IMP	Imperative
INAN	Inanimate
INDEF	Indefinite
INT	Intensifier
KY SP	Kyakor Speaker
LOC	Locative
NEG	Negative
NOM	Nominalizer
NP	Noun phrase
OBJ	Object
OPT	Optative
PART	Particle
PERF	Perfect
PL	Plural
POSS	Possessive
PROG	Progressive
REDUP	Reduplication
REL	Relative marker
REFL	Reflexive
SG	Singular
SUBJ	Subject
SBJV	Subjunctive
TOP	Topic

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CHAPTER ONE

GENERAL INTRODUCTION

1.1 Background of the Study

The study examines linguistic expressions in Akan (Kwa-Niger Congo) that refer to sensations derived from the various senses of the body such as tasting, seeing, touching, smelling and hearing. It demonstrates how the perceptual experiences are conceptualised or grounded in our cognitive abilities.

The sensory signals of the body play very important role in information delivery. This is because the human sense organs encode different meaningful expressions as the organs interact with the physical world. Again, the senses process the evidence in our mental faculties and later redirect them through our perceptual experiences. They are also seen as the basic channels through which we perceive and communicate issues of the things in the world; in terms of our understanding towards what we perceive and the impressions these thoughts create in us (Aikhenvald 2013). These senses help facilitate our decision-making process in the direction of choices we make of things around us. So, our perception towards things we see, taste, touch and hear are all enriched by the information the related senses produce. In support of this argument, Goldberg et al. (2006a:4917) explain that "auditory, gustatory, olfactory, tactile and visual semantic processing has been

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shown to activate regions of the brain responsible for the encoding of the corresponding precepts."

These sensory signals are broadly classified under the term Perception and Cognition (henceforth P/C) (Rhee 2001; Levin 1993). Perception and Cognition expressions discuss sensations, intentions and thought. Also, they provide evidence of human understanding of the world since human experiences are linked to issues of the world according to Rhee (2001). The principal feature of this class of expressions is their relationship with the human state of mind which codes information in the physical world as well as provides evidence of human understanding. On the contrary, languages differ in their expressions of thought (mind). Thus, structures of different languages determine the cognitive capabilities of how people view the world. For example, people see differently and their reactions [may be] as a result of what were in their minds, their psychological orientations, cultural values and their overall experiences with the environment.

According to Nordquist (2017:1) mental-state verbs which are also inherently seen as cognitive verbs are associated with verb meanings that are related to "understanding, discovering, planning or deciding". This domain of events illustrates examples of mental state verbs in English. Examples include *know*, *think, learn, understand, perceive, feel, guess, see, recognize, notice, want, wish, hope, decide, expect, prefer, remember, forget, imagine*, and *believe*. He distinguishes such cognitive verbs from perception verbs by arguing that the latter express

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physical knowledge of senses such as *see, watch, look, hear, listen, feel*, and *taste*. These verbs capture signals in the nervous system which affect the physical sense organs. Thus, perception verbs represent internal conditions of feelings, beliefs and opinions.

Some of the examples of perception and cognition expressions in Akan that can be examined in the domain of mental-state events include *hwɛ́* 'look', *hú* 'see', *ká...hwɛ́* 'taste', *hùà/ hùà hwɛ́* 'smell', *tsè (ǹká)* 'feel' / 'smell/scent', *tsé* 'feel', *mìá..hwɛ́* 'touch', etc. These are the basic forms of the examples of the mental-state verbs in the language. Apart from these basic ones, there are other forms that the language also realises. These and the other forms will be discussed in chapters 3-5.

1.2 Rationale

Language serves as a vehicle for expressing human thoughts, feelings and emotions. This is because language influences to some extent the way we think and view the world.

Current debate in the linguistic literature regarding language and thought is the fact that languages differ in how they express the basic senses such as vision, taste, smell, touch, and hearing (Aikhenvald & Storch 2013). To them, languages have different ways of constructing perceptive and cognitive meanings; some

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languages like to construct cognitive meaning using visual labels while others view cognitive expressions in terms of auditory perception labels. The literature confirms that sensory perception displays different meanings among different cultures (Majid et al. 2018; Majid & Levinson 2011).

Some contemporary linguists also (Van Putten 2020; Majid et al. 2018; Majid & Levinson 2011) support the assertion that diverse cultures portray diverse sensory evidence by indicating that different environments, cultures and experiences are contributing issues to the diverse sensory information that we experience. For instance, Van Putten (2020:2) points out that "Sensory perception is used in many different ways depending on cultural practices, life styles and the environment in which people live". Thus, the way of life of people and their experiences reveals what kind of sensory information they express.

These discussions show that there is a gap in the literature of how cultures assign meanings to the basic senses of the body. Since there are variations in the linguistic interpretations of meanings of the basic senses of the body among cultures and their values, this study seeks to examine the linguistic expressions of perception and cognition in the Mfantse dialect (Akan) in relation to how the language ascribes meanings to these basic senses of the body as they interact with the world.

The study also contributes to finding how perception and cognition are expressed in Akan (Mfantse) by focusing on the linguistic expressions that encode

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the five basic senses. It goes on to find out how perception and cognition influence each other in relation to the cultural preferences that are realised for the various senses.

Further, it explores the various discourses and meanings these P/C expressions display in the language.

1.3 Objectives of the Study

The goal of this study is to contribute to the current discussion on cross-linguistic research on perception and cognition expressions. The specific objectives of the study are:

(1) To document the perception and cognition expressions in the Mfantse dialect of Akan.
(2) To examine the relationship that exists between perception and cognition expressions in the Mfantse dialect of Akan.
(3) To examine the semantic features associated with Mfantse perception and cognition expressions.

1.4 Research Questions

In line with the study objectives, the study addresses the following research questions:

(1) What are the various perception and cognition expressions present in Akan?

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(2) What are the various relationships that exist between perception and cognition expressions in the Mfantse dialect of Akan?

(3) What are the semantic features of Mfantse perception and cognition expressions?

1.5 General Background Knowledge of the Akan Language

This section discusses the background information (the language and the people and a sketch grammar) of Akan and the sociolinguistic milieu of the study communities.

Ghana is a multilingual country with many Ghanaian languages. Figure 1.1 language shows the distribution of languages in Ghana.

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Figure 1.1 Language Map of Ghana

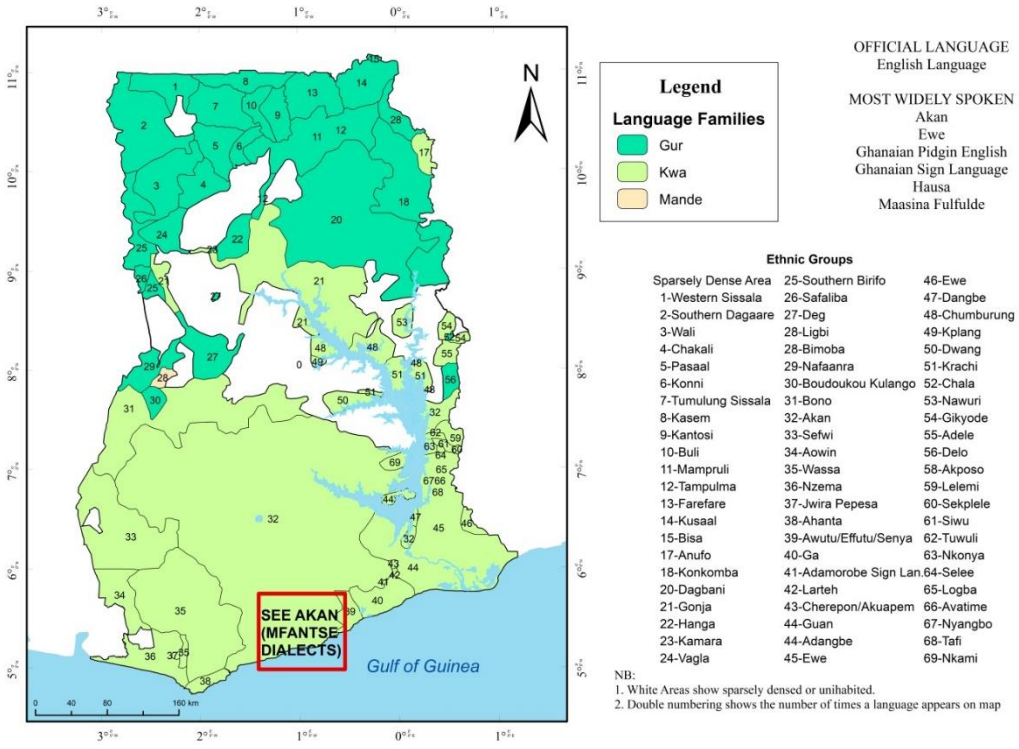


Fig. 1.1 Language Map of Ghana – Ethnologue Online, Lewis (2009).

A careful look at the language map shows that almost half of the population of Ghana speak Akan and it is the largest ethnic group as well. The map also illustrates all the various Ghanaian languages and the various regions where these languages are spoken in Ghana. The colours indicate the language families and the numbering specifies places where these languages are spoken while the parentheses stipulate the number of times (if mentioned more than once) a language's number appears on the map. On the map, the Akan speaking area is represented by the light

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green colour and numbered 32. Places where Akan is spoken are also represented by the same colour. As mentioned earlier, it can be realised on the map that Akan is the most spoken language in Ghana. The study area (Mfantse speaking zone) is located with the red bordered square and so in this thesis, all data are drawn from only the study zone.

1.5.1 The Language and People of Akan

Akan is a Kwa (Niger-Congo) language spoken in Ghana in West Africa. The Akan language represents the people called Akans who speak the various dialects of the Akan language as their native language (Dolphyne 1988).

According to Ethnologue online, Akan is the largest language group in Ghana and most widely spoken indigenous language consisting of Akuapem, Asante, Mfantse, Bono, Wasa, Agona, Breman, Akyem, Gomoa, Kwahu, Denkyira, Assin, and Akwamu. The 2010 national population census confirms this and points out that 49.10% of the Ghanaian population are Akans. This percentage shows that Akan is the most widely spoken language in Ghana. Among the dialects of Akan, only three (Akuapem, Mfantse, and Asante) have gained literary status and are used in schools. These three dialects are studied from the lower primary of education through to the university level. At the lower primary level of education, the language is used as a medium of instruction while it is taught as a subject at the upper primary,

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junior high school (JHS), senior high school (SHS) and offered as a course at the Colleges of Education and university level. According to Osam (2004) there have been various programmes (Bachelor, Masters and Doctoral) in the study of Akan in the University of Ghana, Linguistics Department that have existed for over fifty-six years (56). Akan is also taught in other universities such as University of Education, Winneba, University of Science and Technology and University of Cape Coast. Also, a number of radio and television stations broadcast news and other programmes in Akan. According to Agyekum (2012) the Akan language is the leading language in most media (radio and TV) and political discourses. Some radio stations such as Peace FM, Adom FM, Nhyira FM, Onua FM, Asɛmpa FM, Radio Peace and Radio Windy Bay as well as television stations including UTV, TV Africa, Atinka TV, Angel TV, Western TV and Adom TV present their programmes in the Akan language. Furthermore, the language is used for trading and religious purposes in some areas in the Greater Accra region as a second language. According to Osam (2004) the dialects of Akan are spoken in regions such as Eastern, Central, Brong-Ahafo, Ashanti, Western and some areas in the Volta region of Ghana as well as Côte d'Ivoire. Dolphyne (1988) mentions also that the Anyi (Aowin), Baule, Sehwi, Nzema and Ahanta in the Western part of Ghana and the Efutu/Awutu, Anum-Kyerepong-Larteh— all Guan languages from the Southern and Eastern part of Ghana— also speak Akan as their second language, though not all the inhabitants speak Akan. Dolphyne (1988) points out that all the dialects of Akan have a number

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of shared vocabularies. Looking at the most important role Akan plays in national activities it can be emphasised that Akan is the fastest growing language in Ghana. In view of this Osam (2004:3) indicates that "even though no official declaration has been made, Akan is growing in its influence as a potential national language, especially since people who speak other languages sometimes use it as a lingua franca". A summary of the dialects of Akan and its speakers is illustrated in Table 1.2 below:

Table 1.1 Dialects of Akan and their Number of Speakers

Dialects	Number of speakers
Agona	85,900
Ahafo	626,000
Akuapem	3,820,000
Asante	142,000
Assin	124,000
Dankyira	2,730,000

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Fante	443,000
Kwawu, and others	15,400
Total users:	9,309,200
As L1 users As L2 users	8,309,200 1,000,000

Ethnologue (2013 UNSD).

The dialects of Akan are in two major groups— Mfantse and Twi. In terms of speakers, Twi is considered the largest sub-group because of the number of users. It is also the most researched dialect of Akan in the literature. The Twi dialects are the Asante, Akyem, Kwahus, Bono, Wassa and the Akuapem as shown in Table 1.2 above. The map of Akan dialects, figure 1.2 below, describes the various dialect distribution of the Akan group in Ghana.

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Figure 1.2 Dialect Distribution of the Akan Group in Ghana

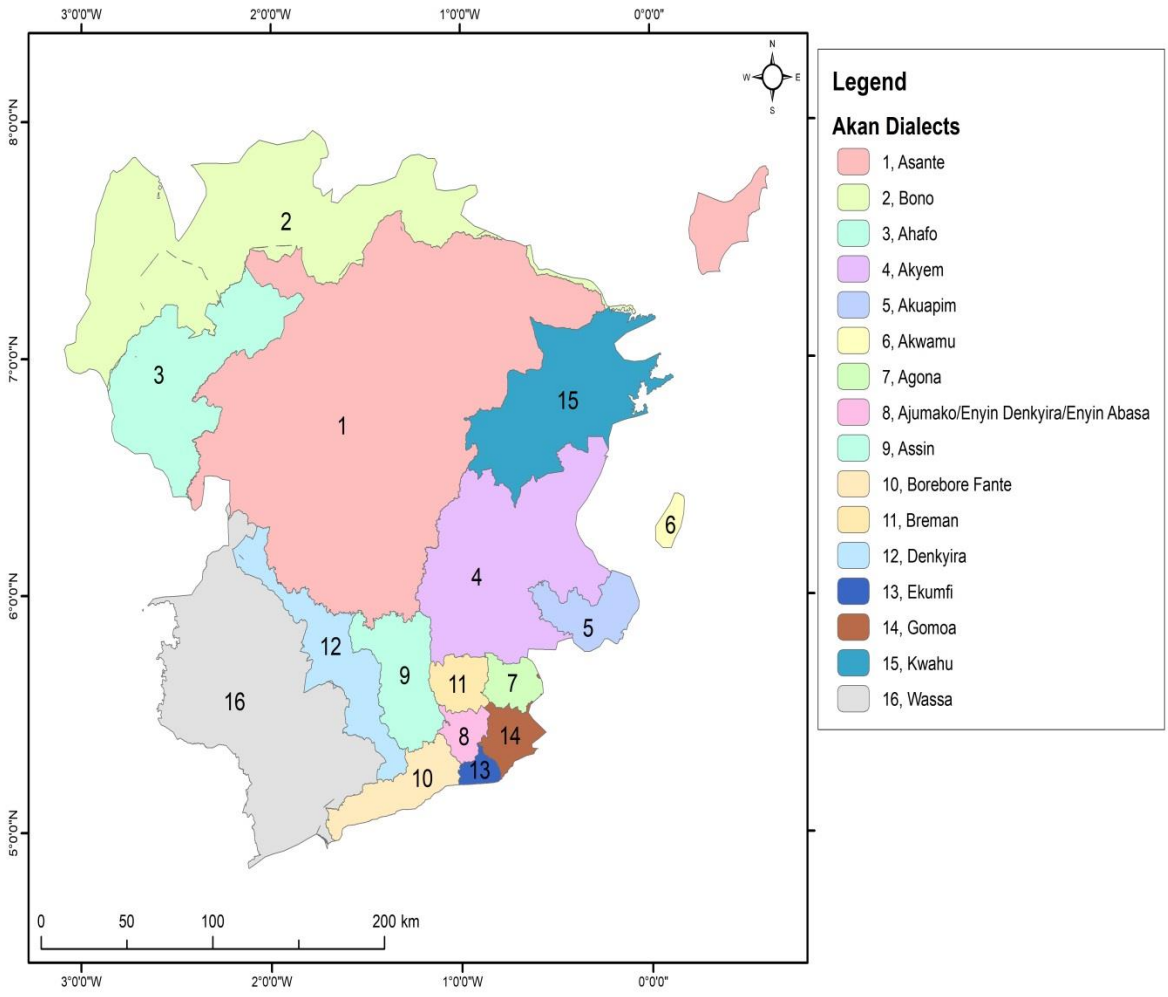


Fig. 1.2 Map of Akan Dialects in Ghana

1.5.1.1 Brief History of the Mfantses

According to Crayner (1989) the Mfantses migrated from Takyiman in the current Bono East Region. As the Akans moved, the various groups separated to settle at

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places where they could get shelter and peace. This act became the origin of the name of the half who got separated, "Fa-atsew" meaning 'half has separated', known in present day as Mfantsefo or 'Bɔrbɔr Mfantse'. Through the migration, the 'Bɔrbɔr Mfantse' was led by three (3) great warriors known as Oburmankoma, Ɔdapagyan and Ɔson (The Eagle, the Whale and the Elephant, respectively). These warriors were represented by these symbols; eagle, whale and elephant signifying that on the land, in the air and in the sea they were the mighty warriors. 'Bɔrbɔr Mfantse' first settled at Kwaaman and finally settled at Mankesim and others later settled at Enyan. As the population grew, the Mfantse groups spread towards the coast and into the hinterland.

1.5.1.2 The Mfantse Dialects Group

The Mfantse dialect which this study focuses on is originally known as Mfantse and its speakers called Mfantsefo for plural and Mfantsenyi for its singular form. In present-day this dialect is also called Fantse/Fante, however, the study uses the original name Mfantse. This distinct group has many sub-dialects. However, researchers classify these sub-dialects differently. For instance, Dolphyne and Dakubu (1988) classify Mfantse group as follows: Agona, Gomoa, Anomabo, and Abura. Abakah (2003:9) divides the Mfantse dialects into five main sub-dialects: "Iguae, Boka, Anee, Agona and Breman". Osam's, (2004) sub-divisions for the

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Mfantse sub-dialects group are Gomoa, Ekumfi, Nkusukum, Iguae, Breman and Agona. Ajumako, Enyan, Essiam dialects are also considered part of the Mfantse dialects. Some researchers also classify 'Bɔrbɔr Mfantse' as the prototypical Mfantse dialect because it is studied and learnt in schools. Examples of these Mfantse sub-dialects can be identified in towns like Mankesim, Saltpond, Kormantse, Abandze, Anomabo, Egyaa and Biriwa. Figure 1.3 illustrates the Mfantse dialects distribution in the Central Region of Ghana.

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Figure 1.3 The Mfantse Dialects Distribution in the Central Region of Ghana.

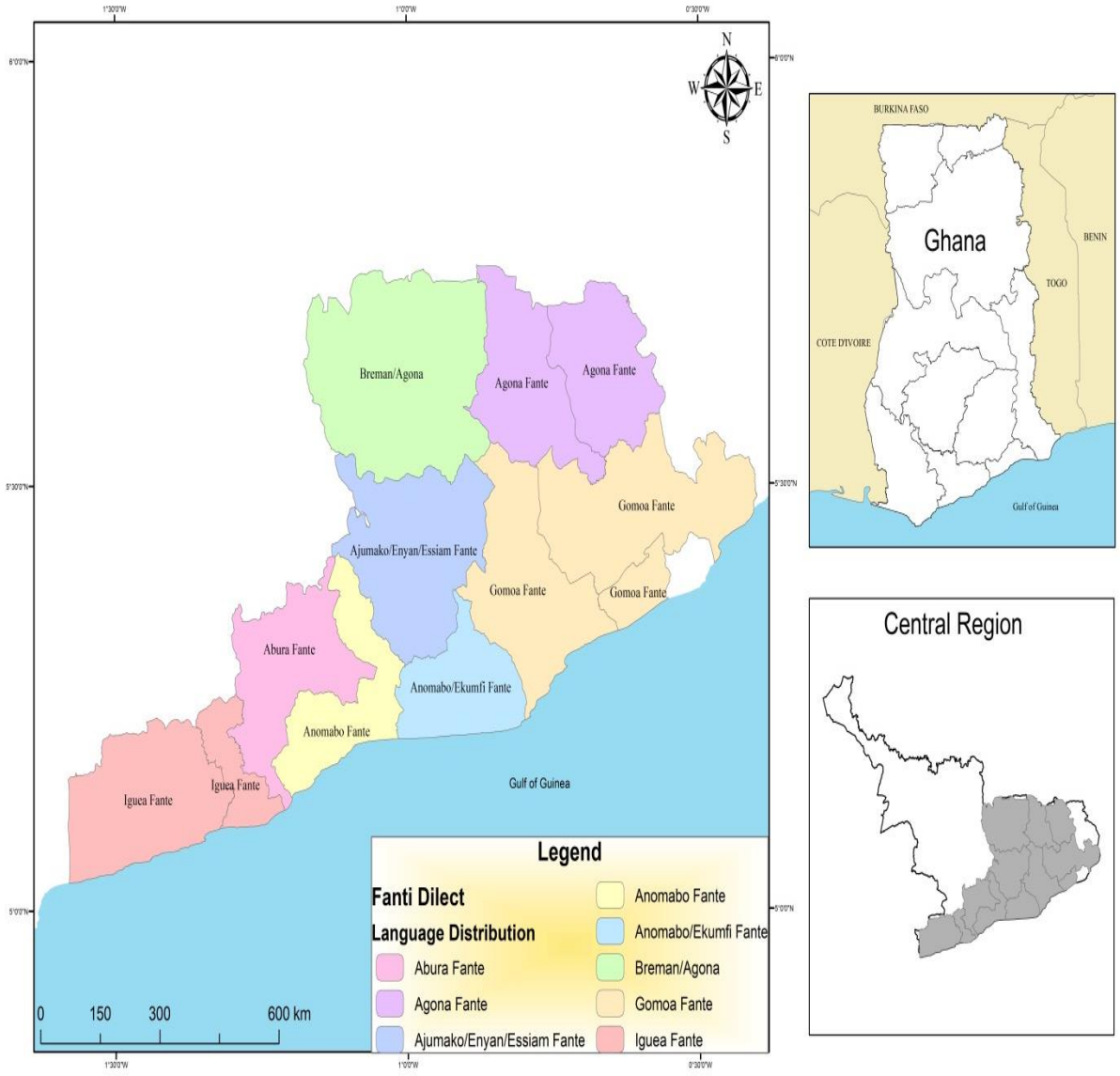


Fig. 1.3 Mfantse Dialects Distribution in the Central Region.

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1.6 The Linguistic Features of Akan

In this section I will discuss some aspects of the linguistic features of Akan such as phonology (tones, vowels and consonants), and syntax (tense and aspect, and pronominal systems).

1.6.1 Some Phonological Features of Akan

The phonological structure of the Akan language is made up of vowels and consonants. In the Akan orthography there are seven oral vowels / i, ɛ, e, a, ɔ, o, u/ and fifteen consonants/ b, d, f, g, h, k, l, m, n, p, r, s, t, w, y/. However, nine (9) oral vowels / i, ɪ, ɛ, e, a, ʊ, ɔ, o, u/ and eighteen (18) consonants are realised according to the tongue properties. There is also a tenth vowel /æ/ which is a variant of the vowel /a/ (Dolphyne 1988). According to Dolphyne, this vowel normally appears before syllables with the vowel /i/ and / u/ in Akuapem and Asante dialects. In Mfantse, the vowel /e/ normally plays this role. Examples are illustrated below:

1.	Asante	/æ̀ní/		'eyes'
	Akuapem	/pæ̀tú/		'owl'
	Mfantse	èdʒ̀bàń	/ædzìbàń/	'food'

Another thing worth mentioning about vowels in Akan is the vowel harmony principles. Osam (1993) mentions that vowels that can occur in prefix position can be combined on the basis of harmonisation principles to form what is referred to in

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phonology as vowel harmony. The nine vowels according to Dolphyne (1988) can be grouped into two vowel harmony sets (+ATR and –ATR) depending on the position of the tongue root harmony. Set 1 vowels consist of these vowel set /i, e, o, u, æ/ produced with advanced tongue root (+ATR) while set 2, comprises these vowels /ɪ, ɛ, a, ɔ, ʊ/ produced with unadvanced tongue root (-ATR). In this harmonisation principle only vowels from the same set can occur in a word (Dolphyne 1988). For example,

ATR Harmony

2a	èkùtú	'orange'
	èhí	'provoking'
	`ɔhɔ́hʊ́	'stranger/foreigner'
	`ɔkrá	'the soul'
	nyì̀mdzèé	'knowledge/wisdom'

2b.	má	àbɛ̀ǹkwàń
	1SGPOSS	palm-nut.soup

'My palm-nut soup.'

In addition to the vowel harmony, Mfantse verbal forms accept rounding harmony and this normally occurs with the first person pronoun prefix, and the tense/aspect prefixes with the exception of the perfect in the dialect. In this rounding harmony, vowels described as rounded and unrounded occur in verbal prefixes which also have verb stems being rounded vowels or unrounded vowels (Osam 2004; Dolphyne

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1988). Dolphyne explains that the rounding harmony can also occur in the 1st and 3rd person possessive pronouns. She spells out that these verbal affixes could be pronounced in four different ways. For instance, 1st person singular pronominal prefix **me,** the progressive prefix **re** and the ingressive prefix **kɔ** can have the following four pronunciations in the dialect as shown below:

3a. **me** - / me, mi, mo, mu /

re - / re, ri, ro, ru /

kɔ - / ko, kɔ, ke, kɛ /

Rounding Harmony

3b. mú ńdúŕ

1SG POSS medicine

'My medicine.'

Furthermore, among the nine oral vowels, five (5) can be nasalised as follows; /ĩ, ɪ̃, ã, ũ, ʊ̃/. Nasalisation is a contrastive feature in Akan. Thus, these nasal vowels make lexical distinctions and they have contrast with their oral counterparts when they appear after voiceless consonants (Manyah 2011). Examples are illustrated below:

4a. /fa/ — 'to take'

(b) /fã/ — 'half'

(c) /su/ — 'nature'

(d) /sũ/ — 'to weep'

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The data in examples (4a) to (4d) show distinction between words. In these words, a nasal vowel and an oral vowel bring about a meaning change, such that the absence of the nasal feature on the vowel gives a different meaning. Thus, the nasalised vowels are phonemic in nature and bring a change in meaning in identical words.

In addition to nasalisation, the vowel /o/ can also be nasalised in Mfantse as shown in the word, *mũõ* 'to be bad'. A chart with examples of the Akan oral vowels is presented in Table 1.2 below:

Table 1.2 Akan Oral Vowels with Examples

Vowels	**Description**	**Examples**
I	High Front Advanced	siw 'pound'
ɪ	High Front Unadvanced	tse /tsɪ/hear' '
e	Mid-High Front Advanced	edur 'medicine'
ɛ	Mid-Low Front Unadvanced	pɛ 'like'
a	Low Central Unadvanced	abowa 'animal'
æ	Low Central Advanced	Patu/pætu/ 'pretend'
ɔ	Mid-Low Back Unadvanced	ɔwɔ 'snake'

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o	Mid-High Back Advanced	owu ‘death’
ʊ	High Back Unadvanced	tow /tʊw/ ‘throw’
u	High Back Advanced	bu ‘break’

Osam (2004: 4)

1.6.2 Akan Consonants

In the phonetic description of Akan consonants, eighteen (18) consonants are identified according to their place and manner of articulation, though thirty-four (34) consonants are represented in the Akan orthography, characterised by sixteen (16) letters of the alphabet (Dolphyne 1988). Some consonants can be described as voiced and others as voiceless depending on how the vocal cord vibrates when the sound is produced. An example of the inventory of the Akan consonants chart with the phonetic transcription is shown in Table 1.3 below:

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Table 1.3 The Consonant Chart of Akan

	Bilabial	**Labia-dental**	**Alveolar**	**Palatal**	**Velar**	**glottal**
Plosive	p b		t d		k g kw gw	
Affricate			ts dz	ky [tɕ] gy [dʑ] tw [tɕɥ] dw [dʑɥ]		
Nasal	m		n	ny [ɲ] nw [ɲɥ]	Ɔ nw [ŋw]	
Lateral			l			
Trill			r			
Fricative		f	s	hy [ɕ] hw [ɕɥ]		h

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Approximant/glide	w		r	y		

(Dolphyne 1988:29)

The generalisations Dolphyne makes about voicing on the Akan consonants chart are that fricative sounds are voiceless and have no voiced counterparts. Conversely, all the plosive and affricate voiceless sounds have their voiced counterparts. Also, the glides (approximants), the nasals, the lateral and the trill display only voiced feature. Another mention was that the palatal sound, alveo-palatal, velar and glottal consonants show labialised and non-labialised counterparts as in hy: hw and k: kw.

1.6.3 Tones in Akan

Kwa languages including Akan are known to be tonal languages. This is because mostly, pitch variations determine meanings of words. The high (the ACUTE:´) and the low (the GRAVE:`) tones are the two basic tones in Akan. The tones are normally marked on vowels and on syllabic consonants. These tones can play both grammatical and lexical roles in the language (Dolphyne 1988; Osam 2004). Lexically, the tones contrast meanings of words bearing the same segment. The unit of syllable that marks or carries the tone is known as 'Tone Bearing Unit (TBU). The following examples illustrate tone marking on words in Akan:

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5a. kɛ̀ǹtɛ́ń ‘basket’ kɛ̀ǹtɛ̀ǹ ‘dominate / take-over’

5b. wín ‘leak’ wín ‘shade’

At the sentence level we can say *kyɛ́ǹsɛ̀ nó wìǹ* ‘the saucepan leaks’ or *wíń wɔ̀ dáń nó ékyìr̀* ‘shade can be found at the back of the house’. *Kɛ̀ǹtɛ́ń nó sì póń nó dò* ‘the basket is on the table’ and *Esi kɛ́ǹtɛ̀ǹ ǹdzɛ́m̀bá dò* ‘Esi assumes control over things’. These are illustrated in 6a - 6d below:

6a. Kyɛ́ǹsɛ̀ nó wìǹ
saucepan DEF leak.HAB
‘The saucepan leaks.’

6b. Wíń wɔ̀ dáń nó ékyìr̀
shade LOC house DEF back
‘Shade can be found at the back of the house.’

6c. Kɛ̀ǹtɛ́ń nó sì póń nó dò
basket DEF fix table DEF on
‘The basket is on the table.’

6d. Esi kɛ́ǹtɛ̀ǹ ǹdzɛ́m̀bá dò
Esi take-over.HAB PL.thing on
‘Esi assumes control over things.’

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Grammatically, the tone bearing unit distinguishes meaning in relation to tense and aspect markings. Examples are shown in 7 below:

7a. ó -hù
3SG SUB.see.HAB
'She/he sees.'

7b. ò-hú-ù nò
3SG SUB.think.COMPL DEF
'She/he saw him/her.'

In example (7) tones have been used to distinguish tense. In (7a), the low tone was used to indicate the habitual form of the verb while in (7b) it marked the past form of the verb. So, apart from the vowels and consonants which make up words, the meaning of a word can also be determined by the use of tone.

1.7 The Syntax and Morphology of Akan

This section discusses the morphology and syntax of Akan verbal classes. The structure of words in Akan is made up of stems or roots and affixes (prefixes and suffixes). The syllable structure of the words is taken into consideration in word formation in Akan. Dolphyne (1988) mentions that in the formation of a new word in Akan, a single stem or two or more stems (compound) can be combined; or it can be formed through reduplication (repetition of stems). Appah (2009) also mentions

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that in Akan a word may be formed by merging two or more bases (roots or stems). This type of word formation is the most common means of forming words in Akan (Abakah 2015; Osam *et al*. 2013; Adomako 2012). Besides, Akan verbs also have verbal affixes such as subject marker prefixes, tense aspect affixes, mood prefixes, motional prefixes and negation prefix— they go along with (Osam 2004; Saah 2002; Dolphyne 1988). In congruence with this concept, Dolphyne (1988) makes it clear that verbal affixes also agree in vowel harmony with the vowels of the root words which they attach themselves to. In this study, we discuss the three major types of verbal affixes (Dolphyne 1988) in the language: subject-prefixes, tense/aspect affixes and the negative prefixes. I illustrate examples of subject marker prefixes from Osam (2004: 7) and Dolphyne (1988: 87) below:

Subject Markers (Prefixes) in Akan

	Subject Prefix	**Persons**	**Citation Form**
8.	me-	1st person singular (1SG)	me
	wo-, e-/ i / (Fa)	2nd person singular (2SG)	wo/ɔwo
	ɔ-	3rd person singular (3SG)	ɔno
	ɛ	impersonal (As. Ak.)	ɛno
	(Inanimate – As. Ak. and some Mfantse dialect)		

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yɛ-	1st person plural (1PLU)	hɛn (Fa.) /yɛn
mo-, wɔ- (Fa.)	2nd person plural (2PLU)	mo / hom (Fa)
wɔ-, yɛ- (As.)	3rd person plural (3PLU)	wɔn/hɔn (Fa)/wɔɔnom

As indicated earlier, these prefixes agree with the root word (nouns) in person and in number as illustrated in (9) below:

9a. ɔ̀-bɔ́-kɔ́ skúùl̀
3SG.SUBJ-FUT-go school
'S/he will go to school.'

9b. wò-dzí-ì èdzìbàń nó
2PL SUBJ-eat-COMPL food DEF
'They ate the food.'

In example (9) the subjects' prefixes agree in person and in number with their subject nouns, though these nouns are covertly expressed.

According to Osam (2004) in sentence construction in Akan, where there is a lexical noun subject, no pronominal marker is attached to the verb. He also mentions that there are some situations in the language, especially in Bono and in Mfantse where lexical nouns occur in the sentence; but we still find the subject pronoun occurring with the verb. Examples are indicated in (10) below:

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10a. Màámé nó ò-bù m̀pànyìm̀fó
woman DEF 3SG SUBJ-respect.HAB PL.elder
'The woman respects the elderly.'

10b. Àbòfrá nó ɔ́-sòm̀ yíé.
child DEF 3SG SUBJ-do.HAB serve well
'The child serves well/ renders good services.'

Examples above show that though there are lexical nouns *màámé* 'woman' and *àbòfrá* 'child' occurring at the subject position, the subject-prefixes for the third person singular also occur in the sentences. It is also clear in the language that there are different subject prefixes for non-animate and animate entities. In the Twi dialects, for instance, the subject prefix /ɛ-/ is used for non-animate entities whereas the prefix /ɔ-/ is used for both animate and inanimate entities in the Mfantse dialect (Osam 2004). Illustrations are shown in (11) below:

11a. hàbáń nó bɛ́-hyèẁ (Mfantse)
bush DEF FUT-burn
'The bush will burn.'

11b. ɔ̀-bɛ́-hyèẁ
3SG SUB FUT-burn
'It will burn.'

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11c. Esi bɔ́-kɔ́ skùúl̀

Esi FUT-go school

'Esi will go to school.'

11d. ɔ̀-bɔ́-kɔ́ skùúl̀

3SG SUBJ-FUT-go school

'S/he will go to school.'

11e. èwíémú b-é-té (Twi)

sky FUT-tear

'The sky will clear up.'

11f. è-b-é-té

3INAN SUBJ-FUT-tear

'It will clear up.'

The examples above display the same morphological form of subject-prefix /ɔ-/ in the Mfantse dialect for both animate and inanimate entities as shown in examples (11 a-d), while the subject prefix /ɛ-/ is used for only non-animate entities *èwíémú* 'the sky' in the Twi dialect in examples (11f).

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1.7.1 Tense/Aspect Prefixes (TAM)

Another morphological feature in Akan that expresses time duration is the Tense/Aspect affixes. Though in the literature many studies such as Osam (1994; 2004; 2008); Dolphyne (1987; 1988) have been conducted on Tense/Aspect to confirm their presence in the language, Osam (2008) argues that Akan be considered largely as an aspectual language with two distinct tense distributions, the future and the non-future. Subsequently, he lists the following as the tense aspects for Akan; Future tense (FUT) and Completive (COMPL), Perfect (PERF), Progressive (PROG), and Habitual (HAB) aspects. These aspectual properties are going to be marked in on the examples in this study.

In Akan the future is morphologically marked by the prefix *bɛ̀* - while the non-future is not marked (Osam 2004). The future tense, according to Duah (2013), also marks diverse denotations in different contexts in the language. Thus, the future tense can mark events that happen after the time of speaking; it also marks intentions of the speaker; the future prefix also expresses ability when combined with the verb *tùm* 'be able' (Osam 2004). Illustrations of the future are shown in the examples below:

12a. Abena bɛ́-kyéẁ náḿ
Abena FUT-fry fish
'Abena will fry fish.'

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12b. Kofi bé-dzídzí
Kofi FUT-eat
'Kofi will eat.'

12c. wɔ̀-bɔ́-kɔ́ Ǹkràǹ
2PLU SUB-FUT-go Accra
'They will go to Accra.'

12d. wò-bó-túm̀ à-mà dó
3PLU SUB-FUT-able CONS-lift up
'They can lift it up.'

In examples (12a) & (12b), the events of frying and eating are perceived as taking place after the time of speaking. In example (12c), the future is expressing intentions to travel to Accra while in (12d); it is used as a modal, expressing ability or possibility of being able to do something.

The progressive in Akan is marked by the prefix /re-/. This prefix has different phonetic realisations in sentence constructions in the language. For instance, the progressive prefix in Mfantse is realised phonetically in four different ways; *ro-*, *re-*, *ri-*, and *ru-*. These pronunciations are as a result of the rounding harmony processes in the dialect (Osam 2004; Dolphyne 1988). Progressive is also realised by the lengthening of the final vowel of the verb (Dolphyne 1988; Osam 1994).

The past tense is referred to as completive by Osam (2008; 2004) albeit the general reference is past tense. His argument is that the basic role of the past tense marker is to show the completeness of an action in general. In view of that the

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completive mark will not be compatible with the progressive (i.e. the imperfective aspects). Osam (2004) explains further that, to correct this past imperfective action, Akan uses the conjunction (discourse particle) *ná* (Twi), *nná* 'then' to correct it so that the progressive can now be accepted to occur with the past as indicated in (13).

13. Kyèrɛ̀kyérɛ̀nyí nó bâ-é nó nnà
Kyèrɛ́kyèrɛ́nyí DEF come-COMPL when then
m̀bòfrá nó rù-sùá ádzé
PL.Child DEF PROG.learn something
'When the teacher came, the children were learning.'

We notice in example (13) that it is possible to have the past tense marker co-occurring with the progressive. This combination is possible with the conjunction *nnà* 'then' co-joining the clauses. This combination can also occur in English and is grammatical where the verb 'to be' can co-occur with the progressive as exemplified in 14 below:

14. Joyce was dancing.

The past tense in Akan is marked in two ways in the affirmative: first if the verb stem ends in a vowel and it is followed by a direct object, the final vowel of the verb stem is lengthened. When the verb ends with a consonant and it is followed by a direct object or adverbial, the final consonant is also lengthened. Secondly, where the verb occurs at the clause final position, the completive is marked by the suffixes /-i/ or /-e/ and should be marked with low tone. Again, the completive suffix

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agrees with the immediate vowel of the verb in + or – ATR. Instances are shown in (15) below:

15a. Kwansema kú-ù àkókɔ́ nó
Kwansema kill.COMPL. chicken DEF
'Kwansema slaughtered the chicken.'

15b. Kwansema púw-ẁ Abena
Kwansema frighten.COMPL. Abena
'Kwansema frightened Abena.'

15c. Ama sà- àè
Ama dance.COMPL.
'Ama danced.'

In addition to the uses of these vowels /i/ or /ɪ/ in the completive sense, it is observed that the suffix /-yɛ/ can also be used in the Asante dialect to express completive (Dolphyne 1988). This position has been countered by Ofori (2018) that there is never a past marker in Asante and that the extra-vowel before /-yɛ/ then is an emphatic unit. An instance is shown in (16):

16. Ama pìráá -yɛ̀
Ama wound.COMPL.
'Ama was wounded.'

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The perfective in Akan is marked by the prefix /à/. This perfect prefix /à/ agrees with the vowel of the verb stem in terms of ATR harmony as demonstrated in (17) below:

17a. Esi á-tɔ̀n̄ né táḿ
Esi PERF.sell POSS cloth.
'Esi has sold her cloth.'

17b. Esi é-bù né táḿ nó ánò
Esi PERF.fold POSS cloth DEF mouth
'Esi has hemmed her cloth.'

In Akan not all tense aspect markings are marked by affixes. Just like the continuative, the habitual is marked by tones on the verb stem. The habitual also expresses present time in the language although Akan does not mark present tense morphologically. An example is illustrated in 18 below:

18. Esi hù àdzé
Esi see/HAB. something
'Esi sees.'

Negation in Akan is marked by the homorganic nasal prefix and it is said on a low tone. For example, the past negative form is marked by the prefix vowel /à/ said on a low tone and followed by the negative morpheme as indicated in example (19).

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19. Amponsa à-mm̀-bá fíé
Amponsa COMPL-NEG-come home
'Amponsa did not come home.'

In Akan, the perfect morpheme in the negative occurs as a suffix but the negative morpheme appears as a prefix said on a high tone. An example is shown in (20).

20. Amponsa mḿ-báà fíé
Amponsa NEG-come-PERF home
'Amponsa hasn't come home.'

With the negative habitual morpheme, there is no tonal variation (Osam 2004). Consider example (21) below:

21. Amponsa mm̀bá fíé.
Amponsa NEG-come/HAB home
'Amponsa doesn't come home.'

1.8 Contributions to Knowledge

Documenting expressions of perception and cognition in a language is key to contributing knowledge to the inventory of perception and cognition research in relation to sensory experience. This is because it is one of the basic issues in the sensory organs which help in illustrating issues in the cognitive domain, the basic tools for understanding things in the world. Again, by documenting expressions of perception and cognition in the Mfantse dialect of Akan, this will serve as a resource

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for the development of other cognitive topics in the language and other African languages.

This is a novel study that provides descriptions of perceptive and cognitive expressions that are used in the Mfantse dialect of Akan. Thus, findings in this area are indispensable because the descriptions presented in this thesis have not been extensively explored in earlier research done on perception in Akan.

The findings of this study will also serve as a motivation for cross-linguistic studies on perception and cognition among Ghanaian languages in particular, Kwa languages and African languages in general.

Again, the study will also inform the debates about the hierarchy of the senses in languages. It will also expose cultural preferences that are realised from the various senses in languages. The study will also add up to the existing literature on perception and cognition for further references of research in this area. Thus, it will be an educational material for students and researchers.

Finally, it bridges the gap in research done on perception and cognition since the findings help uncover the linguistic structures of sensory information in the language.

1.9 The Methodology

The findings of this thesis were basically grounded on the data collected from Mfantse speaking communities selected in some Municipalities and districts in the

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Central Region of Ghana. This section discusses the research design, sociolinguistic status of the districts sampled for data collection, data collection procedure, data elicitation process, processing the data, tools for data collection, and representation of text examples in the thesis.

1.9.1 Research Design

This is a qualitative descriptive study. It adopts the linguistic fieldwork approach. This approach is appropriate because it allows the researcher to carefully investigate language through direct contact (one-on-one conversation, direct observation with participants (Chelliah & de Reuse 2011; Foley 2002) to establish how people describe perception and cognition concepts and what resources there are in the language.

1.9.2 The Sociolinguistic Status of the Research Districts (Sites)

The study focused on all the Akan districts and Municipalities in the Central Region of Ghana. However, the target population were Mfantse speaking communities and the accessible population were based on four Mfantse speaking communities whose dialects have not had major contact with other languages. The four districts were Mfantseman Municipal Assembly, Ajumako-Enyan-Esiam District, Gomoa East

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District and Abura-Asebu-Kwamankese District. These sampled communities helped convey the variations of meanings and other linguistic expressions of perception and cognition in the language. Brief background information of each selected district is described as follows.

The Mfantseman district can be found along the Atlantic coastline of the Central Region of Ghana constituting an area of 300 square kilometres. Mfantseman is bounded on the west by the Abura-Asebu-Kwamankese District, on the North-East by Ajumako-Enyan-Essiam District, on the east by Ekumfi District and on the south by the Gulf of Guinea (Atlantic Ocean). The Mfantseman district, according to the 2010 population and housing census, carries the largest population (2,201,863) of the Central Region.

The Ajumako-Enyan-Essiam District district has three traditional areas constituting the Ajumakos, Essiams and the Enyans (AEE). Ajumako is the capital town of this district. The district is bounded on the west by the Assins, the south by Mfantseman District, on the east by Gomoa District and on the north-west by Asikuma (www.statsghana.gov.gh).

The Gomoa East District is one of the three (3) districts in Gomoa. “It was carved out of the then Gomoa District in 2008 by the Legislative Instrument 1883 and became operational on 29th February 2008” (2010 PHC: 1). It occupies an area of 539.69 square kilometres. It is noted from the Population and Housing Census

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report that the Gomoa East District is located in the south-eastern part of the Central Region. It is bordered to the north-east by Agona East District, south west by Gomoa West, east by Awutu Senya and Ga south in the Greater Accra Region and to the south by Effutu. The Atlantic Ocean borders the south-eastern part of the district. (www.statsghana.gov.gh).

The Abura Asebu Kwamankɛse District (AAKD) according to the 2010 Population and Housing Census (PHC) was created from the then Mfantseman Municipal Council in 1988 and was officially established by the Legislative Instrument L.1. 1381. Abura Dunkwa is its capital town with a total population of about 117,185 representing 5.3% of the total population of the Central Region. It is bounded on the north by Assin South District, on the east by Mfantseman Municipal, on the south-east by a 5km stretch of the Gulf of Guinea, on the south by Cape Coast Metropolitan and on the west by Twifo-Heman-Lower Denkyira District. (www.statsghana.gov.gh).

1.9.3 Data Collection Procedure

Mfantse native-speaking participants were engaged in semi-structured interviews and direct observation of procedural events. Video recordings were purposively done to capture various scenes as well as complement ideas of concepts raised during the interview sessions.

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The population of the study comprised all Akan (Mfantse) districts and municipalities in the Central Region of Ghana, which is the focus study area. The Central Region is made up of 20 districts (i.e. one (1) metropolitan, six (6) municipal and thirteen (13) ordinary districts. Since the focus was on the Mfantse dialect alone, a probability sampling technique was used to select four Mfantse districts and 40 speakers for data collection. The four districts were Mfantseman Municipal Assembly, Ajumako-Enyan-Esiam District, Gomoa East District and Abura-Asebu-Kwamankese District. The study was conducted in these Mfantse communities because they are known to have variations of dialectal significance which will help unearth the various expressions of perception and cognition in the language. Also, two towns each were sampled for dialectal variation purposes. These areas have not had much language contact and therefore helped in providing rich information for the research. These towns include Kyakor and Dwendaama (Mfantseman Municipal), Ampiah-Ajumako and Atakorase (Ajumako-Enyan-Esiam District), Nyanyano and Ojobi (Gomoa East District), Asebu and Abakrampa (Abura-Asebu-Kwamankese District).

Five (5) native-speakers from each town were purposively sampled for interviews. These summed up to the total of 40 participants sampled. The 40 participants that were sampled for data collection were aged 20 and 60 years who have lived in the communities for not less than 10 years. Various background searches for inclusion of a participant in the study were considered. Thus, criteria

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such as knowledge of language (language competence), gender, (both male and female) educated and non-educated were considered in the selection procedure.

In order to check for language competence, interviews with participants' knowledge on language showed that they have not had lots of language contact with other languages and have lived in the communities over 10 years. Other members in the community also confirmed participants' language vitality. This criterion was carefully chosen in relation to Bowern's (2008:131) assertion that "the ideal consultant is a native speaker of the language under study… who has no speech impediments, [and] are fluent storytellers, and like thinking about and being creative with language. They [also] have very clear articulation and infinite patience".

With the issue of gender, the literature attests (Bowen 2008) that females are more stationed in their communities (especially in areas where men tend to travel to cities for work but women don't) than male and this makes their languages reliable, but because there should be balancing in ideas, both male and females need to be considered in the selection of language consultant (Bowern 2008). In view of this, this study considered gender issues in the selection of participants for data collection. The criteria on educated and uneducated were also considered because while the uneducated participants helped in providing the form of the language, the educated facilitated in the decision making of clarifying the correct and non-correct

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form of the data (Bowern 2008). All participants who satisfied these criteria were selected to be part of the study.

Participation in this research was voluntary, so only consenting participants were allowed in the study after the objectives had been explained to them. Those who agreed to participate in the study were made to sign a consent form (see Appendix IV). However, participants who satisfied the requirements but did not wish to take part in the study were excluded. A brief information about the total number of respondents is provided in table 1.4.

Table 1.4 A Table Representing the List of the Consultants

Identity	Name	Age	Sex	Town	Occupation
1. AA	Araba Ahenma	50	Female	Abakrampah	Food vendor
2. AA	Aba Apietua	48	Female	Abakrampah	Fish monger
3. UA	Uncle Kojo	50	Male	Abakrampah	Head of a clan
4. EF	Ekua Fenyiwa	52	Female	Abakrampah	Palm oil processor
5. AF	Araba Fowaa	49	Female	Abakrampah	Fish monger
6. KO	Kojo Osidu	54	Male	Attakurase	Linguist

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7. KT	Kojo Takyi	52	Male	Attakurase	hunter
8. MS	Maame Sekyiwa	39	Female	Attakurase	Gari processor
9. UG	Uncle Goman	39	Male	Attakurase	Farmer
10. EB	Esi Benyiwa	51	Female	Asebu	Fish monger
11. EA	Ekua Akyerewa	60	Female	Asebu	Palm oil processor
12. SA	Sister Ama	45	Female	Ampia-Ajumako	Gari processor
13. AA	Aunty Asarewa	52	Female	Ampia-Ajumako	Kenkey processor
14. UA	Uncle Okaa	59	Male	Ampia-Ajumako	Hunter
15. UO	Uncle Osam	58	Male	Ampia-Ajumako	Word caver
16. AB	Aunty B	57	Female	Ampia-Ajumako	Oil Processor
17. KA	Kwame Ayirifa	51	Male	Dwendama	Hunter
18. AB	Aunty Mansa	65	Female	Dwendama	Oil Processor and kenkey processor
19. AZ	Adjoa Zenabu	33	Female	Dwendama	Trader

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20. KT	Kofi Tetteh	60	Male	Dwendama	Farmer
21. EN	Esi Nana	29	Female	Asebu	Oil Processor
22. KA	Kweku Akunor	58	Male	Kyakor	Farmer
23. EM	Esi Mbrowa	60	Female	Kyakor	Soap processor
24. OT	Opanyin Tawiah	63	Male	Kyakor	Goldsmith
25. OA	Opanyin Akim	55	Male	Dwendama	Weaver/linguist
26. SO	Sister Obo	58	Female	Asebu	Kenkey processor
27. OK	Opanyin Kofi	59	Male	Asebu	Farmer
28. UK	Uncle Kodwo	48	Male	Attakurase	Blacksmith
29. AA	Aunty Ama	59	Female	Kyakor	Kenkey processor
30. AE	Aba Esoun	40	Female	Kyakor	Orange farmer
31. TA	Teacher Atta	35	Male	ojobi	Teacher
32. GA	Gifty Ackon	29	Female	Ojobi	Teacher
33. NO	Nana Obo	36	Male	Ojobi	Mechanics

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34. US	Uncle Sam	45	Male	Ojobi	Driver
35. AA	Aunty Ansaba	47	Female	Ojobi	House wife
36. AO	Aba Odur	38	Female	Nyanyano	Fish monger
37. KN	Kwesi Nyarko	46	Male	Nyanyano	Fisherman
38. PK	Papa Kuma	51	Male	Nyanyano	Teacher
39. PE	Papa Ephraim	31	Male	Nyanyano	Electrician
40. AD	Adwoa Dede Bondze	39	Female	Nyanyano	Nurse

1.9.3.1 Data Elicitation

In the elicitation process, both the controlled and the spontaneous methods were used. The spontaneous method of elicitation helped participants to speak freely about concepts relating to perception and cognition in Akan (Mfantse) while the controlled method of elicitation was done through the use of a semi-structured interview procedure. This line of conversation was guided by the researcher. Both audio and video recordings were used in the elicitation process. The sentences in the interview schedule were confirmed with the consultants (native speakers) in the communities and other Akan (Mfantse) language researchers who speak and

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understand the language. This was done to establish face validity of the questions before being used. The content validity of the instrument was also cross-checked with language experts. Their comments were carefully considered before administering the questions. Data collected was analysed using content analysis.

On the field, four trained consultants were guided to engage participants in both spontaneous and controlled elicitation processes involving procedural activities such as food processing, production of body ornaments, preparation of favourite food and cloth weaving. They were also asked to describe people they admire, their likes and dislikes. This process is supported by Levinson et al. (2007) who mention that it is important to evaluate how people talk when assessing or describing procedural events. In view of that further interview questions (as a means of probing) and discussions followed after the narration.

Background information of participants such as: age, number of years participants have stayed in the community and educational background were considered before the interview began. During the interview sessions, participants were asked some questions as follows: (1) List all the taste, smell, hear, touch and vision terms you can identify. (2) In what contexts or circumstances (E.g. funeral rites, marriage rites, marriage experiences etc.) are these terms used and whether all people use the terms in the same way and in all situations or there are differences? (3) Describe your favourite meal, how is palm oil prepared, how do you prepare

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kenkey etc. These questions were written in English however, they were elicited in the Mfantse dialect.

I adapted the questions in the *Field Manual of Max Planck Institute for Psycholinguistics (MPI) Language and Cognition* Volume 14[1] (Kendrick & Majid 2011) and modified them to suit the situation on the ground. This was designed to facilitate narration and elicitation of natural speech on a wide range of topics such as funeral rites, marriage rites, marriage experiences, and encountering problems (assessing emotions, feelings, thinking etc.) Others include food processing, description of objects (sugar, salt, drinks, spray etc.), description of symptoms of diseases and preparation of different dishes. This is found in the interview questions in Appendix I.

[1] 'The Language and Cognition Field Manuals and Stimulus Materials' http://fieldmanuals.mpi.nl. This site contains materials for field elicitation of semantics and the field collection of verbal behaviour. These are unique resources that have been compiled over twenty years of investigation of under-studied languages by the former Language and Cognition department at the Max Planck Institute for Psycholinguistics.

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1.9.3.2 Processing the Data

A total of forty (40) recordings, constituting a time period of 02hrs: 45mins: 27ss of audio files were collected as well as some video recordings. In processing the data, recordings were transcribed with the help of some of the trained language consultants for purposes of clarity and were later saved on a laptop. Various themes that emerged in relation to the purpose of the study as well as the relevant literature were identified and coded. The transcribed data was then labelled. In the description of the labelled comments from the participants or direct relevant quotes from the data, the abbreviated form of the name of the town and the speaker's number in the recording process were used to code the data illustrated in the thesis for anonymity purposes. The coding system shows where the data was collected and who provided it. Also, the coded data helped show the practicality of data usage in the analysis. For example, KYSP2 means, data was provided from the second speaker from Kyakor town. Sample texts with glosses which reflect the topic of the study can be found in Appendix II of the thesis.

The findings of the research were validated by sending the feedback to the participants and other language experts who took part in the study for confirmation purposes. I made sure all comments and sentences emerged from the data and evidences were firmly grounded in the findings without any influence by the researcher.

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1.9.3.3 Representation of Text Examples in the Thesis

The recorded data was transcribed and analysed using the Leipzig Glossing Rules which has three levels of representation; the phonemic transcription of the utterances, interlinear morphemic glossing and the free translation in English as in (22) below:

22. Esi hú -ǹ m̀-bówá nó.
Esi see-COMPL PL.animal DEF
'Esi saw the animals.'

1.10 Ethical Consideration

According to Berg (2007), researchers in Social Sciences owe professional ethical obligations to the human subject and the real world they collect data from in order to honour and ensure confidentiality made to them. This means that ethical issues are critical to research since it holds the integrity in research activities; for this reason, researchers cannot overlook issues of ethics (Bell & Bryman 2007). Following these arguments and the University of Ghana's Policy on Ethics, I ensured that ethical considerations were followed in the course of the research. This was done by seeking approval from the University of Ghana Research Ethics Committee for the Humanities before gathering data for the study. The certified protocol number is ECH 150/17-18. The approved letter can be found in Appendix III of the thesis.

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Also, as part of ensuring confidentiality of the data recordings, the data will be accessible to only the principal investigator and the trained research assistants. Transcribed data have been placed on a special project computer with codes which are accessible to only the principal investigator. Special codes have been placed on the files in a folder on the special computer. Data has also been stored on several external hard drives, pen drives and CDs for back up purposes. Data will be kept confidential for about two to five years and will not be released to a second or a third party for any reason whatsoever.

1.11 The Structure of the Study

The study is structured into six chapters. Chapter one discusses the introductory information about the study. It provides the general background issues such as the objectives and research questions of the study. It continues to look at the general background knowledge of the Akan language and also the sociolinguistic status of the research districts. It also presents some of the previous linguistic features of Akan which includes some phonological and morpho-syntactic issues that are significant for proper understanding of some of the topics in this thesis. It shows the methodological approach from which data was gathered and also the ethical consideration for carrying out the study.

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Chapter two is dedicated to the theoretical underpinnings that guide the study. It also reviews the literature on perception and cognition expressions and discusses the various contributions on the topic in the literature. The cognitive linguistics framework is also discussed in this chapter.

Chapter three is concerned with the semantics of the perception verbs (*hwɛ* and *hu*) and the various constructions and meanings that characterised this domain. The vision sense is classified as the universal and most preferred sense; this chapter examines the diverse meanings of vision and find out whether there are or not some semantic bases for this or there are different explanations to that. It goes on to find out whether or not Akan conforms to this universality of the hierarchy of perception.

In chapter four, the semantics of taste (gustatory) expressions is examined. The chapter shows the various arguments taste categories select. The physiological and metaphorical extensions are also discussed.

Chapter five is dedicated to the semantics of olfactory, auditory and tactile expressions.

Chapter six draws conclusions, presents the summary of findings of the study and recommends projections for future research.

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CHAPTER TWO

THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1 Introduction

This chapter discusses the theoretical framework that guides the study and a review of related literature on the subject. Section 2.1 discusses the cognitive linguistic (henceforth CL) framework. Section 2.2 reviews current scholarly literature on the various aspects of perception and cognition and their contributions to this study.

2.2 Cognitive Linguistics

One of the emergent approaches in linguistic inquiry is cognitive linguistics (CL). Studies into cognitive linguistics began in the 1970s (Evans and Green 2006; Croft & Cruse 2004). According to Janda (2010) CL traces its root from Eleanor Rosch, a cognitive psychologist's work on human categorization. This study examines the intellectual capability of the human mind in relation to how objects are classified into different categories. Apart from Rosch's work, other studies in cognitive science, especially cognitive psychology and brain sciences, contributed to the emergence of cognitive linguistics. During the same period that CL began, linguists such as George Lakoff, John R. Ross, Paul Postal and James McCawley had also

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begun the generative semantics programme. This programme had its basis from transformational generative grammar but it was not in conformism to Chomsky's notion on generative grammar though some ideas (analysing language stressing on 'semantic deep structure' that is linked to 'surface structure by transformation') in the generative semantics were from Chomsky's 1965 book Aspects of the Theory of Syntax (Bagha 2011). The underlying concept that aligned generative semantics was that it did not analyse syntax separately from semantics; it always incorporated ideas of syntax into semantics and pragmatics. According to Bagha (2011), because lots of controversies arose against the programme, its ideas were later integrated into cognitive linguistics. These studies challenged cognitive linguists who were interested in the study of language and the mind, to develop this theory to analyse language issues that relate to the human mind. Their main aim was to have a broad scope of theory that can be used to investigate language issues related to cognitive activities. Consequently, cognitive linguistics was seen as an interdisciplinary approach to examine language and mental experiences in a holistic way. In support of this idea, this is what Geeraerts & Cuyckens (2007:3) had to say "throughout this theoretical and ''sociological'' introduction to Cognitive Linguistics, we will emphasize that Cognitive Linguistics is not a single theory of language, but rather a cluster of broadly compatible approaches."

Today, it is one of the fastest growing approaches to analysing linguistic data due to increasing acceptance of the approach in empirical studies relating to

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cognitive events. Some of the leading cognitive linguists who promoted this movement include George Lakoff (1991), Ronald Langacker (1987), Leonard Talmy (2000), and Gilles Fauconnier (2006). Though these linguists work in different areas of cognitive linguistics, they all come to the realisation that meaning is central to linguistics inquiry.

Cognitive linguistics (CL) focuses on the relationship between language use and the mind, as well as the relationship between socio-physical experiences and the world. Evans & Green (2006) noted that cognitive linguistics differs from other approaches to the study of language because its central objective emphasises the human mind in relation to language use. Evans (2007) makes a similar observation and points out that CL looks at the connection between the mind and how language is used in the world around us.

Dirven (2005) notes that CL deals with linguistic phenomena which relate to mental activities and human experiences; interaction of the body with the environment, opinions of people, understanding, feelings and other sensory activities. He continues that CL looks at language as part of human cognition which has constant interaction with other cognitive abilities. Cognitive linguistics therefore provides a broad scope of ideas that allows speakers to express their thought or perspective to communicate specific meaning to their hearers and also help bring clarity in linguistic knowledge and every day experiences. It extends its inquiry to

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pragmatic use of language, demonstrating that as we study language, we illustrate the practicality of its usage. Supporting the above claim, Fauconnier (2006) comments that:

> Cognitive linguistics recognizes that the study of language is the study of language use and that when we engage in any language activity, we draw unconsciously on vast cognitive and cultural resources, call up models and frames, set up multiple connections, coordinate large arrays of information, and engage in creative mappings, transfers, and elaborations (2006:1)

Cognitive linguistics also seeks to address the issue of meaning as embodiment, where the human body is considered to provide meaningful expressions as the body interacts with the mind and the world (Neagu 2013). Two notions relate to embodiment— metaphor and metonymy. These two notions play major roles in cognitive linguistics research. Metaphor reveals the inherent conceptual meanings about a basic concept; it maps one idea onto another. It also means understanding a concept in terms of a different concept. Metonymy, on the other hand, depicts how one notion is used in place of the other.

In addition to the above discussions, Langacker (1987) looks at CL as the interconnectedness that exists between various philosophies and the structure of language. His notion reveals that CL seeks to incorporate various analyses of

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linguistic structures including cognitive semantics and functional syntax. To him, meaning is a cognitive phenomenon and must eventually be analysed as such.

Furthermore, the approach seeks to provide answers to some of the inadequacies of the Chomskyan approach to analysing language. Major linguistic investigations concentrated on syntax. Thus, issues concerning grammar were central in most linguistic analyses. The generative approach investigated syntactic structures of language in terms of discrete mathematical symbols. These symbols related to only abstract frames without paying attention to what these frames mean and what they portray to the physical world. Again, the symbols were based on formulation of rules to examine syntactic properties, neglecting meaning of mental experiences (how the human mind organises, synthesises and uses language on the basis of psychological prowess) in language studies. The gap between meaning and language structure, that is, cognitive abilities, is what CL seeks to fill.

In the broad range of approaches to cognitive linguistics, though the idea of conceptual meaning is vital to language studies, it also allows linguistic structures to reflect conceptual meaning structure (Ansah 2011). Ansah's comment shows that conceptual meaning and linguistic structures work hand in hand. It again shows that cognitive linguistic analysis goes beyond linguistic structures where grammatical structures are analysed as disconnected properties from meaning. Instead it looks in detail at all meanings relating to cognitive functions, bearing in mind experiences in the world.

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Jacobsen (2012), in agreement with this statement, mentions that cognitive linguistics approaches the study of language from the perspective of the cognition domain. That is, language learning is rooted in the overall cognitive abilities of humans. This theory moves away from the abstract analysis of language structure to a more pragmatic analysis of the human mind. Arguing from this point one can say that the underlying tenet of cognitive linguistics is that:

> Cognitive linguistics rejects the claim that the human mind is organized into distinct 'encapsulated' modules of knowledge, one of which is language, and that these modules serve to digest raw sensory input in such a way that it can then be processed by the central cognitive systems (involving deduction, reasoning, memory and so on). [It continues] to reject the claim that there is a distinct language module which asserts that linguistic structures and organization are markedly distinct from other aspects of cognition (Evans and Green 2006:41).

It can be noted from the above discussions that cognitive linguistics operates on the holistic analysis of language where logical, coherent and meaningful ideas are expressed. And so Talmy (2000) sums the idea about cognitive linguistics as a large framework of approaches that help analyse language relating to cognitive structures.

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2.3 Commitments of Cognitive Linguistics

There are two commitments that set cognitive linguistics apart from other approaches to investigating linguistic data. These commitments are Generalisation Commitment and Cognitive Commitment (Lakoff 1991).

2.3.1 Generalisation Commitment

Generalisation commitment is a guiding ideology that supports the broad scope of all areas of language (Lakoff 1990). This commitment searches for all possible generalisations that can be made about the different language components (syntax, semantics, phonology, morphology, pragmatics etc.) in language studies (Evans & Green 2006). It addresses what is common and standard for language analysis. It analyses the various aspects of meanings from the cognitive domains as a holistic approach rather than treating them as discrete elements (Lakoff 1990). According to Lakoff the generalisation commitment allows for a range of meanings as far as the linguistic data can exhibit to bring about rich ideas that language can reveal through thought. Supporting this assertion, Evans (2012) comments that:

> Generalisation commitment represents a commitment to openly investigating how the various aspects of linguistic knowledge emerge from a common set of human cognitive abilities upon which they draw, rather than

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> assuming that they are produced in an encapsulated module of the mind, consisting of distinct knowledge types of subsystems (2012:3).

Generalisation commitment also helps to identify what is common among aspects of language and the generalisations that can be used to analyse the communication competence, understanding and experiences of the world.

From the standpoint of generalisation commitment, there should be generalisations that should characterise the various grammatical structures in the language. For instance, there should be generalisations about semantic approaches to linguistic data and competencies that can help unearth the conceptual abilities of the human mind. This and other generalisations should help analyse other forms of linguistic notions (Lakoff 1991).

Lakoff's statement reveals general understanding of how various aspects of language learning develop from a collective set of guidelines from a cognitive point of view. This commitment digresses from the formal approach (generative grammar) which claims that a component of language should be seen as a distinct element from the other divisions in linguistics and therefore should be analysed independently. This argument is reiterated by Evans & Green (2006):

> Generative grammar (developed by Chomsky) usually argues that areas such as Syntax; Semantics and Phonology concern significantly different kinds of structuring principles operating over different kinds of primitives. For

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> instance, a syntax 'module' is an area in the mind concerned with structuring words into sentences, whereas a phonology 'module' is concerned with structuring sounds into patterns permitted by the rules of any given language, and by human language in general (Evans & Green 2006:28).

Cognitive linguists uphold the view that various areas in language studies must ideally not be treated as discrete unit but in holistic way where all related ideas that arise from these areas must be analysed together. The argument is that concepts have united resemblance in terms of their philosophical underpinnings; thus, these concepts must have mutually dependent relationship. Hence, not a single member should be independent in its own right. For example, in analysing cognitive activities there should be a connection between the conceptual ideas and grammatical structures. We cannot do away with grammatical contents that might arise in the analysis process of linguistic data nor can we treat cognitive activities separately from grammatical structures. There will be common issues that will be associated with them and must be addressed as such.

2.3.2 Cognitive Commitment

Cognitive commitment discusses how the human mind operates at the level of language and the various interpretations it gives to reality around us. This commitment points out that the varied meanings that language activates will not in

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any way be the same for all people because meanings are expressed differently by people through their own psychological experiences. It helps provide meaning to what exists in the brain as well as what is in the world outside.

As part of cognitive commitment principles, Evans (2012) outlines a number of concrete effects that cognitive commitment exhibits.

(a) Firstly, linguistic theories cannot include structures or processes that violate what is known about human cognition. For example, if sequential derivation of syntactic structures violates time constraints provided by actual human language processing, then it must be jettisoned.

(b) Secondly, models that employ established cognitive properties to explain language phenomena are more parsimonious than those that are built from a priori simplicity metrics (such as Chomskyan elegance— the view that a theoretical model should eschew redundancy of representation in favour of parsimony as a matter of principle, regardless as to whether such is supported by the empirical facts).

(c) Finally, the cognitive linguistic researcher is charged with establishing convergent evidence for the cognitive reality of components of any model proposed— whether or not this research is conducted by the cognitive linguist (Evans 2012:2).

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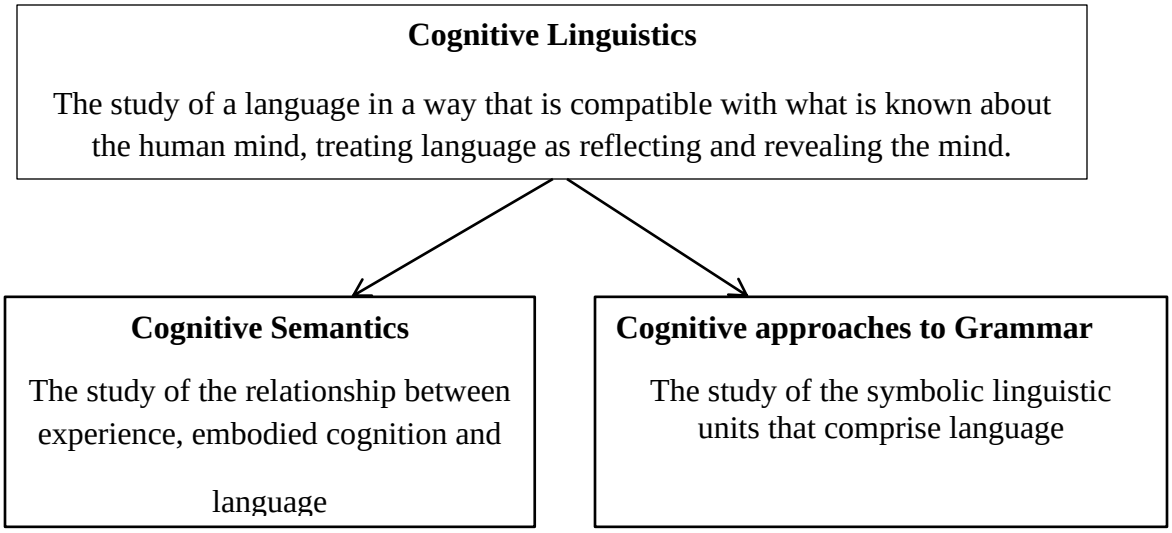
These commitments allow researchers to examine language from broader perspectives, taking into consideration the standard generalisations and cognitive commitments about the nature of language and how the brain works as we interact with the world.

2.4 Branches of Cognitive Linguistics

Cognitive linguistics approach to language study has two major divisions—cognitive grammar and cognitive semantics (Evans & Green 2006). It is clear from the literature that meaning and linguistic structures complement each other; none is independent in its own right. Thus, meaning and structure are entwined to explain linguistic ideas as well as describe the various components, none of which is void of meaning. Though some linguists, notably Langacker, have extended the notion of cognitive linguistics to cover phonology, these two main subfields of cognitive linguistics are what this study is built on. The two main subfields of cognitive linguistics are diagrammatically shown below:

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Figure 2.1 Subfields of Cognitive Linguistics



Adapted from (Evans & Green 2006:50)

The model explains the relationship between the outside world domains which is co-opted into how the brain works with respect to knowledge of meaning embodied in language learning.

2.4.1 Cognitive Grammar

Cognitive grammar is a model which describes conceptual knowledge as image schemas or concepts that relate to our mental capabilities. The term was known originally as 'space grammar' developed by Langacker (1982). It is also seen as one of the cognitive approaches to the analysis of linguistic structures in relation to

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semantic representations and thus connecting meaning with conceptual representations.

This model does not look at the term 'grammar' as just a constituent of language which discusses construction of sentences. Rather, it considers grammar in a broader sense to refer to the holistic approach which integrates meaning and structure as one unit. The model also supports the generalisation commitment in cognitive linguistics in the sense that it embodies all the possible generalisations that describe all the grammatical structures in language. Cognitive grammar assumes that it is not possible to investigate linguistic structures without making reference to the sensory experiences in the world (Evans et al. 2007). There is interdependency activity that allows for cognitive practices and grammatical interaction. Supporting this claim, Langacker (1986) points out that:

> Cognitive grammar assumes that language is neither self-contained nor describable without essential reference to cognitive processing [and that] grammatical structures do not constitute an autonomous formal system or level of representation. They are claimed instead to be inherently symbolic, providing for the structuring and conventional symbolization of conceptual content. […] [Thus,] it is ultimately as pointless to analyze grammatical units without reference to their semantic value; [it is the same as] writing a dictionary which omits the meanings of its lexical items (1986:1).

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Langacker's (1986) comments above show that cognitive grammar goes beyond the formal approach of analysing the internal structures of language independently without considering meaning. That is, it deviates from the traditional system of analysing grammar in terms of 'words and rules.' Cognitive grammar integrates meaning in the exploration of grammatical structures. Thus, grammatical structures and semantic values are very significant in the investigation of language. They are indispensable modules that cannot be separated. He says this to support the fact that grammar and meaning are critical in linguistic analysis; Langacker (2013) argues that

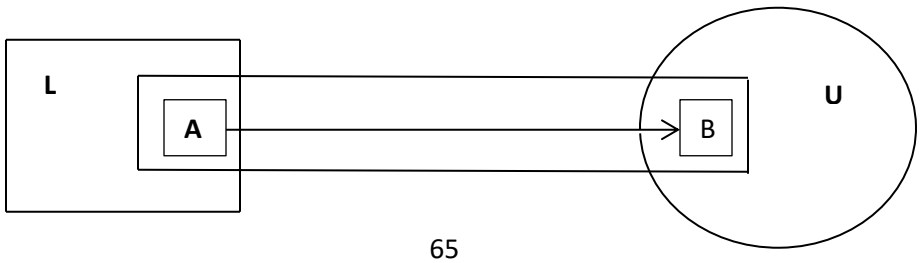
> …grammar is meaningful. This is so in two respects. For one thing, the elements of grammar—like vocabulary items—have meanings in their own right. Additionally, grammar allows us to construct and symbolize the more elaborate meanings of complex expressions (like phrases, clauses, and sentences). It is thus an essential aspect of the conceptual apparatus through which we apprehend and engage the world. And instead of being a distinct and self-contained cognitive system, grammar is not only an integral part of cognition but also a key to understanding it (2013: 13).

This relationship is what Langacker calls 'network model' (Langacker 2002), while Evans (2007) sees this intertwining relationship as an organised network.

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Furthermore, cognitive linguists relate cognitive grammar to symbols where there is no difference between syntax and the lexicon. Evans & Green (2006) see this as 'symbolic' (symbols that contain the linguistic units involving grammatical structures) (cf. Langacker 1987; 2001; 2008; 2013-- symbolic assemblies). This is because the symbols contain the linguistic units involving grammatical structures, sounds, morphemes and meanings that exist in the real world which are illustrated in our conceptual experiences. For example, the word *see* can be represented as a symbolic unit that consists of two sound segments [s] and [i:]. These segments are represented as phonological units in the language structure. The word *see* can also have TENSE represented as *saw*. The past morpheme '–ed' represents the grammatical units in the symbolic unit – *saw*. This development is associated with patterns called 'instantiation' (Langacker 2000); that is, a specific instance of usage in the language. The examples show that phonological rules as well as grammatical rules can be seen as symbolic units that can represent meanings in the language structure as well as the world around us. This specific instance of use corresponds to schemas. An example of instantiation of a schema adapted from Langacker (1998: 2) is illustrated below:

Figure 2.2 Instantiation Schema



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An instantiation of a schema from Langacker 1998:2

In Langacker's (1998) explanation of the diagram above, the box labelled L, exemplifies the pool of ideas or collection of expressions while the circle labelled U, shows how these expressions are used. The box labelled A in the depository unit indicates the standardised unit or the laid-down rules that govern the standard usage and structure of the language. For example, in Akan, subject NPs precede verbs and adjectives come after the item they modify as illustrated below:

1a. ɔ́-kɔ̀ ǹsú
3SG.SUBJ.go-HAB water
'S/he fetches water.'

1b. àtàŕ fúfúẃ
Dress white
'White dress.'

In example (1a), the third person singular subject pronoun *ɔ* 's/he' is put together with the verb *kɔ̀* 'go' in the construction while in b, the adjective *fúfúẃ* 'white' comes after the noun head *àtàŕ* 'dress'. This is the standard usage in Akan.

The circle labelled B therefore selects from A some of the expressions, words, and concepts in the unit to illustrate the standard usage. This kind of relationship is indicated by the arrow which illustrates that B instantiates schema A.

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Thus, B can be seen as an example of A. Here meaning is crucial because within the cognitive grammar model, grammatical unit emanates as a result of language use.

2.4.2 Cognitive Semantics

Cognitive linguists have argued that knowledge of the world is best investigated through language use. Cognitive semantics as the other subfield of cognitive linguistics focuses on meaning. Yet, it differs from the formal approach to semantics (that pays attention to the use of symbols) in the sense that its fundamental focus is on conceptual and world experiences in analysing linguistic data. Tamly (2000) looks at language as wholly conceptual and thus refers to semantics as conceptual structures of a language in relation to how humans think. Hence, Tamly (2000) sees semantics as intrinsically cognitive, in that meaning is independent of the mind.

Langacker (2008) argues that since meanings reside in the minds of users who construct and understand the expressions, it is best for them to properly interpret experiences in the world.

This assertion is also reiterated in Kuznetsow's (2015) notion of cognitive semantics; he observes that cognitive semantics is about the "…relationship of words to thoughts but it is also about relationship of words to other human concerns. [Thus, it is] about the relationship of words of reality: the way that speakers commit

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themselves to a shared understanding of truth, and the way their thought are anchored to things and situations in the world" (2015:308). The statement shows that meanings of words are epitomised in the minds of the speakers as concept which reflect in their understanding of things around them as they use language.

Again, these explanations above portray that meaning resides in the human mental faculty which is in constant relationship with the various aspects of the body and the physical environment which our bodies interact with (Evans et al. 2007).

Langacker (2008) supporting this statement indicates that speakers who really understand and use the language value its importance in relation to the cognitive experiences. Per the cognitivists notion, for someone to be interested in a particular language s/he must understand the practical usage of it in terms of how members of a community give judgemental interpretations of their experiences.

In cognitive semantics, understanding a language is basically part of the whole cognitive activities of humans and that grammar reveals the linguistic forms that are evident in the world (Janda 2010). Accordingly, the structures of grammar (the arrangement of ideas) are explained through the use of language. These two units are seen as an integrated module that helps in analysing structures and meanings in cognitive semantics. In order to understand and give interpretations to linguistic structures, it is important that the abstract symbols (grammar) interact with the cognitive properties to unearth the various meanings in the world (Langacker 2008).

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As a major branch of cognitive linguistics, it can be deduced from the statements above that cognitive semantics does not accept the traditional way of analysing linguistic structures in discrete forms — morphology, syntax, pragmatics, phonology and phonetics. In view of that, these discrete structures are to be examined in integrated way. There are four guiding principles that characterise cognitive semantics (Evans et al. 2007). Each of these principles is discussed below:

The four guiding principles of cognitive semantics are as follows:

(i) Conceptual structure is embodied (the 'embodied cognition thesis')

(ii) Semantic structure is conceptual structure.

(iii) Meaning representation is encyclopaedic.

(iv) Meaning construction is conceptualisation.

2.4.2.1 Conceptual Structure is Embodied

The first principle of cognitive semantics, the thesis of embodied cognition, generally discusses how the body permeates our perceptual activities of the world. The way we behave, think and understand things around us reveals the way our bodies are structured and how they interact with the physical world as we move about.

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Lakoff & Johnson (1999) state that the mind is characteristically seen as an embodied symbol which reveals knowledge of experiences in the world as the body interacts with the environment. Thus, the ability of the individual to reason and exhibit intellectual skills originates from the sensory experiences of the individual. In view of this, Lakoff & Johnson (2003) point out that language is considered an exceptionally embodied action. Juřík (2015) affirms that the effect of embodiment on human thought is very significant in life experiences. That is, the study of language focuses on the body-mind relationship where the various parts of the body relate to the psychological orientations of the individual (physical and psychological relationship).

Thompson (2012) confirms that cognition is influenced by bodily experiences via the brain. In the field of cognitive linguistics, this notion is described as 'embodied cognition' or 'embodied hypothesis' — how the body impacts the mind. For example, the photoreceptors of human beings are different from animals. While animals can have between 2-4 colour photoreceptors to distinguish colours, humans have only one embodiment — the eye — to discriminate colour.

In addition, Fauconnier (2003) states that the structure of the human body influences the way humans use language to describe themsleves and things around them. That is, the human body controls the mental capabilities in resolving issues in the real world. For example, how the body experiences an object closer to it might

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be different from how it experiences one farther apart from it. In this principle, perception relies heavily on bodily experiences and how the body reacts to these experiences. Embodied congition, therefore, concludes that, since embodied experiences of every individual differ, so do our conceptual abilities.

Two issues are key to this thesis: (i) cognition determines the experiences that come out by the interaction of the body and the mind and (ii) the sensory organs that communicate these experiences (meanings) are deeply rooted in the psychological make-up of the individuals themselves (Evans 2012). So the nature of embodiment can reflect the background experienecs the brain displays. This relationship is what is characterised in cognitive linguistics as 'meaning is embodied-semantics'.

The embodied cognition is also connected to the conceptual or cognitive metaphor which helps us to conceptualise abstract concepts comprising 'ideas', 'love', 'life', 'journey' etc. and relate them to our bodily experience and experiences of our social life. Lakoff & Johnson (2003) point out that conceptual metaphor shapes the way we think and reason in terms of real life experiences, thus they call this relationship *experientialism* or *experiential realism* (Lakoff & Johnson 2003). Thus, metaphor is about time, space, moving or controlling objects-- the core elements of embodiedment. This is because metaphors are prevalent in everyday life experiences.

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1. Cognitive metaphors also help to understand one concept in relation to another idea. It is a transfer of meaning of one concept unto the other; this also reflects our cognitive experiences. So cognitivists put this relation into mapping, where a concrete concept – Source domain (that arises from everyday life experiences) is mapped unto a target domain (abstract ideas). For example, in analysing the metaphor. TIME IS MONEY, we get to understand that 'time' in this expression is related to money. We can actually waste or save time; we can gain from or lose its benefit. If we really plan our time well and use it appropriately, we achieve our goal or set target which in the long run can earn us money. In consequence, it illustrates that 'time' well spent is more fulfilling or gratifying than 'time' wasted; which reflects the characteristics of money. So, time is quantified in relation to the features of money. We can imagine people who don't value and use time profitably, just as people who don't value and use money well, what will their bahavoiurs and lives be? This is related to the fact that generally, time is seen as a treasured package. This is what it means for this metaphorical expression: TIME IS MONEY. Thus, Money is concrete; its benefits are palpable so we expand this notion to the abstract domain of 'time'.

2. These two concepts are different kinds of entities but we regard 'time' in terms of money. So when we think of TIME, we spend, steal, save, waste, invest wisely or poorly just as we do to MONEY. Here, the basic idea of money is understood as the concrete domain while time is considered as the abstract domain. Thus, the

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chracteristics of the concept in the source domain – MONEY is transferred to the target domain TIME. We can have a similar example in Akan since metaphors are also pervasive in Akan; *ɔbra yɛ kõ* 'LIFE IS WAR'. In this metaphor, *life* is associated with *war,* in that we can lose life or win (gain our lives). Thus, the natural life in general is a matter of battle; if we live it well, we gain and vice versa. So, we need to plan strategies, defend and secure our own lives; where we feel insecure and indefensible to win the battle, we have to either leave the present situation or device new line of attack to make life easier for us to win.

All activities in connection with life are geared towards the concept of battling or war although we don't engage in physical battle, the various events in life tell it all. It is in this sense that *Life* is argued to be *War*. Thus, the metaphor, *ɔbra yɛ kõ* 'LIFE IS WAR'.

In this discussion, the conceptual similarities of 'Time' and 'Money' and 'Life' and 'War' are revealed. In metaphorical expressions (transfer), this relation is called *systematicity* – an equivalence system where ideas act in similar ways (Lakoff & Johnson 2003).

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2.4.2.2 Semantic Structure is Conceptual Structure

This is the second principle in cognitive semantics. The semantic structure principle breaks meanings into smaller units within the conceptual structure. It shows that the discrete units that make up language can be linked with these smaller meanings in the conceptual structure. This is because the units in the language system interrelate with each other and reflect the relationship these smaller meanings have with the conceptual structure. Also, it points out that meanings reside in the minds of the speakers. These reasons allow cognitive semanticists to link semantic structure to conceptual structure. Evans & Green (2006) indicate that semantic structure is incorporated in conceptual structure. This shows how people understand morphemes, sounds, words and sentences, and interpret them by providing correct explanations to reflect the meanings of these units in the language system. These smaller units become sub-units within the conceptual domain. So semantic structure implies conceptual structure.

2.4.2.3 Meaning Representation is Encyclopaedic

The principle claims that the various denotations that a word exhibits relate to the varied experiences that exist in the world. The knowledge that these denotations unveil do not exist independently but are understood to have their references to the information in the encyclopaedia to which they connect (Evans 2012). For example

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the word 'bachelor' has different contextual meanings than when it is identified in isolation, as illustrated below:

2. I hold a Bachelor's degree in English Education from University of Education

3. Mr. Amponsah, my uncle, has remained a bachelor, even at age 50.

The noun 'bachelor' in example (2), relates to a first degree from a university or other academic institutions while 'bachelor' in example (3), refers to a man who is not, and has never been married.

This indicates that meanings are better explained in context than in isolation. Full meanings of words are best obtained or described in the background knowledge experiences of the person as represented in context (Langacker 1987). It is with this notion that cognitive semanticists claim that meaning representation is encyclopaedic.

2.4.2.4 Meaning Construction is Conceptualisation

We have already come to realise that meanings are best identified in context and are related to meanings that have connection with them in the encyclopaedia. This principle (the fourth in the guiding principles of cognitive semantics) means that language helps to bring meaning in discourses. This activity helps in selecting meaningful words presented in dictionaries to fit into a particular discourse.

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Whatever we conceptualise in a discourse can relate to meanings to have connection with them in the lexicon. According to Evans (2012) linguistic meanings rely heavily on our conceptual understanding of things. That is, our intellectual abilities contribute to the various meanings we have.

In relation to this meaning construction, Fauconnier & Tunner (2003) look at it as an account of contextual relations between ideas. They refer to this relation as Projection Mappings where the aspect of concept from a source domain is projected onto another conceptual domain, the target domain. This projection relation is similar to the notion of conceptual metaphor where a source domain is mapped onto a target domain dicussed in section 2.4.2.1.

These discussions point to the main reason why cognitive semanticists connect meaning construction to conceptualisation.

From the discussion, it is clear that cognitive linguistics is the more appropraite approach for analysing sensory modalities. Since, congnitive linguistics has lots of tenets, this study employed the cognitive semantics approach for the analyses of the data. The justification being that its tenets such as conceptualisation, embodiment and metaphor which Talmy (2000) highlight, which this study heavily relied on, helped provided deeper insight into the literary and metaphorical meanings of the expressions of perception and cognition in Akan. The nature of the approach which also allows for interdiscisciplinary and inter-theoretical analysis of

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data helped in providing a broad range of linguistic expressions relating to the senses of the body in Akan.

2.5 Literature Review

Perception and cognition have been widely studied in Psychology, Philosophy, Anthropology and Cognitive Sciences. Some of the linguistic research done on perception and cognition verbs is mostly cross-linguistic in nature. Many researchers (e.g. Viberg 1984; Sweester 1990; Ibarretxe-Antuñano 1999; Evans & Wilkins 2000; Tacca 2010; Majid et al. 2018; Majid & Levinson 2011; Imre 2012; Aikhenvald & Storch 2013; Levinson & Majid 2014; Firestone & Scholl 2016; Sydhagen 2017) have looked at these expressions in different areas of linguistics in languages in Northern Continental Europe such as Belgium, Holland, Germany; North America, South America and Australia; and also in African and Oceanian languages.

2.5.1 The Concept of Perception and Cognition

Perception and cognition interact in many ways. Though they represent different mental experiences, they overlap in information distribution. There are numerous arguments in various researches on whether or not cognitive concepts penetrate

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perception. These philosophical arguments about cognition and perception have been highly debated in the literature.

According to Prinz (2002) every thought of a human being represents images of what exists in the mind (perceptual symbols). He clarifies that since perception is the most essential foundation of which mental images are built, ideas or knowledge that we have are principally the reduplicated forms of perceptual symbols. In view of this, he claims that cognition is characteristically perceptual and that our cognitive practices are deeply rooted in our perceptual experiences. Noting very well that all viewers (percipients) are not the same, the dissimilarities that will arise in terms of perception will reflect not only on the different mind-world activities, but also on the diverse ways in which the events enter into our cognition. Perception and cognition expressions, thus, express how people interact with the world in terms of the various judgments they give through the understanding, intuition, recognition and psychological orientation they have about events they perceive (Usoniene 2002).

In line with this, Frith (2007) argues that percipient or viewers might exhibit different background experiences and expectations; these variations may affect how they perceive things as well as exhibit knowledge of what they think about. He indicates that, we go through either good or bad experiences in various aspects of life, which later are revealed in our understanding of the world. How people behave

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the way they behave, think the way they think and perceive the way they perceive are all because of how they have positioned their minds and how they interact with the physical world due to past experiences. This means that reaction and action we receive presently from the environment are by nature due to historical philosophies that might have arisen in relation to happenstances from the physical world. This even affects how we look at things and pronounce judgment on issues relating to our understanding of events we come across with. Frith continues to debate, however, that it is not always that we experience these phenomena in the world. Nonetheless, the brain can also create images of various kinds of sensations which may affect the way we think, behave and perceive things.

To add to the above considerations, Schacter et al. (2009) make clear that in the event of perceiving, it is the brain that processes several sensations into meaningful ideas. Thus, the sense organs receive the information and transfer it to the brain, where the brain processes it through the identification of objects, organisation of concepts and understanding of thought. It can be deduced from the discussions that there is information sharing between the sense organs and thought which are exposed in our perception and knowledge distribution. This interpretation is associated with Tacca (2010), who points out that perception information guides our decisions and actions and shapes our beliefs; just as in the same way our knowledge influences the way we perceive the world.

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This knowledge becomes the fundamental source for cognitive information which further influences perceptual practices. This kind of influence shows that cognitive practices depend on perceptual evidence. That is, what you think of relies heavily on your experiences on what you have seen or heard or know of. So, the perceivers' attitude towards a particular event and/or their expectations emanates from their intellectual background experiences (interest, motives, social setting, social relationship, time, proximity etc.). As De Vries (2013:133) rightly points out, perception expressions are "mental response to the perceived event". Thus, speakers use expressions of perception when they want to express internal conditions of feelings, beliefs, and opinions about events. They do that through mental response – understanding, interpretations and inferences.

In a contrasting idea, Aikhenvald & Storch (2013) assert that the connection that exists between sensory perception and cognitive development appears to be distinct in relation to the various cultures they occur in. They associate these senses: hearing, seeing, smelling and feeling with cognition. Thus, cognition deals with cognitive practices such as understanding, thinking, perceiving and problem solving. Our sense organs therefore encode different meaningful expressions as the organs interact with the physical world. Speakers of language have ways of expressing sensory perceptions such as sight, hearing, smell, taste and touch and also "have varied ways in which they express feelings, assumptions and inferences" (p.1).

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In a similar view, Firestone & Scholl (2016) argue that cognition and perception are basically distinct in nature. Their argument was based on the premise that there is no one way the mind operates, in that, the mind has several parts which operate in diverse ways such that seeing shapes works differently than planning a trip. In the same way, understanding a novel, moving objects, memorising poems or expressing our emotions towards something either negative or positive, all work differently. Thus, emphasising that the distinct nature of perception and cognition are clear in the numerous visual delusions we have and the conflicting evidence perception and cognition convey about the world. This is seen in their statement "…. there may be no better way to truly feel the distinction between perception and cognition for yourself than to visually experience the world in a way you know it not to be" (2016:4).

In order to fully understand the account of perception and cognition, Sydhagen (2017) clarifies that though there is a thin line between perception and cognition relationship, basically, they function differently in our mental life. This evidence, notwithstanding, it is very challenging to draw a clear-cut line between perception and cognition. He points out that a lot of evidence shows that "all kinds of cognitive state, including beliefs, purposes, and emotions, systematically interact in intricate ways in generating perceptual representations" (2017:3). He states that some linguists even doubt whether there is factual dissimilarity at all. This points to the reality that there are no precise views in distinguishing between perception and

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cognition since perception varies from person to person. For example, in perceiving, a pink ball may seem red to someone else or a rectangular shape can be seen as square by different people. This illusion of our vision can sometimes become a harmful behaviour than others and can create problems in understanding things around us. He again explains that:

> …. cognition is meant to capture, roughly, the capacity of thought. Thinking is unlike perceiving in that it does not essentially involve, and is not limited to, the here and there now. [For example, we] can think of things that happened years ago, even before [we] were born, [we] can wish for future things, [and] imagine things that have never, or will never, exist, and so on. [Thus,] cognition centrally involves reasoning, evaluation, knowledge, belief, memory, decision making and problem solving. Very roughly speaking, one could say that, as usually understood, while perception is the process of acquiring new information; cognition makes use of already existing information in its operations (2017:4).

The current debates show that cognition is fed by perception and that they are not seen as multi-directional phenomenon.

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2.5.2 The Senses, Perception and Language Use

Diverse meanings and concepts have been explored in relation to language, senses and cognition. Research indicates that the idea of embodiment (one of the tenets in cognitive linguistics) demonstrates that meaning resides in human bodies and perception. This is communicated in our everyday interaction with the physical world (Ibarretxe-Antuñano 1999). This shows that meanings are not the same; different thoughts illustrate different meanings. In human existence, human beings express their thoughts and experiences in diverse meaningful ways. For example, the taste of hot pepper can be described by scientists as a perception which is facilitated by pain receptor.

On the other hand, taste can be expressed in different contexts by linguists as expressing a sensation of flavour, savour, and appetite perceived when the mouth and throat come into contact with a substance. This implies that the various relationships (physical, social and cultural) that exist between the sensual paradigms have great significant influence on the conceptual experiences (Evans & Green 2006). In other words, the sense, perception, and language interaction account for the conceptual experiences in the world. This view is evident in Schacter et al. (2009:2) who point out also that, "the mind is the private inner experience of perceptions, thoughts, memories and feelings." These reflections are communicated through our bodily senses which come to bear in our language use. Thus, language allows us to organise our thoughts and help give judgmental inferences that are

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established by experiences. This means that we need not disregard the importance of language when we are talking about sensory issues. The indication is that, the sensory organs play major roles in sending and processing information (language issues) based on their interactions with the environment (Majid and Levinson 2011).

The issue of culture is another major concern when we talk about senses, perception and language use. Every culture has its values associated with each sense and a kind of lenses they use to look into or measure each particular sense in terms of language usage. Aikhenvald & Storch (2013) indicate that sensual information interacts strongly with the cultural practices of members of a community as they use their language. Thus, concepts of a particular sense in a particular language differ from one language to the other.

Also, there are culturally specific meanings to the various senses. They buttress their point with the following examples; in Kapsiki of Cameroon, the sense of smell is associated with blacksmiths. This is because as a group, they are connected with the smell of a 'totemic animal' so whenever smell is mentioned, the idea of blacksmiths comes in mind first, before it can be connected with anything else. Similarly, in the culture of the people of East Sepik (found in Papua New Guinea), it is a taboo for a woman to catch a glimpse and listen to the magic flutes. So, in that culture, women are forbidden to see and hear the sound of the 'magic flute' (the magical sound which functions as the spirit of protection and spiritual communications). Hence, the sense of seeing and hearing with their values attached

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to this flute, are very critical in that community. It is clear from these examples that there are cultural dichotomies in relation to the various senses Kapsiki and East Sepik community members come into contact with.

Also, the phenomenal character i.e. what-it-is-like proposed by Sydhagen (2017) shows that what-it-is-like to touch, or hear something is totally different from what it is like to smell something. Thus, meanings emanate from our mental construal of the things around us and these meanings are demonstrated through the various sense organs. It can be concluded that what someone has seen, felt, believes in and understands, is what they express views of.

2.5.3 Semantic Meanings of Perception Expressions

2.5.3.1 The Semantic Meanings of the Five Basic Senses

It is clear in our day-to-day interactions with the world that numerous meanings that are communicated are done through the senses. The senses process the evidence in our mental faculties and later redirect them through our perceptual experiences. These experiences are eminent in the broad category of perception. The class of 'perception' refers to the verb class representing *see, look, listen, sound, smell,*

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touch, feel and *taste* as well as the semantic field[2] (vision, hearing, touch, smell and taste) which is further sub-classed into three groups in relation to the semantic role their subject plays (Ibarretxe-Antuñano 1999). These three groups are:

2.5.3.1.1 Experience Verbs

In the category, the subject does not willfully control the actions or the events. The experience of perceiving comes as involuntary act and therefore demonstrates a 'state or inchoative' realisation. Other names given to this first group by different authors include 'experience' (Viberg 1984:123), and 'stative with experiencer subject' (Lehrer 1990: 223). Examples are illustrated in the sentences below:

4a. Esi saw the animals.

b. Esi heard the voices.

c. Esi felt a stone under her foot.

d. Esi smelled perfume in the room.

e. Esi tasted pepper in the food.

In the examples above, the subject, Esi, has no control over the actions performed by the following sense organs: eye, ear, skin, nose and the mouth. Thus, the subject

[1.] Semantic field is a lexical set of semantically related items, or a set of group of words which relate to each other in semantic way or have related meaning. These groups of words share similar properties and discuss common subject matter (Boran 2018).

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may or may not have control over the activities of perceiving. Examples can be demonstrated in Akan:

5. Esi hú-ǹ m̀-bówá nó.
   Esi see-COMPL PL.animal DEF
   'Esi saw the animals.'

6. Esi tsé - è ǹdzé nó
   Esi hear-COMPL voice DEF
   'Esi heard the voice.'

7. Esi tsé - è dɛ̂ né náń é-sì bóbá dò.
   Esi hear-COMPL COMP. 3SGPOSS. SUBJ. leg PERF.step stone on
   'Esi felt she had stepped on a stone.'

8. Esi tsé - è èdùhúáḿ ńkà wɔ̀ dáń nó mú.
   Esi hear-COMPL perfume scent be house DEF inside
   'Esi smelled perfume in the room.'

9. Esi tsé - è mùòkó wɔ̀ èdzìbàń nó mú.
   Esi hear-COMPL pepper be edziban DEF inside
   'Esi tasted pepper in the food.'

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2.5.3.1.2 Active Perception Verbs

According to Viberg (1984) this class of verbs represents situations where perceptual activities are deliberately ordered by human agents, the converse of the first class. This second sub-class is seen to be the 'active perception verbs' (Ibarretxe-Antuñano 1999); or 'active experiencer subject' (Lehrer 1990:223) or 'active' verbs. Instances are shown in here:

10 a. Esi looked at the choir.

b. Esi listened to the choir.

c. Esi felt the cloth (to find out its texture).

d. Esi smelled the perfume (to see if she could use it).

e. Esi tasted the food (to see if she could eat it).

In these examples, different lexical items are used to express the 'active activity' of the perception verbs that fall under this group. This concept occurs in Akan too where *hwɛ́* 'look', *tsíè* 'listen', *húà* 'smell' and *kà hwɛ́* 'taste' are used to express controlled activity of the perception verbs. Gisborne (1996) points out that to strike the differences in the two groups 'a deliberate test' is needed to identify the controlled (active) and the uncontrolled (stative) perceptions. He proposes the use of the 'deliberately adverb' occurring with perception verbs. He is of the view that perception verbs that can occur with this adverb are seen to be 'agentive' and

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therefore can be addressed as 'active experiencers' whereas those that cannot occur with the 'deliberately adverb' are realised as 'involuntary perception'. So, group one cannot occur with the 'deliberately adverb' while the second group can occur with the 'deliberately adverb'. Examples are presented below:

11 a. Esi was deliberately looking at the man

b. *Esi deliberately sees the man.

c. Even though her father has warned her about that boy, Esi deliberately goes to see him whenever she goes to the market.

In the above example, since the perception verb *look* can occur with the adverb *deliberately,* it is considered an 'active perception verb' and for that reason recognised as 'agentive verb'. In example (11b), it is not possible for the perception verb *see* to accept the adverb *deliberately* in its structure (hence, the verb is considered as an 'experience verb'), I think it depends on which meaning of *see* is being expressed in the sentence. For instance, in example (11c), the adverb *deliberately* co-occurs with the active verb *see* and makes the sentence meaningful. So, the test can be subject to which kind of sense we want to express. Based on that, we can select which kind of verb will best fit the sentence structure and not rely solely on the adverb *deliberately* test. This is tested in Akan as shown in the examples below:

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12a. Esi hyɛ́-ɛ̀ dá árá kɔ̀ hwɛ́- ɛ̀ pàpá nó ényím̀

Esi deliberately-COMPL go look.COMPL man DEF face

'Esi deliberately went and looked at the man's face.'

b. Esi hyɛ̀ dá árá hwɛ̀ nò

Esi deliberately.HAB look.HAB 3SG.OBJ

'Esi deliberately looks at him/her.'

c. ɔ́-hyɛ̀ dá árá kɔ́ hú nó

3SG.SUBJ.deliberately go.HAB see 3SG.OBJ

'He/she deliberately goes to see him.'

d. Esi hyɛ̀ dá árá kɔ́- hú pàpá nó m̀bɛ́ŕ bíárá â

Esi deliberately.HAB go see.HAB man DEF whenever COMP

ɔ́-bɔ́kɔ́ gúámù

3SG.OBJ.FUT.go market

'Esi deliberately goes to visit the man secretly anytime she goes to the market.'

e. * ɔ́-hyɛ̀ dá árá hù àbòwà nò

3SG.SUBJ.deliberately see.HAB animal 3SG.OBJ

'He/she deliberately sees the animal'

f.* ɔ́-hyɛ̀ dá árá hù àdzé

3SG.SUBJ.deliberately see.HAB something

'He/she deliberately sees something'

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In Akan the two verbs *hwɛ́* and *hú* that express see were used to test for the deliberate adverb test. In all the examples in (12a-f), the Agent functions as the Active Experiencer subjects. Though we notice in (12a-d), that the deliberate test passes, in (12e & f) the deliberate test fails. This is because in (12a-d), the perceptual experiences are deliberately ordered by the Agents. Thus, the Agents control the perceptual events. On the other hand, the deliberate test as occurs in (12e & f), renders the sentence ungrammatical because the collocation of the visual verb *hú* 'see' in relation with the objects appears as if the events happen in involuntary action. Again, the Agents' act in using the deliberate actions in those contexts was unacceptable in the language. Since the deliberates test fails in involuntary perpetual experience, it can be said of example (12e & f) that the sentences are ungrammatical in the case of the deliberate test in Akan. In the case of *hú* in example (12c & d) the motion verb *kɔ́* 'go' should always apply when there is the deliberate adverb in the construction, without that, it renders the sentence ungrammatical.

2.5.3.1.3 The Stimulus Subject Verbs

Verbs in the third group have their subjects acting as the motivators in the perceptual activities. Their major role is to influence the activities. The stimulus subject verbs are referred to as the 'flip verbs' or 'stimulus subject' (Lehrer 1990:223), or 'the

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copulative' by Viberg (1984:123) and 'percept' by Gisborne (1996:1). Their subjects act as the stimulus of perception. Illustrations are indicated in example (13).

13a. Esi looked joyous.

b. Esi sounded happy.

c. The material felt rough.

d. Esi smelled good/ of the perfume.

e. The meal tasted good / of the spices.

(These examples were adapted from Ibarretxe-Antuñano 1999:43-45).

In these examples the subject Esi plays a stimulation role in the perception activities; *look, sound, feel, smell* and *taste*. The subject becomes the promoter or the persuader in the perceptual activities. We present an example in Akan below:

14. Ńnà Esi n'ényí ágyè
That Esi POSS.eye receive
'Esi sounded/looked happy.'

In example (14) the percipient finds the theme entity, (the object) in a happy mood. This perceptual experience the object demonstrates (happiness) might have been influenced by a stimulus. The effect the causal event (functioning as motivation) carries unto the object is what the percipient observes (happiness) from the theme entity, the object.

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The explanations of the three sub-classes of the semantic field of the basic perception verbs in English are represented in Table 2.1 below:

Table 2.1 The Basic Perception Verbs in English

SENSE MODALITY	**EXPERIENCE/ PASSIVE**	**ACTIVITY**	**PERCEPT/ COPULATIVE**
VISION	See	Look	Look
HEARING	Hear	Listen	Sound
TOUCH	Feel/Touch	Touch/Feel	Feel
SMELL	Smell	Smell/Sniff	Smell
TASTE	Taste	Taste	Taste

The table of the basic perception verbs in English was adapted from Ibarretxe-Antuñano (1999:45).

Following Viberg (1984), Ibarretxe-Antuñano (1999:45) explains that there are three categories of basic perception verbs in English. These are the Experience (passive), Activity and Percept (copulative). In the table 1, the first column represents the general sensory concepts of the five components of the semantic field of perception verbs in English. The second column denotes the first category, Experience, of the basic perception verbs; this category discusses the

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'uncontrollable state' which shows that the subject of the stimulus often plays the role of passive observer of the perception activity. These are observed as the 'stative with experiencer subject' (Lehrer 1990:223). In this construction, the perceiver or the experiencer functions as the subject. In the view of Blendea (2015:92), "membership to the group of passive verbs such as see, hear, feel, smell and taste is based on some common characteristics such as the idea of non-intentional perception and that of different means of obtaining the sensorial information (via humans' inherent and uncontrolled properties: vision, hearing, touch, smell and taste)". The third column exemplifies the Activity category that is, the second category. This refers to the controlled group where the subject plays agentive role in the perception process. This group focuses attention on voluntary actions to achieve results of the perceived activity. Blendea (2015) points out a common trait 'in order to perceive' which reflects this group's activity. So, we can have voluntary actions: 'in order to see, in order to hear, in order to find out what flavour it has, etc. (2015:92). The fourth column displays the third category, the Percept (copulative) or the phenomenon-based, as Ibarretxe-Antuñano (1999:45) puts it. This group indicates that the subject itself functions as the stimulant in the perception process. It can also be noted from the table that the perception verb *hear* is the only one which has different lexical verbs to represent the different senses' perceptions in the other categories in the table, the rest have no distinctions of such nature. According to Ibarretxe-Antuñano (1999) the three sub-classes discussed above represent the

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prototypical (the ideal or the primary sense) meanings that perception verbs in English reveal.

2.5.4 Non-Prototypical Meanings of Perception Expressions

The non-prototypical meanings are considered semantic extensions or the extended meanings that the perception and cognition expressions can convey. They can be seen as physical or metaphorical (Ibarretxe-Antuñano 1999). Most of the extended meanings are also polysemous in nature. These semantic extensions add up to the central meanings perception expressions provide.

The physical meanings, according to Ibarretxe-Antuñano (1999), represent the fundamental or the basic meanings of the perception expression. The activity of the perceiver involves direct contact with the perceived object. She describes the physical meanings as prototypical, the typical member of a category, or the ideal concept that the senses depict.

Neagu (2013) points out that there are many ways in which the activity of perception is illustrated; some of the activities express concrete entities, while others express cognitive activities such as thinking, reasoning, understanding etc. These cognitive activities can also sometimes exhibit metaphorical concepts. Aikhenvald and Storch (2013) add that each of the perception senses has some distinctive meaning extensions which reveal metaphorical experiences.

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Naigles (2000) also observes that mental-state verbs are considered 'notoriously' polysemous. This is because perception verbs, one of the domains of mental-state verbs, demonstrate how events in the world create varied information of related senses. This helps unearth the extended meanings of the various senses of the body. The inference here is that in a language, a word can have many related senses or meanings which sometimes are considered as a challenging notion in language studies. It is important that good analysis is rendered to such words in order to bring clarity in terms of their usage. For instance, Lien (2005) attempts a cognitive account of polysemy of three verbs of visual perception in Taiwanese, Southern Min. Findings in his analysis show that visual perception is an indispensable means by which people cope with the world. His semantic text frame was based on the use of the eye and the syntactic test on the imperative and the progressive form with the use of the eye — 'see'. It was clear in his discussions that the use of the eye can indicate event interpretation, process, controlling, volitional and social interpretations. However, where cognitive sense links perception sense is where the use of the eye expresses recognition, determination, classification and judgment.

In the Akan, perception verbs are indeed polysemous in nature. Agyekum (2001) points out that "there are instances where the metaphorical expressions are derived from the use of the verbs or nouns denoting the organs of perception themselves or both" (2001:150). He relates this argument to the fact that the mind

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is seen as a body metaphor (cf. Neagu 2012; Sweester 1990). He again explains that the connection between 'physical and mental world' results in the differences in meanings. This issue is what this study would want to pursue.

2.5.5 Is there a Linguistic Universal Hierarchy of the Senses?

It has been noted in the literature that the visual sense is the most important and the preferred sense of all the senses of the body. In fact, the assumption has been established, especially in Western beliefs that vision and auditory senses are permissible in perception than taste and smell serving as the channel of information delivery. "This predicts that humans ought to be better at communicating about sight and hearing than the other senses, and decades of work based on English and related languages certainly suggest this is true" (Majid et al. 2018: 1).

In view of this, a universal hierarchy proposed by Viberg (1984) in relation to evaluating which sense is the most preferred, placed sight (SEE) on top of the hierarchy. His argument was based on the fact that if a verb exhibits a basic meaning to a sense modality to the left direction of the hierarchy (which is the highest level) and can again express extended meanings to some or all of the other senses to the right direction (the lower level) on the hierarchy, then that sense is the most preferred one. This was clear in his statement in the interpretation of the hierarchy as follows "a verb having a basic meaning belonging to a sense modality higher to

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the left in the hierarchy can get an extended meaning that covers some (or all) of the sense modalities lower in the hierarchy" (Viberg 1984:136-137). The hierarchy is illustrated below:

Sight > Hearing > Touch > Smell/Taste

This hierarchy represents the "linguistic universal according to which verbs for higher sensory modalities may extend to lower modalities, but not the other way round" (Brenzinger and Fehn 2013:169).

Viberg explains further that the universality was postulated on the basis of a typological study conducted on perception verbs in 53 languages. Since the vision perception SEE tested on 53 languages exhibited the characteristics of the hierarchy, it is considered the most preferred sense followed by the other senses. The hierarchy shows that, TASTE sense is the least preferred. Further research has shown that the sense hierarchy is not universal or rigid; cultural factors may play a role in the expression of cognition and perception and may affect the position of a sense item on the hierarchy. Brenzinger and Fehn (2013) argue that the universality notion of the hierarchy of senses does not hold true across language and cultures because in some languages like Khwe-llAni, Ts'ixa and other Khoeid languages (formerly Central Khoisan languages), TASTE is the most central sense in the sensory perception which relates to the basic meaning of perceiving food, the act of food consumption—the most highly commendable activity in those communities.

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It can be argued that Viberg's (1984) hierarchy does not always hold true for all languages. This means that languages can demonstrate diverse hierarchical structures in relation to cultural values associated to that sense modality. Thus, the more value members of a community place on a particular sense, the more prominent that sense is. The more a society has a close relationship with that particular sense, the more its members use its vocabulary and other related words associated with that sense.

In support of this topical argument, works like Evans & Wilkins (2000); Levinson & Majid (2014); Majid & Levinson (2011); Majid & Kruspe (2018) and Majid et al. (2018) all confirm the cultural variations. For instance, Majid et al. (2018:1) endorsed the role of culture in determining which sense is the most likely to occupy the topmost position on the hierarchy by asking this question "How well does [the hierarchy] reflect the diversity of languages and communities worldwide?" They conducted further research on whether there is a universal hierarchy of the senses. This was tested on all the five basic senses and data was elicited in 20 diverse languages, including 3 unrelated sign languages across languages in the world. Findings show that:

> …. languages differ fundamentally in which sensory domains they linguistically code systematically, and how they do so. The tendency for better coding in some domains can be explained in part by cultural preoccupations (2018:1).

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It is clear from these discussions that although languages seem free to elaborate specific sensory domains, the surprise is that no single hierarchy of the senses imposes itself upon language. So, this study proposes that a preferred sense on the hierarchy should be what society greatly values, in terms of its usage and beliefs attached to it.

Gunnarsdóttir (2013) mention that, five perception fields: vision, hearing, touch, taste and smell are the keys in studying perception expressions. These perception fields are associated with senses such as see, look, hear, and feel. These five perception fields are discussed below.

2.5.6 Vision

Vision is one of the suggested senses which is seen as the most accessible sense and the most preferred though not always so across languages. In the domain of mental-state-expressions, especially among the five basic senses of the human body, it has been established in the literature that normally, vision is the most researched area in the study of perception and cognition (Ibarretxe-Antuñano 1999). Vision is classified as the sense which has a vast array of meaning extensions apart from its core function. For instance, Aikhenvald & Storch (2013) show that in Warekena of Xié a North Arawak language from North West Amazonia, the lexical verb — *eda* represents 'seeing' and 'looking' at the same time 'hearing' and 'listening'. This means that apart from the basic function of *eda* signifying 'seeing' it can further

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express auditory perception — an extended meaning. They explain also that the various meanings of the verb *eda* syntactically demonstrate ambitransitiveness in a construction. Thus, the verb may or may not require a direct object in its structure.

In a similar case the verb — *nhaa* is used to express 'see', 'look', 'hear', and 'think' in Guugu, Yimidhirr, an Australian language (Aikhenvald & Storch 2013). In Luwo, the verb 'see' can also mean 'hear' and 'obey' (Storch 2013).

Akan demonstrates a similar situation where the verb *hunu* 'to see' illustrates polysemous semantic extensions such as 'find out', 'consult', 'discover', 'discern', 'notice', 'understand', 'know', 'realise', 'experience', and 'familiarise with' (Agyekum 2005).

Ibarretxe-Antuñano (1999) classified the main extended meanings of physical vision (see and look) into three major categories; (i) the intellectual or mental activity group, (ii) the social relationship group and (iii) assurance or reliability groups. She added another pragmatic value of the visual perception which does not fall into the three main categories. That is 'to witness' and 'to refer to'. These groupings have related meanings to vision; these are listed in Table 2.2.

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Table 2.2 Extended Meanings of Vision

THE INTELLECTUAL OR MENTAL ACTIVITY GROUP	THE SOCIAL RELATIONSHIP GROUP	ASSURANCE OR RELIABILITY GROUP
to understand	to meet	to ascertain
to foresee	to pay a visit	to find out
to visualise	to receive	to make sure
to consider	to get on badly	to take care
to revise	to go out with	
to imagine	to accompany	
to regard	to escort	
to meditate		

Other meaning extensions that can relate to the active form of *see* — *watch* include: observe, examine, scrutinise, study, survey, search, seek, escort and scan; other related meanings of the passive (stative) form of *see* are notice, spot, discern.

The current study would show various discourse analyses of these three groupings in relation to the relationship between the semantics and syntax of visual perception in Akan. The visual sense in Mfantse dialect of Akan discloses

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intellectual, intra-psychological and social psychological meanings. These are clear in both the physical and extended discussions.

Evans & Wilkins (2000) point out three research traditions that relate to perception verbs. These are: (i) Viberg's (1984) typological study of lexical studies of the verbs of perception (ii) Sweester's (1990) cognitive linguistic approach to visual perception as the basic sensory source that can reveal various extensions of meanings; from the primary meaning through to the metaphorical senses (iii) Anthropology of the senses — emphasises

(a) the value cultures place on the various senses and the varied meanings they assign to the sense.

(b) how cultures demonstrate the pragmatic use of these senses in different discourses and

(c) how cultures ascribe symbolic patterns to the senses and the reasons assigned to it.

These values are critically looked at as the visual senses as discussed in chapter three (3). It examines how members in Akan communities use the visual sense in diverse discourses and the various motives assigned to the context in which these visual senses are used.

In the earlier discussions on the linguistic hierarchy of the basic senses, it was also clear that both Viberg's (1984) and Sweetser's (1990) traditions have been debunked by the issue of cultural variations as a determinant for semantic

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extensions. Though each of these researchers developed their own methodology, one central idea shared by all is that meaning is so fundamental to language learning and that it must be given a prime attention of study.

2.5.7 Hearing

'Hear' and 'listen' are the two main verbs in English that are analysed in the domain of 'hear' sense. Akan has a similar example *tsé* 'hear' and *tséì* 'listen'. 'Hearing' refers to a non-controlled (uncontrolled) activity and 'listening' designates a controlled event (De Vries 2013). According to Brenzinger & Fehn (2013) hearing is used to express Activity and Experience expressions.

According to Aikhenvald & Storch (2013) hearing can also be associated with the concept of 'understanding', 'knowing' and remembering in Indo-European language.

In a similar analysis by De Vries (2013), 'hear' in Korowai, a West Papuan language, can be marked as 'know' when the "referent of the object of the verb is an audible entity that can be perceived with the ears... [he mentions again that] when the perfective (*daibo* 'to have heard') is used in the sense 'to know' the object always refers to explanations, to mean that people heard" (De Vries 2013:128).

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One extended meaning of 'hear' found in a cross-linguistic study (in Spanish, English and Basque) by Ibarretxe-Antuñano (1999) is 'to heed, to pay attention'. This extended meaning has two explanations (i) the speaker demands attention from the hearer, the speaker does not only demand attention, but also that (ii) the hearer does what he is telling him to do. In this situation 'hearing' means 'to obey'. Again, 'hear' can also mean 'to be told', 'to be informed' and 'to understand'. Basque also exhibits two more extended meanings of 'hear' — 'to be educated' and 'to have an agreement'. She elaborates that the interpersonal relationship that exists in this sensory domain causes the semantic shift in the events process:

hear → heed → obey.

2.5.8 Touch

The meaning of touch according to Brenzinger & Fehn (2013) seem to be the hardest to describe but since 'hold' denotes the state in which we can find an activity more than experience, the action of touching is basically limited to physical activity. The Experience of physical contact can either be done through direct contact or a feeling which is seen as controlled tactile experience and perceiving through uncontrolled tactile experience. An example is bodily touch and other objects. The experience of touch 'to feel' also denotes two views: 'feeling by direct contact' and 'perceiving

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without direct contact' (Jakobi & El-Guzuuli 2013). The form of the latter experience deals with sensation of a close feeling of danger.

The issue of 'feel of' and 'feel for' relating to touch as in 'perceive by touch' has been long proven. Ibarretxe-Antuñano (1999) confirms this by clarifying that a related meaning of touch 'feel' relates to the field of emotions. She lists the following as other extended semantic meanings for touch:

– 'to partake of food or drink'

– 'to affect'

– 'to reach'

– 'to deal with'

– 'to ask for a loan'

– 'to consider,

– 'to weigh'

– 'to correspond'

– 'to persuade',

– 'to stimulate'

– 'to be a relative'

Touch to AFFECT causes physical change i.e. abstract change reflects physical change. Another meaning she mentions that relates to touch is 'to reach' – for example, *he touched the high point in his career / he has reached the peak of his*

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career. This means that there is an aimed point to be reached or signifies the final point of something or reaching a destination, or the time to pay has come (Spanish) or attaining a dream target.

2.5.9 Smell

The phenomenon of smell is also known as olfactory. According to Majid & Kruspe (2018) in the literature, not much attention is given to or placed on the olfaction domain. Also, the smell sense is identified as the human sense that cannot exhibit much extended meanings including metaphorical concepts (Viberg (1984); Sweester (1990); Ibarretxe-Antuñano (1999). These arguments, I think, should be measured according to language specifics and not to be generalised for all languages. This is in line with Viberg's (1984) comment that, his typological study on verbs of perception conducted on 53 languages did not fairly represent languages in the world; thus, his data overrepresented European languages while languages from the North and South America as well as Oceania were highly underrepresented.

Ibarretxe-Antuñano (1999) lists one physical extended meaning of smell i.e. '*to trail something'* and a number of metaphorical meanings in English, Basque and Spanish. The metaphorical meanings in the three languages are illustrated in Table 2.3.

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Table 2.3 Metaphorical Meanings in Smell Perception

Metaphorical meanings	*English*	*Basque*	*Spanish*
'to suspect'	✓	✓	✓
'to guess', 'to sense'	✓	✓	✓
'to investigate'	✓	✓	✓
'to disdain', 'to show contempt'	✓		
'to corrupt'		✓	
'to prophesy'		✓	
'to go unnoticed'		✓	

Extended meanings in smell in English, Basque and Spanish (1999:82).

Storch (2013) observes that smell terms in Luwo (a Western Nilotic language of South Sudan, spoken in Waw) form a word class by themselves. Also, the smell sense can relate to cognitive experiences such as 'know'.

A more recent study by Kövecses (2018) states that the smell sense is seen as an equally important perceptual concept just as others reflect in the sense modality. He defines the smell sense as "a sensation, a property, a faculty, and an act" (p.6) that can exhibit both active and passive roles. He explains that the 'passive' form displays the element – an 'origin' or 'the cause'. The origin or the cause of the smell

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functions as the source which is the smell itself. The active element on the other hand is the originator of the smell, or the object possessing the smell capacity.

Majid & Kruspe (2018) also point out, however, that though these differences are there in the olfaction domain, evidence in the literature suggests that 'odours' are the most ineffable among other related senses in this domain, the most recognised in hunter-gathering communities. For example, an experiment was conducted between a hunter-gatherer Semaq Beri and Sweden-horticulturalist Semelai. Results showed that the hunter-gatherer Semaq Beri, showed ease in naming odours and colours than Semelai who demonstrated lower codability for smells than colours. This shows that the differences in linguistic expressions of substances depend largely on the interaction community members have with the environment they find themselves in. Majid & Levinson (2011) acknowledging this fact, assert that our cultural backgrounds reflect our sensory perception, in that, the environment in which members of a community find themselves will determine the value they have for the various senses. For example, the perspective of coastal communities towards the human sense will differ largely from the communities found in the hinterland due to the kind of settings they have. Thus, the perception of a fisherman towards the smell of a fish will be different from the perception of a hunter's smell of an animal; the kind of smell that an animal in a bush will emit will be different from that of fish from the sea.

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Majid & Kruspe (2018) mention again that the smell term *p ʔus* in Jahai language can display different qualities of odours. Examples include: odours we experience from abandoned homes— mouldy or musty, odours we experience from foliage decomposition, and from foods that have gone stale.

2.5.10 Taste

Taste distinguishes the various forms of flavours and preferences people have towards the food they eat or a liking for something. The association between the choices for a specific taste displays the perception people have towards the food they eat or a liking for something. The literature points out that 'taste' relates to many of the senses; while some link 'taste' 'to touch' others associate it with the onomatopoeic sound 'to knock'. Other senses related to 'taste' were 'flavour', 'to have a distinctive flavour or taste', 'sense of smell' and 'taste of something' (Ibarretxe-Antuñano 1999). The observation made from these discussions is that there was no agreement whether to accept or challenge the basic meaning of 'taste'. Some of the extended meanings that taste verbs have are:

— 'to experience something':

(a) He has tasted the frustration of defeat.

(b) He tasted of the life of the rich. (Neagu 2013)

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Brenzinger & Fehn (2013) indicate that 'taste' has fundamental meaning which means 'to perceive'. They list taste terms as, 'sour/ rough', 'nice/sweet', 'bitter', 'hot', and 'tasteless'.

Neagu (2013) describes 'taste' as one of the human senses that can generally be linked to the likes and dislikes of people in relation to how it matches their taste. Personal likes and dislikes such as preference for clothing, music, and friends. 'Taste' thus can be linked to the personal idiosyncratic frame of mind of the perceiver.

Highlighting the discussions above, it is clear that, it is sometimes difficult for languages to code the various domains of the human senses; for it does happen as their study proved in the various experiments they carried out (Majid & Levinson 2011). However, cultural values are imperative. Akan examples will be examined with regards to the coded meanings that these sense phenomena demonstrate in the language and whether or not Akan lacks coded expressions to describe any of the senses.

2.6 Summary

This chapter has looked at the theoretical framework which underpins the study and the literature review. The theory showed that linguistic data should be analysed in holistic way taking cognizance of the fact that meaning resides in human embodiment. Its two basic commitments (generalization and cognitive

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commitments) allow language to be examined in broader perspective considering its vast meanings as well as their structures. It also measures language in relation to their metaphorical roles. Since cognitive linguistics is about language use and the mind (sensory system) and its interaction with the body (the human body), the environment and the physical world, it is imperative to adopt a theoretical framework like cognitive linguistics approach to language study, to help account for the literal and extended meanings of perception and cognition expressions in Akan. As a result, this theory is meant to serve as the backdrop against which this thesis is written, since the treatment of expressions of perceptions and congnition in Akan discussed in this study is driven by the parameters of cognitive linguistics explanations mentioned above.

The literature review touched on the concept of perception and cognition. It came to light that lots of controversies have been surrounding the concept of perception and cognition; whether perception penetrates cognition or vice versa. However, recent literature points out that, perception influences cognition and they interact in many ways; though they represent different mental experiences, they overlap in information distribution**.**

Also, the argument claiming that vision is on top of the sense hierarchy was debunked by the fact that if a sense should be rated high, then this must be determined by cultural preference of the members of a community; whichever

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sense community members plays particular interest on becomes the highest on the sense hierarchy.

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CHAPTER THREE

THE SEMANTICS OF THE

PERCEPTION VERBS *Hwɛ́* and *Hú*

3.0 Introduction

The purpose of this chapter is to provide a systematic account of the different perceptive domains the two basic verbs *hwɛ́* 'look'/'watch' and *hú* 'see' in Akan express. It goes on to explore the diverse usages of both the basic and the extended meanings the perceptive verbs demonstrate in the language.

The chapter is in three sections: Section 3.1 discusses the basic meanings of the perceptive verbs in Akan. It also looks at their morphosyntactic behaviours in the visual process. Section 3.2 looks at the physical extended meanings. These are discussed under the various domains such as intra psychological domain (one entity), and social psychological domain (between two entities or several entities). Section 3.3 discusses the metaphorical extensions of the perceptive verbs in the language.

Perceptive verbs (PV) *hwɛ́* and *hú* in Akan are generally connected with visual perception. One of the most important qualities of the perceptive verbs is that as the brain receives stimulus, it processes it to reveal the experience of seeing physically. Thus, what is captured in our mental faculty is now exposed in reality. From this standpoint, perception is activated.

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Abu-Jarad (2008) articulates that for one to see clearly, the percipients of the action should be very observant or vigilant of the things around them so as to give accurate explanations to the things they perceive. This is because on what account could we report on things we have not seen; how do we report accurately? Nonetheless, there are situations we can 'look' without seeing, which we can report on. An example is illustrated in (1) below:

1. Mò hwɛ́-è nàásó m-è-ǹǹ-hú
   1SG.SUBJ look-COMPL but 1SG.SUBJ-PERF-NEG-see
   'I tried looking at it but I couldn't see it.'

Even so, the ability to see comes in different forms— seeing with the mind's eye (conceptualisation) or seeing by getting into physical contact with objects (physical evidence) or seeing through other senses of the body (often labelled in the literature as 'cross-modal perception' (Winter 2019); or inter-field (Aikhenvald & Storch 2013).

Kubota (2016: 17) argues that visual perception can be seen as "an act of obtaining any kind of concept and or knowledge that is visually obtainable about some object of the external-physical and the internal-mental world". Thus, in the act of perceiving, we are not just getting information from the environment as a camera captures evidence through its lenses but we also become involved in cognitive activities such as trying to understand and interpret what we have seen

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through our visual senses or our sensory modalities[3]. This buttresses the earlier submission by Abu-Jarad (2008) that critical examination of visual concepts is imperative. More so, the perceiver should exhibit sufficient knowledge in the act of seeing/perceiving to bring clarity in the process of conceptualisation (Roque et al. 2018).

As the literature on visual perception shows (Viberg 1984; Sweester 1990; Ibarretxe-Antuñano 1999; Klemfuss et al. 2002; Dresner 2005; Aikhenvald & Storch 2013; Brenzinger & Fehn 2013; Coco & Keller 2014) vision is one of the most researched areas in the study of perception and cognition, especially in the domain of mental-state-expression. In view of this, it has been considered to be the sense which exhibits the most meaning extensions to reflect cognition apart from its primary role of demonstrating physical 'seeing'. The phenomenon of the vision verb exhibiting varied meanings is demonstrable in many languages. Some of the languages include Yimidhirr, an Australian language (Aikhenvald & Storch 2013), Luwo, a Western Nilotic language of South Sudan (Storch 2013) and Warekena of Xié a North Arawak language from North West Amazonia (Aikhenvald & Storch 2013). In these languages, the visual verb 'see' can further express 'think', 'hear', 'obey' and 'listen'. Kubota (2016:118) supports this by indicating that the verb 'see' is used to indicate "a wide variety of human perceptive and cognitive activities

[3] "Sense or sensory modality is used to refer to a subtype of perceptual experience that is associated with dedicated sensory organ and its own cognitive machinery in the brain" (Winter 2019: 11).

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which involve mental aspects". We examine perceptive verbs in the Mfantse dialect of Akan in the section that follows to find out the various basic usages and other pragmatic meanings these expressions reveal in the language.

3.1 The Basic Meanings of the Perceptive Verbs *Hwɛ́* and *Hú*

The parts of the body that regulate the activity of sight are the eye and the brain (Lien 2005). So in the literature, the 'eye', supported by the brain, is seen as the window through which physical and conceptual events are processed. Lien (2005) makes clear that visual perception is a way by which humans cope with the world around them due to their visual experiences with the world.

Considering physical or the basic meanings of perceptive verbs, Lien (2005) comments that in terms of the physical activity of vision, the eye (the sensory organ) connects to the perceiver and the object of focus (the perceived object). In this activity, the sensory organ must categorically point to an object (purpose). Basically, for someone to complete a visual experience or cycle, there should be evidence of something where the percipient can have visual association with (getting into contact with or to be in touch with an object). This means that perceptive verbs can be described primarily as transitive verbs where an obligatory object is required. But then, this object can either be overtly or covertly expressed. The constructions can sometimes also occur with locative expressions.

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In the Mfantse dialect of Akan there are two basic perceptive verbs; *hwɛ́* 'look'/watch' and *hú* 'see'.

Hwɛ́ 'look'/'watch' involves the process to identify the relevant object in a scene; it is a conscious (deliberate action) look which helps to ascertain something in the real world. This is in relation to the view that the several eye responses that emanate from the sensory organ communicate detailed information of experiences in the world. The process of the visual activity (time frame) depends on the events. However, the visual stint involved in *hwɛ́* 'look'/ 'watch' is that of a longer one. Kubota (2016) calls this situation, 'Durative' because the action of sight is done within a time frame. *Hú* 'see', on the other hand, is seen as a natural and instantaneous occurrence. Thus, in the process of the visual activity, objects are captured on the spot. This process is called 'Inceptive' (Kubota 2016), where the visual activity occurs in a very short time and is done instantly. However, in some cases, it is possible to use *hú* 'see' to perform visual activity that entails a longer period of time in the language where the visual line is directed towards activity of caring. *Hwɛ́* 'look'/ 'watch' is more volitional while *hú* 'see' can play both volitional and non-volitional roles. It is clear with the CPVs that if the visual process hinges on our natural senses then non-volitional occurrence happens.

Deconstructing these verbs in their natural Mfantse experiences, *hwɛ́* 'look'/ 'watch' and *hú* 'see' can exhibit diverse interpretations depending on the context in which they occur. In the basic clause structure of PVs there is always an Experiencer

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(who functions as the percipient and grammatical subject) and a stimulus (the object). This show a simple transitive construction where the grammatical subject functions as Experiencer at one point in time, and at other times, the Experiencer is perceived as Agent. Where the grammatical subject plays the role of an Experiencer as Agent (Agentive Experiencer), it is required of the Agent to have motivating drive in the process of the visual event.

Occasionally, in the predication slot of their constructions, these PVs co-occur with complementizer *dɛ́*, 'that' and causative verb *mà* 'to cause'. However, when the PV – *hú* 'see' is immediately followed by the causative verb *mà* in the predicate slot, it renders the sentence ungrammatical. So, for purposes of grammaticality, there should be a direct object (direct objects immediately occupying the post-verbal position are called recipient NPs, Osam 2000) which should immediately follow the PV – *hú* 'see' before the causative verb. An illustration of the simple structure is shown below:

Experiencer Subject	**Verb of Perception**	**Stimulus**
	Hwɛ́ 'look'/'watch'	(OBJ NP)
		(CP - dɛ́ , mà OBJ)
	Hú 'see'	(OBJ NP)
		(CP - dɛ́, OBJ mà)
		(CP - *ma OBJ)

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Some instances of *hwɛ́* 'look'/ 'watch' and *hú* 'see' are shown below. The explanation to the coding of the examples from the data is provided on the list of abbreviation at page xxiv.

2a. Mú-hù àdzé
1SG.SUBJ-see/HAB thing
'I (can) see.' (ADJT SP 1)

2b. Mú-hù hɔ̀ǹ
1SG.SUBJ-see/HAB 3PL.OBJ
'I can see them.' (ADJT SP 1)

3a. Kofi hú-ù dɛ̂ Ama ré-sàẁ
Kofi see-COMPL COMP Ama PROG-dance
'Kofi saw that Ama was dancing.'

3b. Kofi hwɛ́- ɛ̀ dɛ̂ hɔ́ǹ nyìnárá é-dzí-dzí
Kofi look-COMPL COMP 3PL.SUBJ all PERF-eat-REDUP
'Kofi ensured that they had all eaten.'

3c. Kofi hwɛ́- ɛ̀ mà[4] Ama yɛ́-ɛ̀ èdwúmá nó

[4] According to Osam (2007; 1998) in addition to the complementizer *dɛ*, Akan has another complementizer that results from grammaticalization of a causative verb *ma* 'make, cause, & give'. He explains that "the status of *ma* as a complementizer is not uniform across the dialects of the language [however], in Fante, *ma* functions as a complementizer" (2007: 112). He indicates that the behaviour of *ma* in Fante

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Kofi look-COMPL COMP Ama do-COMPL work DEF

'Kofi ensured that Ama did the work.'

3d. *Kofi hú-ù mà Ama yɛ́-è èdwúmá nó

Kofi see-COMPL COMP Ama do-COMPL work DEF

Intended meaning: 'Kofi ensured that Ama did the work.'

3e. Kofi hú-ú Ebo mà ɔ́-bòá-á

Kofi see-COMPL Ebo COMP 3SG.SUBJ-help-COMPL

nó

3SG.OBJ

'Kofi saw Ebo and helped him.'

Examples (2a) & (2b) describe instances of the general ability to see or the natural occurrence of seeing. Thus, *hú* should generally have direct object either overtly or covertly expressed. These constructions are examples of transitive constructions where the overt subject animate NPs controls the visual experience. The percipients (the subject) demonstrate an experience where objects (the stimulus) in the real

functions the same way as complementizer that introduces subordinate clauses in complement constructions. *Ma* in (3c) is an example of a complementizer.

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world are visibly exposed through the conscious activity of seeing. Example (2a) could also mean that the percipient is pointing to the fact that he/she is able to see.

In example (3a), the subject functions as the percipient in the visual activity. This visual event occurs in a non-volitional way. In the construction, the CPV, *hú* 'see' co-occurs with the complementizer *dɛ́* 'that' in the clause.

In (3b) & (c), the subjects NPs have the ability to control the events in the visual process. In (3b), the grammatical subject takes responsibility of making sure that the objects are well fed. In (3c), the subject NP (Kofi) takes supervisory role to ensure that the object (Ama) performs the work. With (3d), the PV – *hú* 'see' has the causative verb *mà* immediately following it before the direct object rendering the sentence ungrammatical in the language. On the contrary, we see the grammaticality in (3e) as the PV - *hú* 'see' co-occurs with the recipient NP, the direct object (Ebo) immediately following it before the causative verb *mà*. All these visual events occurred in a volitional environment and go beyond just physical seeing.

Confirming this in a recent study, Kubota (2016) observes that physical visual perception is an experience where an object in an environment is consciously exposed through the action of seeing. The object perceived is always a tangible element to which attention can be drawn. It illustrates the power of the perceiver's

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visual lens and the direction of his focus. We look at examples of the Experiencer and Activity notions of perceptual events in the section that follows.

3.1.1 The Experiencer and Activity Notions of Perceptive Verbs (Hwɛ́ / Hú)

The Experiencer notion on perceptive expressions indicates that there is a direct physical contact between the perceiver and the perceived object (Kubota 2016; Jakobi & El- Guzuuli 2013; Agyekum 2005). When this happens, the perceiver or the perceiving entity takes the semantic role of Experiencer in relation to the Source/Phenomenon – i.e. the perceived object. In the process of the visual perception, the grammatical subject (NP1) functions as the Experiencer of the activity when the eye (the sensory organ) connects to the object of focus (the perceived object), that is the NP2. Below are some examples:

4a. Ì-túm̀		**hwɛ̀**	ɔ̀báá	â	nó	hó
2SG.SUBJ-able		look/HAB	woman	REL	3SG.POSS	self
yɛ̀	fɛ́ẃ	nà	à[5]-wár	nó		
be	beautiful	CONJ	CONS-marry	3SG.OBJ		

'You can admire a beautiful lady and then marry her.' (ABAK SP 3)

[5] The consecutive marker (CONS) 'à' as expressed in example (4a) is "secondary to the progressive aspect and the future tense in the context of serial constructions, and sometimes even in conjoined structure. Even though the vowel of the consecutive aspect is the same as the vowel of the perfect, the two vowels differ in tone. The perfect prefix has a high tone but the consecutive is a low tone /à/" (Osam 2004:16; Osam 1994:76; Dolphyne (1987).

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4b.	**Mó-hwɛ́- ɛ̀**	m̀fònyíń	nó	nyìnárá
	1SG.SUBJ-look-COMPL	picture	DEF	all

'I looked at all the pictures.'

5a.	Esi	**hú-ù**	sìkà-m̀fútú
	Esi	see-COMPL	gold-dust

'Esi saw gold dust.'

5b.	Bɔ̀dɔ́ḿ	nó	**hú-ù**	èwí	nó
	dog	DEF	see-COMPL	thief	DEF

'The dog saw the thief.'

In example (4a), both the grammatical subjects NP1 and the perceived objects NP2 are animate [+ human] entities. The subject, in example (4a) draws attention to what visual information he perceives from the targeted object and directs his visual line to it, pointing to a specific area (the field of vision – beauty of a woman) where his interest is. In (4b), there is an overt subject (the perceiver) and object (the source or the targeted phenomenon). In both (4a & b), there are deliberate actions going on where the perceivers, who visually receive the input of the actions, function as the Experiencer though there is active perception role occurring. This is what (Lehrer 1990:223) calls 'active experiencer subject' whose attention is directed to the direct object. The movement of the action is a volitional act and an achievement event; we find a durative process where attention is fixed on the source from the beginning of

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the action till the end, a continuous activity. This means that visual activity perception can occur in Akan without the use of the *deliberate test* as proposed by Gisborne (1996).

We proposed in chapter two where a *deliberate test* was confirmed that, the deliberate test is subject to which kind of meaning the perceptive verb is used in context or the percipients want to express. This will lead to which kind of verb will best fit the sentence structure and not rely solely on the adverb deliberately test.

In example (5), the verb *hú* is playing both roles of volitional and non-volitional activity. Thus, in (5a) the subject is either making conscious effort in searching for the treasure, the direct object [inanimate entity—gold dust] or she just chanced on it (discovered it—non-volitional). Here, the subject is functioning as either Experiencer or Active Experiencer subject. In (5b), the verb *hú* represents both volitional and non-volitional acts. It may happen that the subject NP, the dog per chance (may be looking around) saw the perceived object (the thief) or it searched for the thief, and found him. The visual line of the perceiver was that of a direct contact in fulfilling the identification process of specifying who the object was. The perceiver then functions as Active Experiencer of the action.

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3.1.2 The Stimulus Notion of the Perceptive Verb Hwɛ̀ in Akan

There is a third dimension of the visual event. This is called the *copulative* (Viberg 1984:123), *stimulus*/*the flip* (Lehrer 1990:223) or *percept* (Gisborne 1996:1). In this, the subject is presented as a motivator in the perceptual activities. The visual perception verb *hwɛ́* only occurs in stimulus construction. Example (6) illustrates the stimulus of perception.

6. Yɛ̀-dzè gyá nà yɛ́-dzé **hwé-hwɛ́**
   1PL.SUBJ-do-take fire FOC 1PL.SUBJ-do-take look-REDUP

   àbówá nó
   animal DEF

   'We use fire to look for the animal.' (AMPJ SP 4)

In example (6), we see a complex sentence where the use of *gyá* (fire) represents the stimulation instrument in search of the *àbówá* 'animal'. The subject NP, which functions as the Agent in the process of the visual activity stimulates the action of seeking (hunt) for the perceived object. The activity is a volitional act where the Agent seeks and pursues feral animals. This normally happens in hunting (of animals) experiences and in the process one of the strategies of the forager to get meat is to use fire as a stimulus which serves as impulsions to the feral animals to come out of their huts. This stimulation process helps the hunters get meat.

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3.2 The Physical Extended Meanings of the Perceptive Verbs *Hwɛ́ /Hú*

This section discusses the extended meanings of the visual perception expressions in the language. It explores the various domains in which these verbs occur and the various arguments each verb selects in each domain.

According to Ibarretxe-Antuñano (1999) and other researchers such as Agyekum (2005) and Aikhenvald & Storch (2013), extended meanings which are also considered semantic extensions (non-prototypical meanings) may be physical or metaphorical. But this section focuses on the physical extended aspect. Section 3.3 discusses the metaphorical extensions.

Most of the extended meanings are also polysemous. The physical extended meanings may sometimes represent cognitive and concrete actions. With the concrete events, the eye is used to signify social relationships while the cognitive meaning indicates mental or intellectual occurrences such as understanding, recognition, judgment and clarifications.

Roque et al. (2018) also observe that sight verbs demonstrate a lot of extended meanings, pointing out that knowledge based experiences are the most prominent in the study of visual perceptions. These semantic extensions add up to the principal meanings perceptive verbs provide. *Hwɛ́* and *hú* in general, describe basic events of vision. However, they are different in terms of their occurrences in sentence structures, the frequency at which they occur, the different domains they occur in,

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the various words they occur with and the various meanings they exhibit is important. Both activities of *hwɛ́* and *hú* can extend to other cognitive activities in that seeing can be done in the mind i.e. seeing in the mind's eye. The discussion that follows is grouped into two domains; intra psychological domain (one entity) and social psychological domain (involving two entities or more entities).

3.2.1 Intra Psychological Domain

Perceptive verbs in the Mfantse dialect of Akan exhibit intra psychological experiences where the percipients communicate their own perceptual ideas without engaging any other entity. The focus of the percipients' visual line is directed towards their internal thoughts, perceptions, beliefs or ideas. This domain usually deals with expressing ideas in the frame of one's mind. It is normally done to satisfy the percipients' curiosity about something, encouraging themselves about a condition, expressing one's beliefs and opinions about something, and their convictions about something. It normally illustrates the self-philosophies of the individual (the percipient). In intra-psychological communication, it is not obligatory on the part of the percipients to provide feedback to oneself. Some of the illustrations are shown below:

7.	Mò-rò-**hwè-hwɛ́** è-dzí	àdzé	bí
	1SG.SUBJ-PROG-look-REDUP	something	INDEF

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CONS-eat
'I am looking for something to eat.'

8. Mò-rò-**hwè-hwɛ́** m'-ákɔ́ńdɔ́dzé
   1SG.SUBJ-PROG-look-REDUP 1SG.POSS-delicasy
   'I am looking for a delicacy of mine.'

9. M-ê-**hù** àsɛ́ḿ nó mú
   1SG.SUBJ-PERF-see issue 3SG.POSS inside
   'I have found the truth in the matter.'

10. M-ê-**hù** èdwúmá nó ényí dó
    1SG.SUBJ-PERF-see job DEF eye on
    'I have become skilled enough on the job.'

In examples (7-10) the percipients' visual line concerns satisfying their curiosity about something. In (7) and (8), the percipients focus their visual lines on their desires that will bring them enjoyment or satisfaction and therefore communicate their intentions. For instance, the percipient uses the sensory visual domain to express a desire of searching for something to eat in example (7), while in (8); the sensory visual domain is used to search for the heart's desire of the percipient. In (9), the visual concerns were that of understanding the issue better. In (10), the percipients share their internal beliefs or opinions about an inner ability. That is, they have now figured out what the work is about, though this does not make them

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experts. The visual capabilities of the percipients are directed to the issue of self-confidence.

Another intra psychological event points to visual direction indicating notions such as investigating, examining, discovering, and inspecting. These activities move towards achieving a purpose. These circumstances move farther away from just seeing with the eye. Some of the visual perceptions that can be expressed in purpose-driven domains are illustrated below:

11. Èbùrɔ́ẃ	â	wɔ́-dzé	yɛ̀	dɔ̀kɔ́ń	nó,
maize	REL	3PL.SUBJ-take	do	kenkey	DCM
mɔ́-hwɛ̀		nɔ̀	yíé	ànà	m-à-fɔ́ẃ
1SG.SUBJ-look		3SG.OBJ	well	before	1SG.SUBJ-PERF-wet

'I examine the maize I use to prepare kenkey very well before soaking it in water.' (KYSP1)

12. Mɛ̀-dzɛ̀	**m'-ényíwá**		nà	mé-dzé	
1SG.SUBJ-use	1SG.POSS-eye		FOC	1SG.SUBJ-use	
hwɛ̀	dɛ̂	èbùrɔ́ẃ		nó	ɔ́-tú
look/HAB	COMP	maize		3SG.OBJ	3SG.SUBJ-rise

'I use my eyes to ascertain whether the maize can rise.' (KYSP 1)

Semantically, the overt subject in example (11), the percipient has the will power to critically examine or inspect the value of the theme entity i.e. the perceived object (maize) using the eye. The use of the adverb yíé 'well' in the construction, allows her to give a perceptual judgment about the perceived object (maize) being inspected

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or examined. In example (12), the eye is used to determine the quality of the object (whether that kind of maize increases in quantities when it is moulded into dough) before it is used. Though it is well known that we see with the eye, here, the eye has been given prominence (of being more significant) in examining the object. That is why the eye is explicitly mentioned. The percipient [animate + human] in this construction has experience in the kenkey processing business so she can use the physical eye to find out which type of maize, the perceived object [inanimate object], can increase in size when soaked in water in terms of its texture.

Further, in intra-psychological domain, the percipient's visual information in predicting the occurrence of events is imperative. Certain reasoning and signs they envisage become satisfactory evidence about a perceived event. An example is illustrated in example (13) below:

13.	Mó	**hwɛ̀**	wímù	â[6]	ǹsú	bɔ́-tɔ́
	1SG.SUBJ	see/HAB	atmosphere	CCM	rain	FUT-fall

'A look at the weather indicates an imminent rainfall.'

[6] This particle 'â' in example (13) appears to be performing a different function from the relative clause maker and the interrogative particle. The role of this â appears in conditional sentences. In Akan the conditional clause is marked by two discontinuous elements: Sɛ ….. â. The *sɛ* is optional but the 'â' is obligatory. Thus, there cannot be a conditional clause without 'â'. So, I gloss this as conditional clausal marker (CCM). Sentences like (13) with or without 'sɛ' are common in Akan.

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The percipient in example (13) uses their visual experience about the weather; signs or indicators such as gathered clouds, heavy winds and others that show signs of rain to perceive or visualise rainfall. These pieces of visual evidence allow the perceiver to give judgement about the perceived event.

The visual experience can also be used to express diligence in terms of monitoring event in intra-psychological events. An example is shown in (14) below:

14.	**ɔ́-hwɛ̀**	kàkŕá	â	á-ká	nó
	3SG.SUBJ-look/HAB	little	REL	PERF-leave	3SG.OBJ
	yíé				
	well				

'S/he takes good care of whatever is left.' (ATASP 3)

In example (14), the percipient is seen as a character who becomes very conscientious in his/her activities towards the perceived object. He/she protects, preserves, cares for, monitors, observes and acts meticulously in the direction of the theme entity (the perceived object).

3.2.2 Social Psychological Domain

This type of perceptive activity involves physical vision that is associated with interpersonal relationships or face-to-face interactions between two or more entities. The primary intention of this visual activity is 'to meet', and the form of meeting

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may mean paying someone visits, having an appointment or going for consultation. This means that the social psychological role of perceptive events is phenomenal in cognitive linguistic research. The social relationship generally selects [+human] argument for both the grammatical subject and objects. The following are some of the examples:

15. Mó-kɔ̀ kɔ́-hwɛ́ nò wɔ̀ àyàrsábéá
1SG.SUBJ-go go-look/HAB 3SG.OBJ at hospital

hɔ́
there

'I pay him/her a visit at the hospital.' (ATASP 3)

16. Yè-kó-**hú** à-sɔ́fó nó mà wɔ́
1PL.SUBJ-go-see PL-pastor DEF COMP 3PL.SUBJ

bɔ̀ m̀páá mà hɛ̀ǹ
strike prayer give 1PL.OBJ

'We go and consult the pastors to pray for us.'(ATASP 3)

17. ɔ̀-kɔ́-**hwɛ́-ɛ̀** n'-ékyìr̀ kwáń
3SG.SUBJ-go-look-COMPL 3SG.POSS-back road

'S/he saw him/her off.' (KYSP 4)

18. Egya Kweku pɛ́-ɛ̀ bìríbí kò-**hú-ù**
Egya Kweku seek-COMPL something go-see-COMPL

èdwúmá mù pànyíń nó

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work inside boss DEF

'Egya Kweku looked for something (in the form of a gift) and went to see the boss of the company with it.' (KYSP 4)

In example (15), *hwɛ́* 'look'- to visit (paying someone a visit or going to see someone) does not only mean visually perceiving the object with one's eyes but also engaging in a personal interaction. Both participants might have earlier intimate relationship. Though there is a particular word in the language to mean to visit – srà 'to visit', the context in (15) also explains the concept of visitation and so *hwɛ́* 'look'- to visit can be allied to the perception of visitation. The sick who is being visited functions as the Recipient of the visual activity. The one who pays the visit functions as the Instigator of the action. In the instance of visitation, the 'Active Experiencer subject' finds out how someone is doing regarding his/her health and general life activities. These contexts accept the motion verb *kɔ* 'go' in its construction for grammaticality purposes as illustrated in examples (15) & (16). Examples (16) & (18) give further explanations of social relationship in terms of seeking help in all areas of life including health issues, financial support, education, advice, counselling and accomplishment of an assignment.

In example (16), the perceived object, pastor, occupies the superior status who offers help to the percipient, the subject, in terms of rendering prayer (for pacification or something else they requested for). We see a similar situation in example (18) where the domain of attention of the visual line of the percipient is

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directed to a superior object (the boss) pointing to a specific need— 'seeking help' for job placement or some form of help. This idea though not explicitly stated, could be analysed as contextual information. This construction illustrates a stimulus activity where there is stimulation in the form of incentive from the percipient to the perceived object. The percipient perceives that through that stimulation the perceived object in question will offer them the assistance they need. In both examples (16) & (18) the target idea of 'seeking help' selects [+human] entities. These findings have also been proven cross linguistically in earlier works (see Roque et al. 2018; Agyekum 2018; Aikhenvald & Storch 2013; Evans & Wilkins 2000, Ibarretxe-Antuñano 1999).

Sometimes the perceptive verb *hwɛ́* 'look' is used to express the event of escorting or accompanying someone; the interlocutors may not necessarily be superior and subordinate, they could be co-equals as well. We see this in example (17), where another form of relational experience is expressed. There is no indicator of their status whether they are co-equals or superior verses subordinate. So the implication may be they are either superior or subordinate, or they are co-equals. According to Lien (2005), some of the consultation may be in the form: client verses lawyer, student verses teacher and patient verses doctor. There is always a mutual understanding or already known establishment of contact experiences with the speaker who is directing the subject (percipient) to the superordinate (direct object who can offer assistance. In this condition, the visual line is directed to issues of

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dependency. This event entails volitional activity and may happen within a particular time frame.

Another social relationship that perceptive verb *hwé* 'look' expresses is the notion of caring and monitoring. In this group, the physical sight is connected to power or influence of supremacy over the perceived object. The visual activity which takes the form of keeping under control are normally associated with events such as watching over, monitoring, caring, looking after and nurturing. The perceiver exercises authority over the perceived object. Here, the relationship is that of dependability, trustworthiness, show of love and concern. The visual attention of the percipient to the object is profiled superior-subordinate relationship, where the one with power (percipient) has the ability to correct the subordinate (the object) in the case where there is imbalance in the actions. Sometimes the object applies defensive mechanisms which can result in insecurity. In another situation where the visual line is directed towards love, caring and showing concern in the relationship, dependability and trustworthiness are significant. The visual action becomes a volitional event and can select features like [+/- animate] entities. Instances of this construction are shown below:

19a.	**Hwɛ̀**	àbòfrá	nó	dò	yíé
	look/IMP	child	DEF	on	well

'Take good care of the baby.'

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19b. **Hwɛ̀** fíé hɔ́ yíé
look/IMP household there well
'Take good care of the household.'

20. Àsɔ́ɾ nó só **hwɛ̀** à-bɔ̀bɔ̀fó/e-hia-fo
church DEF also see/HAB PL-needy/ NOM-need-PL
'The church also takes care of the needy.' (ABAK SP3)

In (19), the speakers are entrusting the baby and the house into the care of a trusted person thereby empowering the percipients to exercise responsibility in taking care of the baby and also keep the house well. Though the percipients are not overtly expressed, it is understood that in (19a), both the percipient and the perceived objects are [+ human] entities while in (19b), we have [+ human, - inanimate] entities. The percipient is associated with the location (house) where their visual line is to be directed. There are situations where we can have a feature like NP1 [inanimate] and NP2 [+ human] as shown in example (20). In (20), the church takes anthropomorphic behaviour and functions as Active Experiencer subject (an animate entity) which takes responsibility and much concern in monitoring and taking care of the poor in the church. Social-emotional skills[7] can be developed in

[7] Social-emotional skills include skills, knowledge and attitudes that are essential for proper maintenance of good emotional attitude and behaviours that are needed for positive relationship.

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examples (19a) and (20) in the kind of context of relationship that can co-exist between the perceiver and the perceived object.

It can be noted that both perceptive verbs *hwɛ́* and *hú* can express the notion of social relationship which deals with love, trustworthiness and dependability. This time the psychological experience is directed to the issue of affection (emotional experience). In this group, the percipient's visual direction is focused on activities of love or the visual line is directed to power of love towards the perceived object. The volitional events centre on both the mental and the physical actions. The relation selects features like [+human] entities only. Illustrations are shown below:

21. M-ê-**hù** ɔ̀báá bí é-síé
    1SG.SUBJ-PERF-see woman INDEF PERF-hide
    'I have mottled a particular woman I would like to marry/ I am courting a woman to marry.'(Lit.: I have a certain woman in mind) (ATA SP 2)

22. Mú-**hú-ù** Ama nó mò-dɔ́-ɔ̀
    ISG.SUBJ-see-COMPL Ama DCM 1SG.SUBJ-love-COMPL
    nò
    3SG.OBJ
    'I fell in love with Ama when I saw her.'

23 Ɔ̀báá nó mó-**hwɛ̀** nò kàkŕá,
   woman DEF 1SG.SUBJ-See 3SG.OBJ for a while
   ná yɛ̀-á-kɛ̀-yɛ nó hó gyáá;

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CONJ 3PL.SUBJ-CONS-go-do 3SG.POSS self talk.to

mè-kyèrɛ́ y-é-kó-**hú** èɡyá nó

1SG.SUBJ-show 1PL.SUBJ-CONS-go-see father DEF

'I study the lady for a while then we go and talk it over with the father.' (ATA SP 2)

24. Ɔ̀báá dzé í-bó-**hú** dɛ̂ ɔ́-á-yɛ̀

woman TOP 2SG.SUBJ-FUT-see COMP 3SG.SUBJ-PERF-do

bɾ́á nó ńnà ɔ̀-dzè nyíńsɛ́ń

menstruation DEF then 3SG.SUBJ-hold pregnancy

náḿ

walk

'As for a woman, before you become aware of her menarche, she would already be pregnant.' (ATA SP 2)

25. Sɛ̀ é-ró-wàɾ́ â ɔ́-wɔ̀ dɛ̂

when 2SG.SUBJ-PROG-marry CCM 3SG.SUBJ-be COMP

é-hwé-hwɛ́ òbí â è-nyé

2SG.SUBJ-REDUP-look someone REL 2SG.SUBJ-be.with

nó nàm̀ à, wó hó bɔ́-tɔ́

3SG.OBJ walk CCM 2SG.POSS self FUT-dropdown

wó.

2SG.OBJ

'When you decide to marry, look for a partner you will feel comfortable with.'(ATA SP 3)

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In examples (21) to (25), the use of *hwɛ́* 'look 'and *hú* 'see' refers to a friendship or a kind of social relationship which can lead to intimacy or marriage relationship. In these constructions, events that lead to amorous relationships are established between the perceivers and the perceived objects. In this kind of relationship, perception precedes the physical encounter (one on one).

In example (21), the use of *hú* 'see' may have two interpretations: physical and metaphorical. In the case of the physical experience, *hú* 'see' may express setting eyes on her physical beauty attracted his attention to express love – that is, love at first sight or the perceiver met the perceived object sometime back whom he had planned to marry (metaphorical). At this time, he (the percipient) is certain to marry the person, because the process of the visual intentions has gone on over a period of time.

In example (22), the visual event is not about physical seeing, it is implied that the perceiver has intentions of entering into marital relationship with the perceived object (may be they are in their courtship stage). In view of that the perceiver observes the actions of the perceived object and studies her as well. The perceptive verb *hwɛ́* 'look' is directed to the way of life of the perceived object such as character, behaviour, and other things he deems good for marriage. When the degree

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of visual attention to the object in question is attained, then the mission of perceptual drive is completed.

The perceptive verb *hwɛ́* 'look' in example (23) is used as observation mechanism. Thus, the visual sense is used in checking every conduct, behaviour, dressing and all other things the percipient deem worth satisfying of a woman before her hand is asked in marriage. Here, because the percipient has purposed to critically study (volitional durative event) and observe the woman, he makes sure to do thorough checks on the perceived object (the woman). This look may include physical looks and beyond physical looks such as expression of emotions, social interaction, and psychological uprightness about the woman (perceived object) he wants to marry. There is a human to human interaction here.

In the context of example (24), the subject is expressing his views, demonstrating his mental ability over the issue of most girls in relation to their attitude towards menstruation and their sexual life. The visual line of the percipient is fixed on his understanding (mental actions) towards the object in question.

In example (22) & (25), the percipient uses the eye as an outlet for searching for what his heart desires (the perceived object). His comment about marriage is that before one marries, there is the need to look for a woman with whom one can associate well for the rest of one's life; and the perceptive verb *hwɛ́* helps in deciding that. To achieve his dreams, the eye must do several searches; thus, a repeated action

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of watching the perceived object within a time frame to observe and assess all the qualities through the mind's eye, (eye and the mind work concurrently) before the purpose will be accomplished. The eye then becomes a decision making tool for the purposes of achieving a goal. The activity goes through durative and volitional process.

In addition to the earlier discussions, the perceptive verbs in Akan can also exhibit other semantic projections relating to the notion of diagnosing, searching, investigating, inspecting, identifying and expecting. The perceptive verb *hwɛ́* 'look' normally demonstrates these understandings. In the context of these understandings, the verb can appear either in a reduplicated form or in its basic form. Examples (26 – 28) illustrate some of the reduplicated concepts of the usage of the perceptive verb *hwɛ́* 'look'.

26. Dátsɛ̀r̀ nó **hwè-hwɛ́** yáŕbá nó nó

doctor DEF REDUP-look desease DEF 3SG.POSS

mú àǹsáànà ɔ̀-à-mà èdúŕ
inside before 3SG.SUBJ-CONS-give medicine

'The doctor first does the diagnosis of the disease before he administers medication.'

27. **Hwè-hwɛ̀** m̀brɛ̀ àdzé nó wɔ́ nó

REDUP-look/IMP where thing DEF at DCM

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'Look for where the item is.'

28. Àsɛ́ḿ nó **hwè-hwɛ̀** mú ádzé
matter DEF REDUP-look/IMP inside thing
'Investigate the case/matter properly.'

The use of the reduplicated verb *hwɛ́* 'look' as expressed in examples (26) to (28) denotes seeing several times. That is, repeated purposeful looking. The indication here is that when the brain receives the visual stimulus it processes it in the mind and its effect is realised through the repeated event of the visual activities. Thus, visual sensory organ, the eye, undergoes several checks in the visual process. These actions are done in a volitional durative manner. In example (26), for instance, the reduplicated form of the perceptive verb *hwèhwɛ́* 'look, look' describes the technique (diagnosis) doctors (the percipient) use. That is, the continuous probing activities of scientific investigation in a particular disease using the visual stimulus. In example (27) & (28), the repeated actions of the activity of seeing are done for purposes of searching and investigating, respectively. The concept of investigating then becomes the metaphorical extension of searching. For instance, in (28), the reduplication of the verb explains the semantic meaning 'many watching or seeing or looking' into the matter through exploration.

The other examples are illustrated in examples (29- 31). In these contexts, the perceptive verbs appear in their basic form.

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29. Mà yɛ́-ń[8]-**hwɛ́** ènyímń kàkŕá
let 1PL.SUBJ.OPT-look face little
'Let's give ourselves some time / wait patiently for a while.' (ADJT SP 5)

30. Mensah kɔ̀-**hwɛ́-ɛ̀** dɛ̂ èdwúmá nó
Mensah go-look-COMPL COMP work DEF
é-dzì mú
PERF-eat whole
'Mensah went to inspect whether the work has been perfectly done.'

31. Yɛ́-**hwɛ̀** dwùmá â yé-rí-dzí
1PL.SUBJ-see/HAB work REL 1PL.SUBJ-PROG-eat
nà yɛ́-dzé bɔ̀ m̀páá
CONJ 1PL.SUBJ-take/HAB play/HAB prayer
'We base our prayer on the programme.' (ADJT SP 5).

In example (29), the percipient's visual line is directed towards the notion of anticipation. The collocation expression of *hwɛ́ ènyímń* accounts for the concept of anticipation. The percipient engages the perceived object's attention by directing

[8] In example (29) the construction is another form of imperative construction which Osam (2004) names as optative. According to Osam (2004:18) the optative "involves the presence of a subject marker and a high tone homorganic nasal prefix on the verb and it is used when commands are directed at plural addressees. So, I gloss this OPT "optative marker" as seen in example (29).

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their visual line to the future (waiting for a while). The visual experience focuses on expectancy, or exercises of bated breath; it is a volitional process which goes through durative development by both the percipient and the perceived object. In this context *hwɛ́* selects [+human] feature for both the subject and the object.

In (30), the visual line of the percipient is directed towards the activity of inspection. The visual sensory activities include examination/scrutiny/evaluation or checks and balances. The use of the perceptive verb *hwɛ́* selects [+human] feature for the subject and [-human] feature for the object. The visual experience is volitional; however, the time frame for the visual activity may be either durative (over long period) or inceptive (over a short period – immediate perception is done indicating direct witness of the activity) depending on the percipient's intent.

With example (31), the visual sensory activity is geared towards a particular programme or occasion before a correlated activity is performed. This example has more cultural connotations, thus in Akan every occasion goes with its particular prayer. In this context, *hwɛ́* has been used as a pointer or check to a particular occasion before its correlated activity (prayer) is performed. Again, we can propose that the CPV *hwɛ́* 'look' relates to the idea of estimation or evaluation. This meaning relates to the conjoined ideas in the construction.

In this context the perceptive verb *hwɛ́* also selects [+ human] feature for the subject and [- human] feature for the object (activity). The visual expertise of the

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percipient is realised only when a particular occasion occurs; the corresponding activity is connected to the percipient's visual line which is performed over a short period of time (inceptive) in a skilful way.

A similar example relates to when a perceptual experience of a circumstance that surrounds a particular activity connotes the present state of that experience. An example is shown in (32) below:

32.	Ńtsí	yɛ́-**hwɛ̀**			mú	â,	ɔ̀máń	nó	yɛ̀
	so	1PL.SUBJ-look/HAB			inside	CCM	town	DEF	be
	Tàkyí	dzé	ńtsí	nà	yɛ́-frɛ́			nó	
	Takyi	own	so	CONJ	1PL.SUBJ-call/HAB			3SG.OBJ	
	Tàkyímàn								
	Takyiman.								

'So, we realised that the town is for Takyi that is why we call it Takyiman.' (ADJT SP 5)

In example (32), the percipients' visual experiences towards the state of affairs of certain situations compelled them to associate a particular name with the perceived situation. The sensory organ was used to probe further details or deeper understanding of the state of that activity which led to the association of the name. This condition might have gone through durative and volitional processes and selects [+human] entity for the subject position and [inanimate] entity for the perceived occurrence.

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According to Van Putten (2020) visual verbs can express inferences or what she calls 'indirect perception' where the percipients infer meaning from a context based on the evidence they have. This notion is also realised in Akan. In the case of Akan, the perceived object's responses to a percipient's answer in an interrogative construction exhibit this notion. An example is illustrated in (33) below:

33. **É-hwɛ̀**	m̀brɛ̀	wíádzé	á-yɛ́	yí	â,
2SG.SUBJ-look/HAB	how	world	PERF-be	DEM	CCM
í-**hù**	nò	dɛ́ń?			
2SG.SUBJ-see/HAB	3SG.OBJ	how			

'What do you think about how the world is today?'

The example in (33) is an interrogative question where the percipient (the subject) is seeking information from the perceived object about what is happening in the world. The sensory visual activity is used to investigate issues concerning what is happening around them (the society or the country or what is happening globally). So the visual skills centre on the mental interactions to achieve a target goal. In this context both the perceptive verbs *hwɛ́* and *hú* co-occur in the construction. Both verbs *hwɛ́* and *hú* are used to seek clarification about a certain situation or condition. The verbs are used to inquire for information. The evidence of understanding as established in the perceived object's visual experience will allow him/her to provide

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inferences of meanings to the percipient based on the earlier context the percipient portrayed.

Furthermore, with social psychological domain, vision can be used to measure duration of time where a particular event can be celebrated. This is normally associated with traditional and some religious festivals. With this type of communication, the percipients use the visual perception as a means to calculate or measure a certain duration or period for an event. The distance between that event and another is derived from knowledge gained through vision. An example is illustrated in (34) below:

34. Yɛ-**hwɛ́** ǹ-dá nó nà yɛ́-dzé hyɛ̀
1PL.SUBJ-see/HAB PL-day DEF CONJ 1PL.SUBJ-take fix
àfáhyɛ́ dá nó
festival day DEF
'We use the calendar to calculate the date for the festival.' (ADJT SP3)

In example (34), the visual information the percipient has in relation to the occasion to be celebrated is very significant. The factors, signals and other relevant evidence needed to be seen are deduced from the percipient's visual faculty. When these visual signs become evident, then the perceived event is considered to be due to be celebrated. The sensory visual experience then becomes an indicator or a decision making tool in confirmation of a perceived event.

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The perceptive verb *hwɛ́* may also play the role of an indicator or pointer of an individual's behaviour. An example is shown in (35) below:

35. **Hwɛ́** dzà ɔ́-ré-kyéré

look/IMP thing.REL 3SG.SUBJ-PROG-show

'Just look at what s/he is doing.'

Semantically, the subject in (35) is covertly expressed; the perceiver uses their perceptual experience to draw the attention of the perceived object's behaviour or actions to order. From the speaker's point of view (the percipient), the subject's action is seen to be in contrast to what the speaker (the percipient) expects. Thus, the subject's action deviates from the norm. With this, the percipient draws the attention of the perceived object to his/her rightful role. The visual information derived from the verb *hwɛ́* has been that of an indicator or pointer which the percipient points out. Both the percipient and the perceived object are + human arguments.

Sometimes, in social psychological context, the perceptive verb can be used to express the idea of reflections and taking critical look about something. Some examples are displayed below:

36. **Hwɛ́** ná **hù** dɛ̂

look/HAB CONJ see/HAB COMP

ɔ̀-ré-ǹǹ-gyìná

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3SG.SUBJ-PROG-NEG-stand

'Note that it will not stand.'

37. **Í-hù** àdzé â **hwɛ̀** nò
2SG.SUBJ-seesomething CCM see/HAB 3SG.OBJ

yíé
well
'Be careful about things/take a good look about things.'

In example (36), the perceptive verbs *hwɛ́* and *hú* are connected to the issue of introspection. The percipient entreats the perceived object to think through the issue by doing self-examination about it using the visual mechanism. The semantic connotation of this expression is that, the perceiver cannot identify in his/her visual capacity or sense to identify any good things from the perceived object's experiences. In example (37), the visual verbs are used to sound caution to the percipient or notify them to take a good look of things around them. Equally, the cognitive perceptive verb *hwɛ́* can be used to sound a caution. An example is shown in (38) below:

38. **Hwɛ̀** yíé
look/IMP well

'Be careful.'

In (38), the percipient is covertly expressed, but the inference here shows that the percipient is sounding a caution to the perceived object. It can also mean giving warning to the perceived object. The visual activity is connected to signs of warning

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or cautioning. The social relationship between the percipient and the perceived object might be superior versus subordinate or the relationship may depend on other danger looming around whom the warning or cautioning shall be sounded to. The percipient and perceived object have [+ human] features.

3.3 Metaphorical Extensions of the Perceptive Verbs (*Hwɛ́* and *Hú*) in Akan

This section looks at the metaphorical extensions of the perceptive verbs *hwɛ́* and *hú* in Akan. The discussion that follows focuses on the primary metaphors of the perceptive verbs *hwɛ́* and *hú* in the language.

Winter (2019:28) observes that metaphors are one of the "versatile strategies for conveying perceptual meaning as well as enriching sensory vocabularies". He further explains that speakers normally use their knowledge in perception to describe other conceptual meaning. That is, they display extensions of meanings rather than the basic meanings.

Lakoff & Johnson (2003:4) also define metaphors as "our ordinary conceptual system, in terms of which we both think and act; [and that whatever we think and act] is fundamentally metaphorical in nature… [if] our conceptual system is largely metaphorical, then the way we think, what we experience, and what we do every day is very much a matter of metaphor". Understanding this, we can say that metaphor is a thoughtful way of understanding one thing in terms of another

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experience. As our senses visualise things in the real world, they capture so many things that are understood to be found to be embedded in our mental system. That is, what exactly is seen or perceived in the mind's eye, is what is correlated with the notion of metaphor. In view of that, Lakoff and Johnson explain that "metaphor is not just a matter of language… [but] human thought processes are largely metaphorical" (2003:6). In support of this argument, Lakoff and Johnson (2003) point out that metaphor are seen to be pervasive in human life endeavours where the sense of one concept of meaning is transferred unto the other. It can generally be claimed that metaphors embody various meanings in average language usage.

For this reason, cognitive metaphors help us to understand one concept in relation to another idea. These meanings go beyond the basic or literal meanings the verbs express. So cognitivists put this relation into mapping, where a concrete concept – Source domain (that arises from everyday life experiences) is mapped unto a Target domain (abstract ideas – unperceivable and intangible entities we cannot see physically). Instances of metaphors, mappings from one abstract domain to another are also linked to the concept of Conceptual Metaphor Theory (CMT).

According to Saeed (2016:371), "an important characteristic of cognitive semantics is the central role in thought and language assigned to metaphor. Lakoff and his colleagues (e.g. Lakoff and Johnson 2003, 1999, Lakoff 1987, Lakoff and Turner 1989) proposed an approached termed Conceptual Metaphor Theory

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(CMT)". The opinion of these pioneers in CMT is that, among the numerous ways we understand and talk about the reality that surrounds the world, human beings tend to use metaphors more often than they think and generally, they use it instinctively.

Lakoff and Johnson (2003) also expressed that conceptual metaphors are shaped in relation to our cultural and social experiences; consequently, they may differ across cultures. In support of this view, Kovecses (2005) argues that conceptual metaphors account for 'cultural variations' within a given culture. However, for this to be identified there are many factors such as communicative issues, the various situations in which these issues are discussed and the context in which the ideas are expressed, all, might contribute to these cultural differences in the use of CMT.

The above assertions indicate that conceptual metaphors are inherent concepts in the human mind. For instance, what we think about the world around us and our interpersonal relationships with the world are all related to how we view the world. The experiences which are revealed through our thought may be mapped unto other experiences (metaphors) we exhibit. Thus, conceptual metaphor is the key to unlocking the conceptual experiences of the individual.

In Ibarretxe-Antuñano's (2019:2) view our senses do not only serve as conduit for communicating only physical information about the world but also make available essential evidence of things we cannot physically point to (abstract ideas).

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In relation to this, she explains CMT as mappings of two distinct conceptual domains-- the Source and the Target— and mention that in CMT, "the same target domain can be conceptualised in terms of different types of source domains. Thus, it can be noted that meanings in our cognitive faculty are grounded by our experiences. Some examples of metaphors from Lakoff & Johnson (2003:4) are illustrated as follows:

	Source ----------	**Target**
39a.	war	Argument
39b.	war	Life
39c.	money	Time

In example (39) the conceptual domains from which we draw the metaphor is the Source – war and money and the conceptual domains interpreted is the Target – life, argument and time. So, argument, life and time are understood (are conceptualised) in terms of war and money.

We illustrate some examples of metaphors of perceptive verbs of *hwɛ́* and *hú* in the Mfantse dialect of Akan below:

40a. È**hù**bídá	ńtsí	nà	àbówá	ásèr̀wá		gyè
experience	that	CONJ	animal	sparrow		collect/HAB
né	bá		ágór	â,	ó-yì	
3SG.POSS	child		play	CCM	3SG.SUBJ-pick/HAB	

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n'-ényí	tò	ǹkyɛ́ń
3SG.POSS-eye	put/HAB	side

'It is out of caution that when the sparrow plays with the child it looks elsewhere.'

40b. É-dzé		bɔ́-**hwɛ́**	óbí	né	bá
2SG.SUBJ-take/HAB		FUT-look	someone	3SG.POSS	child
dzé	fá	tɔ̀	àkókɔ́	nyɛ̀ǹ	
DCM	pick/HAB	buy/HAB	chicken	rear/HAB	
nò					
3SG.OBJ					

'It is better to rear a hen than to nurture someone else's child.'(ATAK SP4)

40c. **Hwɛ̀**	dó	mà	mè	ǹǹ-yɛ́	dɛ̂
look/IMP	on	give	1SG.OBJ	NEG-be	COMP
wó-árá					
2SG.REFL					

'It is better to take good care of your own things than allowing someone to do so.'

40d. **Hwɛ̀**	pété	né	ǹ-tɛ̀kyèrɛ́	mú
look/IMP	vulture	3SG.POSS	PL-feather	inside

'To use ways and means to uncover the truth.'(Lit.: Look inside the feathers of the vulture)

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In (40a), the concept of *hú* 'see' is extended to the concept of 'cautiousness' – a careful act. Also, the cautiousness idea in the visual event *hú* is teased out from the context in relation to some occurrences that might have happened previously- *bí dá* 'some before'. This relationship is illustrating both semantic and pragmatic features. Again, the example in (40a) is conceptualised to mean that the sparrow is extremely vigilant and alert. It does that because it is assumed that it has experienced some visual dangers previously and this time, it has become very observant even when it plays with its child so that no such danger befalls it again. This means that being vigilant can be conceptualised as an activity of seeing.

In example (40b), the concept of *hwɛ́* 'look' is mapped unto the idea of making investment through nurturing someone (somebody's child). The context in (40b) literally means, in Akan culture, it is normal for a person (a Benefactor--whether a couple, a single parent or benevolent person who wills in the community) to nurture someone's child (Beneficiary). It is expected that this investment yields good development and in turn, the beneficiaries be appreciative of this kind gesture (*hwɛ́* - nurture) shown them. However, if it turns out that these Beneficiaries demonstrate discourteous behaviours towards their Benefactors who have taken care of them in such a way that, there is then a feeling of resentment on the part of the Benefactors, this statement (in 40b) is uttered. Sometimes, so many meanings can be deduced from this behaviour but the common expression heard in the language is the (40b) making contrast judgment of the beneficiaries behaviour to the activities

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of rearing a fowl. The implication is that, it is not even worth it in nurturing (*hwɛ́*) someone's child but it will be more beneficial to use the resources to rear a fowl because in the end you will gain more profit from your produce. This perception is conceptualised in Akan culture to mean one good turn deserves another. This concept of becoming kind through nurturing is mapped unto the concept of *hwɛ́* 'look'. So, in the context, the collocation of the phrases *'hwɛ́ óbí né bá dzé'* in relation to '*fá tɔ̀ àkókɔ́ nyèǹ nò'* brings out the meaning of this context in Akan culture.

In example (40c) the idea of *hwɛ́* 'look' is conceptualised in relation to not taking good care of something that belongs to someone well in their absence as the owner will do. The conceptualisation in (40c) can be associated to some factors that might be obvious for that attitude. In Akan, if people are found not demonstrating the good behaviour in taking good care of someone else's property, they might ascribe it so many issues as wastefulness, carelessness or even having evil intentions. These concepts are mapped unto the activity of looking (a look which does not portray efficiency or productivity).

In (40d), the perception of the subject is made clear — a behaviour that is perceived to connote a good attitude in looking for the truth about something. The activity of being a good investigator or having a private eye is conceptualised as looking.

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The perceptive verbs can also express the metaphorical notion of 'vigilance' and taking precautions or cautiousness. In this expression the emphasis is on the perceived object who is being cautioned to use the eye to watch critically the events around him. Also, the percipient takes precautions due to some visual experiences they have encountered. An example like (41a) will generate the metaphorical expression in (41b).

41a. **É**-yɛ̀ dɛ́ń yɛ̀ **ǹ-hwèhwɛ̀-mú**
2SG.SUBJ-do how be NOM-REDUP-look-inside

béŕ â **á-tsè** dɛ̂ wó kúń
when REL PERF-hear COMP2SG.POSS husband

é-hù ɔ̀báá fófóŕ
2SG.SUBJ-see woman new

'How do you investigate your husband when you hear that he is dating another woman?'

41b. Mè-dzè **m'-ényíwá** bɔ́-tó fámù
1SG.SUBJ-take 1SG.POSS-eye FUT-put down

à-hwɛ́
CONS-look

'I will monitor things closely.' (DW SP 5)

In example (41a), the speaker would want to inquire from the percipient how she reacts (using the visual sense to investigate) when she hears that the husband is

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dating another woman. Here, the PV *hwɛ́* 'look' undergoes repeated (reduplication) purposeful looks in the visual process. The verb has been nominalized as *ǹhwèhwɛ̀mú* 'investigation' (by the nominalization prefix /n/) in the visual process. So, the collocation of the nominalized verb *ǹhwèhwɛ̀* and the postposition word *mú* 'inside' brings out the clear meaning of the act of looking (investigation). In this context the meaning of the visual sense is more on the nominalized word. The second visual sense *hú* 'see' marks tense. Also, there is an interfield activity in this context where the visual sense (the eye) and the auditory sense (the ear) perceptions are combined in identifying a perceived problem.

The notion of *hwɛ́* 'look' in (41b) is extended to the concept of 'vigilance' where a careful watch (being very observant in watching, checking all possible risks that might arise) is done. The percipient embarks on security responsibilities that demand long hours of vigilance such as monitoring and observing. This means that the activity of becoming vigilant can be conceptualised as *hwɛ́* 'to look'. In the conceptualisation process, the percipient does intensive observation over a period of time to achieve the target event. Thus, the percipient performs the visual event (looking) with a specific purpose and aim or target.

Another example that illustrates the metaphorical notion of taking precautions or becoming cautious is shown in (42).

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42.	Ònyíḿpá	bɔ́-**hwɛ́**	yíé	nó[9]	ná	òfìr̀
	man	FUT-see	well	DCM	CONJ	emanate/HAB
	dzà	ó-é-**hú.**				
	thing	3SG.SUBJ-PERF-see				

'People become cautious due to experiences they have encountered.'

Example (42) has the two perceptive verbs occurring in the construction. These two PVs go beyond physical activity of seeing. While the visual activity of *hwɛ́* 'watch'/ 'look' in (42) is conceptualised as being careful or becoming cautious (the cautiousness idea arises because the PV co-occurs with the adverb *yíé* 'well') in daily life. The PV – *hú* 'see' is conceptualised as experiences one has encountered before. These experiences relating to the visual sense *hú* might have been bitter events or certain happenstances that have made them (the percipients) become cautious in life. The conceptualised information—experiences is mapped unto the visual activity of *hú.* This experience is what the percipient focuses on as the prime

[9] The no in example (42) marks the end of a dependent clause; that's why it's better to call it the Dependent Clause Marker (DCM). Also, Fretheim & Amfo (2008:360; Amfo 2007) argues that "a dependent clause followed by *no* [has three functions]; it can (a) impose a temporal constraint on the main clause proposition [as shown in example (42)], (b) mark a relative clause in a syntactic construction where the overt head noun is outside the scope of *no,* [and can] (c) mark one of the propositions in a substitutive ('instead of ') constructions where the future tense prefix *bɛ* indicates that the state of affairs described in the *no*-marked clause is unfulfilled".

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to exhibit the event of taking precaution. So, the event of taking precautions is aligned to the visual activity of *hwɛ́* 'watch' / 'look'.

3.3.1 Relation of Vision to Idiomatic Expressions

The metaphorical meanings of visual perception can be extended to form idiomatic expressions; a structure where the literal meaning of vision is not directed to the individual words that form the idiom; rather, the meaning is derived from the entire idiom. In Akan, this extension of meanings of these idiomatic expressions may come in different forms such as, by the addition of postposition or an NP or adverb of degree and intensity to the visual experience (Agyekum 2005). Mostly in these constructions, the sensory visual organ, the eye, is used to form the idioms. In an earlier study by Gibbs & O'Brien (1990), it was argued that idioms have conceptual undertones and that what is considered as idioms can potentially be analysed as metaphors (but not dead metaphors). They express this in the following lines:

> People have strong conventional images for many idioms and that the regularity in people's knowledge of their images for idioms is due to the conceptual metaphors motivating the figurative meanings of idioms. [Thus,] conventional images and knowledge associated with idioms are constrained by the conceptual metaphors. [In view of that] idioms are not "dead" metaphors with their meanings being

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> arbitrarily determined. Rather, the meanings of many idioms are motivated by speakers' tacit knowledge of the conceptual metaphors underlying the meanings of these figurative phrases (1990:35).

It can be understood from the above statement that idiomatic expressions are influenced by our conceptual skills and abilities; for these underlying motivations inform the meanings of the idioms. Kazemi et al. (2013:38) support this and point out that "conceptual metaphor underlies the comprehension of idioms". That is, meanings that idioms portray are constantly influenced by our conceptual experiences.

In Akan, it is possible to use the visual sensory organ which displays visual experiences to demonstrate idiomatic concept of 'courage', 'respect', 'disrespect' and the 'inability to identify nice and beautiful things'. Examples are shown in (43 – 47) below:

43. N'- **ényíwá** yɛ̀ dzèǹ
    3SG.POSS-eye be hard
    'S/he is courageous.'(Lit.: His/her eyes are strong)

44. N'-**ényíwá** sɔ̀ àdzé
    3SG.POSS-eye light thing
    'S/he is respectful/content.'(Lit.: His/her eyes light/brighten up things)

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45. N'- **ényíwá** m̀m̀-bú nò dwɛ́

3SG.POSS-eye NEG-break 3SG.OBJ once

'S/he is disrespectful.' (Lit.: His/her eye does not blink)

46. ɔ̀-á-tótó n'-**ényíwá** á-wé

3SG.SUBJ-PERF-bake-REDUP 3SG.POSS-eye PERF-chew

'S/he is disrespectful.'(Lit.: He/she has grilled their eyes and eaten them)

47. N'-**ényíwá** dò m̀-bówá é-wú

3SG.POSS-eye on PL-animal PERF-die

'S/he does not know what is nice / beautiful /can't discern what is beautiful or nice.'(Lit.: His/her eyes animals die)

In examples (43 to 47), the visual sensory organ, the eye, which is the source domain is mapped unto the target domains – strong (courageous) in (43), glittering objects (respect/ satisfaction) in (44) and being blunt in speech, behaviour and attitude in (45), disrespectful attitude in (45) and (46) and not able to identify beautiful or nice things in (47).

The percipient in (43) conceptualises the issue of bravery in relation to the visual organ, the eye. Thus, the eye (the source domain that displays visual experiences) of the perceived object presents courageous issues (the target domain). In this context, the eye goes beyond physical seeing to present cognitive knowledge

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that is recognised as courageous. Thus, being courageous is attributed to having strong visual organ.

In (44), the percipient conceptualises shiny, bright object or object that glitters relative to the visual organ. So, the connotation of the meaning of respect is equated to these sparkling objects; that aspect of the body (eye) or behaviour that reveals actions of sparkling. In another context, the same expression may connote that s/he is satisfied with whatever they have. That is the idea of satisfaction can also be conceptualised as conduct that reveals glittering actions. When this situation happens, the concept of showing gratification is associated with the visual organ (the eye) that sparkles. In the negative context, where the person does not demonstrate respectful conduct, examples (45) and (46) are used to describe the percipients.

In (46) the context is not about the perceived object roasting his/her eyes to chew but the roasting of the eye is conceptualised as disrespectful attitude. The perceived object is seen to be blunt in speech and in behaviour. Thus, the concept of being unmannerly is mapped unto the idea of roasted eye in Akan.

In example (47), the visual sensory organ, the eye (what is on the eye) which is the source domain, is conceptualised as being dead (the target domain). That is, there is no life in the visual field of the perceiver – the target domain. The semantic connotation of this expression is that, the perceiver cannot identify in his visual

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capacity good things or beautiful things; thus, the sense to identify beautiful/nice things or good things. It can be expressed literally as *onyim dza a ɔyɛ fɛw*, 'he can't identify beautiful things'. The inability of the eye to recognise beautiful things is conceptualised as dead eyes— no life. The example is (47) is realised as an euphemistic expression.

In Akan, in a context where there are several phenomenal happenings in the environment and there is the need to pay much attention to them, the visual organ is used to communicate that. Also, the visual organ can be used to express the perception of humble behaviour about a percipient. Instances are demonstrated below:

48a. Fà w'-**ényíwá** tò fámú
take/IMP 2SG.POSS-eye put down
'Be watchful.'(Lit.: Take your eye put down)

48b Fà w'-**ényíwá** tò hɔ́
take/IMP 2SG.POSS-eye put there
'Be observant.'(Lit.: Take your eye put there)

48c. Kà w'-**ényíwá** fámú
drive/IMP 2SG.POSS-eye down
'Be humble or humble yourself /slow down in life.'(Lit.: Drive your eye down)

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The activities of the visual organ in example (48) function as the source domain and the conceptualised ideas derived from the sensory organs play the role of the target domain. The constructions in (48a-c) show that there have been some happenings that are on-going, and the percipients are drawing the attention of the perceived objects to that effect. The visual sensory organ, the eye as the source domain is mapped unto the relationship of the ground (a human attribute of humility). The percipients conceptualise this in their mind that the perceived objects need to be more vigilant in a humble manner as indicated in (48a), or become observant in relation to what is going on around them as expressed in (48b) and/or live a humble life shown in (48c). These events are all related to the Target domain. Thus, the concepts of being vigilant and demonstrating humility are conceptualised as lowering of the eye, 'putting the eyes down' and 'touching the ground with the eye', respectively. Taking notice through the eye, the percipients encourage the objects to move a step further in their assessment of information by being more vigilant. The percipients emphasise that the perceived objects in (48a & b) become watchful of the present development of the perceived scenes around them. To make things clearer to the objects in (48c), the percipient cautions the object to come down in terms of actions and in deeds. This expression is mostly characterised with superior verses subordinate relationship where the superior has much experience to advise

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the subordinate (the perceived objects) or bring them to order. All these constructions demonstrate intransitivity.

Another dimension of the idiomatic expressions is where perception is directed to the purpose of directionality. In Akan, these idiomatic expressions are formed with post-positions to express concept of monitoring, dependability and uprightness. In these contexts, the visual organ is used to express these concepts. According to Kubota (2016) the use of sight verb + preposition in English may as well indicate direction. This directionality displays continuous movement and uninterrupted events. She cites the following examples as directions: 'look ahead', 'look around', 'look about', 'look ahead', 'look beyond', 'look to', 'look towards', 'look forward (to)' and look back. Some instances which use the visual organ are illustrated in (49) below:

49a.	M'-**ényíwá**	dzì	w'-**ékyìr̀**	-
	1SG.POSS-eye	eat/HAB	2SG.POSS-back	

'I am following you closely.'(Lit.: My eyes eat your back)

49b.	Òbíárá	n'-**ényíwá**	dà	wó	dó
	everyone	3SG.POSS-eye	lie.on/HAB	2SG.SUBJ	on

'Everyone looks up to you.' (Lit.: Everyone's eyes lie on you)

49c.	Ò-bír-ìì	**n'-ényíwá** dó
	3SG.SUBJ-darken-COMPL	3SG.POSS-eye on

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'S/he tricked the person.' (Lit.: He/she obscures his/her eyes)

From example (49a-c), the sensory organ, *ényí* 'eye' is playing the role of the source domain while the concepts of close monitoring, dependability and being tricky are mapped unto the target domain. In (49a), the eye does not walk; however, the eye is being mapped with taking steps or walking – following closely (the target domain). The concept of walking is conceptualised as movement of the eye that closely monitors someone who is likely to prosper in future (using the eye to follow his back). A person whom all the family have entrusted their hope to is being monitored with the eye so that that dream comes to pass.

In (49b), the eye does not lie prostrate, however, the eye is being mapped with the idea of lying prostrate – a straight focused event (the target domain). Semantically, the meaning of dependability on the part of the perceived object is aligned to uprightness of the eye. Consequently, the conceptualisation of dependability is connected to fixity of the eye.

In example (49c), the visual sense organ (source domain) was likened to darkness. The darkness on the eye or a blurred vision (that it, not seeing properly on an issue and thereby getting disorganised as to what to do) is mapped unto the concept of confusion (the target domain). Thus, in this context, the notion of confusion is conceptualised as the event of using dubious means to deceive someone (putting someone's eye into total darkness' using tricks). These tricks distorted the

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mental vision of the targeted object such that, s/he couldn't make things clear in thought.

The perceptive verbs *hwɛ́* and *hú* are also used to express idiomatic expressions which take on post-positions. These expressions express the idea of focusing on the future, expectancy, forgiveness, understanding and discovering the truth. Example (50 –51) demonstrate some of these ideas.

50a. Dwéń **hwɛ̀** káń
think/HAB look/HAB forward
'Think of the future.'(Lit.: Thinking through the future)

50b. Mà yɛ́-ń-**hwɛ́** ènyím kàkŕá
let 1PL.SUBJ-OPT-see face little
'Let us wait for while.'(Lit.: Let us look face a while)

50c. Hwɛ̀ sòr ná fà mó bɔ́ń
look/IMP up CONJ take/HAB 1SG.POSS sin
kyɛ̀ mè
give/HAB 1SG.OBJ
'For God's sake forgive me.'(Lit.: Look up and forgive me my sins)

50d. M-ê-**hù** dó
1SG.SUBJ-PERF-see on
'I have understood it.'(Lit.: I have seen on)

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51a. M-ê-**hù** àsɛ́m nó èkyìr̀

1SG.SUBJ-PERF-see matter DEF back

'I have come to discover the truth or detected the main fact of the matter.'(Lit.: I have seen the back of the matter)

51b. Ò-é-**hù** né bŕá ánó

3SG.SUBJ-PERF-see 3SG.POSS life mouth

'S/he has lived life to the fullest.'(ATAK SP1)

The context in example (50a) shows that, the concept of looking into the future, looking forward (the source domain) is mapped unto the idea of thoughtfulness (Target domain). Thus, having thoughtful idea is conceptualised as focusing on the future; thus, a look into the future (looking forward). In the same way for (50b), the concept of expectancy is conceptualised as the visual activity of looking forward. With (50c) the sense of forgiveness is conceptualised as looking up to God or looking up to the sky, whereas in (50d), the idea of understanding is conceptualised as seeing the top of it/ seeing the top of something.

Example (51a) demonstrates that knowledge of a perceivable event has been revealed '*hú 'hù èkyìr̀'* literally, 'see back'. The targeted domain (information) has been detected by the percipient through the use of the source domain- *hú* 'to see'. The conceptualised visual activity (*hú*) of identifying the truth or discovering the truth is mapped unto the continuous search of the evidence thereby subjecting the visual line to a durative process to reach the target domain (finding the truth). In that

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exploration, the proposed task was finally accomplished where the truth was exposed.

In (51b), the use of the source domain- *hú* 'to see' (life's mouth) is mapped unto the idea of fruitfulness – having a fruitful life. That is, abstract knowledge of fruitfulness – the target domain. In the human body part, it is the mouth that controls food that enters the human system. This process helps the body's systems to give good health to the body. In the same way, having a productive life is conceptualised as directing one's visual line to a perceivable life activity that enhances good vision to achieve their target domain (the end – the fulfilment of life).

3.4 Summary

The purpose of this chapter has been to provide a systematic account of the two perceptive verbs; *hwɛ́* and *hú* and the various meanings they exhibit in Akan (the physical and the extended meanings). It also looked at the domains where diverse usages of these cognitive perceptive verbs occur.

Hwɛ́ displays an achievement role of the visual activity and involves durative process but depending on the events or occurrence. On the other hand, *hú* is seen as a natural and instantaneous occurrence; a visual activity described as 'on the spot'. In some situations, *hú* can take durative function where the visual line is directed towards activity of monitoring and caring. *Hwɛ́* is more volitional while *hú* can

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display both volitional and non-volitional roles. These two perceptive verbs were classified under two domains, intra and social psychological experiences. The intra psychological experiences captured visual notions connected to self-philosophies such as personal opinions/beliefs, principles and values while social psychological visual experience describes the notions involving purpose, assurance, examining, and interdependency.

The perceptive verbs also exhibit polysemous notions. These are summarised below:

Hwɛ́ - to check or monitor, to examine, to observe, to focus, to expect someone/something, to be a caretaker, to be careful, to be wary of, to visualise, to copy, to concentrate, to stare at, to insult, to nurture (watching over or keeping under control), to discover, to accompany, to admire, to interpret, to make sure, to investigate, to depend, to consult, love and concern, friendship, way of life, attitude, seeking for heart's desire, diagnosing, searching, and expectation, inference of meaning, measure of duration of time, indicates time perception, reflections, preference, critical look, courage, vigilance and respect.

Hú – to consult, to check on, to envisage, to foresee, to experience, to be enlightened, to be abreast with time, to get to know the truth, to identify, to understand, to know, to sleep with or have sexual intercourse, to imagine, to find out, to ascertain, to assess, to realise, to identify, to imagine, to discover, to discern,

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to learn, to notice, to familiarise, to distinguish, to know the secret, to be clever, to empathise and many more.

It was noted that Gisborne's (1996) proposal of the deliberate text to test the role of the percipient as Experiencer in English visual perception has been shown not to be in conformity with that in Akan (Mfantse dialect). That is, in Akan the role of the Experiencer does not wholly depend on the deliberate text. It was observed that the use of these two visual verbs can be done interchangeably depending on which arguments they select and where the visual line is directed to.

Finally, it has been shown that the activity of *hwɛ́* can sometimes be a response to the visual activity of *hú.* That is, *hwɛ́* discusses more of the visual activities that do more probing while *hú* performs the activity of providing results to some of the activities of *hwɛ́*. For instance, in a visual activity where the perceptive verb *hwɛ́* exhibits the notion of 'searching', the resulting activity will lead to identifying (find out) a particular entity or what is being searched for. It can be concluded that the activities of cognitive perceptive verbs *hwɛ́* and *hú* are interrelated in terms of usage.

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CHAPTER FOUR

THE SEMANTICS OF TASTE (GUSTATORY) EXPRESSIONS

4.0 Introduction

This chapter analyses the semantic properties of taste expressions in Akan. Among the meanings conveyed by these expressions are sweetness, saltiness, sourness, bitterness, blandness and congealness. Each will be examined for its prototypical and extended meaning along with its associated syntax.

The chapter is organised as follows: Section 4.1 addresses the basic senses or the physiological functions of the taste categories in Akan, as well as the argument they select. Section 4.2 analyses the metaphorical meanings of the taste categories in varied context in the language. Section 4.3 is the summary of the chapter.

4.1 Taste Perception

The association among the choices for a specific taste displays the perception people have towards the food they eat or the liking they have for something. Thus, the ability to perceive taste is actually about the issue of predilections. Brenzinger & Fehn (2013) point out that the fundamental meaning of taste is 'to perceive' while Neagu (2013) describes taste as one of the human senses that can generally be linked

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to the likes and dislikes of people in relation to what matches their taste. In the view of Gasimli (2016: 303) “the sense of taste has a special place among the empirical feelings and plays an important role in the body's reactions to foreign stimuli, and has great emotional and psychological significance for human beings”. This means that the sensation of feelings towards taste modulation is imperative in human life. He points out that most of the taste expressions are normally classified in the literature as ‘adjectives of taste’, ‘gustative adjectives’, and ‘gustatory adjectives’.

There are five basic taste categories in English: sweet, salty, sour, bitter and umami (the umami taste category is normally associated with the Japanese). These taste categories can also be known as gustatory expressions. The last category of taste, Umami, was named recently in 2002 (though it was discovered as far back as 1908) by scientists who conducted research into food flavours. This kind of taste was very difficult to describe; it exhibits very delicious flavour in non-sweet, sour, bitter, or salty way. It is clear in the discussions that food and taste are culture specific. It is noted that within the scheme of taste descriptions in Akan, what is being described as Umami in Japanese may not exist.

Akan taste categories go beyond the five taste categories in English. The section that follows discusses the various taste categories in Akan.

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4.2 Categories of Taste in Akan

In detecting taste, it is the taste buds that help in its proof of the various taste groups. The taste buds are identified as the taste organs that help in recognising the taste. Different taste buds recognise different taste categories.

In the view of Hayes (2018), the main human device that perceives or measures taste of food has two pathways: the mouth and the throat. These taste receptors first come into physical contact (touch) with the object being perceived. The brain manipulates the receptors and sends the signals through the receptors, and then a judgement is given. The core function of these pathways has to do with the establishment of a feeling of a particular kind of flavour when they get into contact with something, especially food. These core receptor organs, the mouth (tongue) and throat, illustrate the varied taste experiences. The human tongue may at least experience five flavours in the mouth.

The verb that represents the notion of 'to taste' in Akan is the expression *ká...hwɛ́*. This expression combines the notion of two senses *ká* 'to touch/feel' and *hwɛ́* 'to see'. Literally, meaning 'touch and see how it looks like', more specifically, to examine something. According to Agyekum (2018), whenever two objects come into contact with each other, the notion of *ká* is used. So in expressing taste, we have objects (food, edibles and non-edibles) coming into contact with the mouth, the throat and the tongue. That is why we have the expression *ká...hwɛ́*. In Akan, expressing taste goes beyond the experience in the mouth; emotional feelings,

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bodily experiences and engaging in events demonstrate the notion of taste. The basic word *tsé* 'to perceive' can also be used to express the notion of taste. These expressions are normally used to examine the different types or categories of taste (relating to only edible or consumable entities). Apart from these expressions that occur in the language, adjectives can also be used to distinguish the major categories of taste expressions in Akan.

The taste categories in Akan are six with variants; these are illustrated below:

Categories of Taste in Akan	**Gloss**
dɛ́ẁ, dɔ́kɔ́dɔ́kɔ́, fénémfénémˊ	'Pleasant'
ǹkyèǹ, ǹkyèǹkyéǹ	'Salty'
kàẁ, fèm̀, yèrɛ̀yèrɛ̀ẁ, bìsììẁ	'Sour'/ 'Astringent'
wèǹ, wèéwééwéǹ	'Bitter'
táblábáá/tóbúrógyáǹǹ	'Insipid/bland'
dà ànómú	'Congealing'

Akan identifies two more tastes groups in addition to the four (sweet, sour, bitter and salty) English establishes. Accordingly, this study captured six taste categories in Akan. These six categories have various meanings; the basic function and the extended meanings.

Viberg (1984) proposes three concepts that can be used to analyse perceptional terms: the concept of Activity, Experience and Stative. Taste categories will be

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analysed in relation to these three concepts. The section that follows discusses the physiological functions of taste in Akan.

4.2.1 The Physiological Functions of Taste in Akan

The physiological aspect of taste deals with the basic role of taste which is generally described as perception through the mouth— the natural way in identifying the preference of flavours of foods in the mouth. The section that follows discusses the various taste flavours in Akan beginning with the pleasant taste.

4.2.1.1 Dɛ̀ẁ – Pleasant Taste in Akan

The *dɛ̀ẁ* 'pleasant' taste expressions have various meanings-- the basic function, and the extended meanings or the metaphorical meanings. The usage of *dɛ̀ẁ* 'pleasant' can be grouped into three (3) broad areas: (1) what is perceived through the mouth and the tongue, (2) what is perceived through emotions or inner bodily feelings, (3) what is perceived through the pleasure in participating in activities.

The core function of *dɛ̀ẁ* 'pleasant' taste has to do with the expression of feelings for a preference of sweet and pleasant flavours perceived in the mouth, on the tongue and in the throat when it comes into contact with edible entities. The core

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receptor organs, the mouth, throat and the tongue, illustrate the sweet and pleasant taste experiences.

4.2.1.2 Dɛ̀ẁ – Pleasant Taste + Sugary

This section discusses one of the meanings of *dɛ̀ẁ*, the sugary type. The taste category *dɛ̀ẁ* 'pleasant' is generally associated with edible entities and select only animate argument as the percipient of the taste. In its general use, *dɛ̀ẁ* is inherently expressed as the concept of pleasant taste. The sweet taste is naturally realised by the taste receptors because the taste is inherently in the objects. Examples of such objects include *ésíkyìré* 'sugar', *èwó* 'honey', *àhwér* 'sugar cane', *àbrɔ̀bɛ́* 'pineapple'(very ripped) etc. The expressions used to describe these sweet objects are; *dɛ̀ẁ*, (other variants of *dɛ̀ẁ* - *dɛ̀ɛ̀dɛ́ẁ*, *dɛ̀dɛ̀ɛ̀dɛ́ẁ*), *dɔ́kɔ́dɔ́kɔ́*, *fénémfénémń* (these two specifically represent extremely sugary taste), and sometimes the use of phrase like *ésíkyìré wɔ̀ mú* 'there is much sugar'. Examples are illustrated in (1) and (2) below:

1. Ésíkyìré yɛ̀ **dɛ̀ẁ**
   sugar be sweet
   'Sugar is sweet.' (ADJAMPSP1)

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2. Èwó yɛ̀ **dɛ̀ẁ**

   honey be sweet

   'Honey is sweet.' (ADJAMPSP1)

In examples (1) and (2) sugar and honey are sweet by nature and their sugary state does not change. The percipient's experiences of ascertaining the sweet taste can be described in various degrees of perception. Thus it depends on the percipient's sense of reaction towards the perceived object; so we can say that the perception of taste is relative to the perceiver. In examples (1) and (2), the sweet taste was perceived through the receptor's mouth, tongue and throat. The NPs sugar and honey serve as pleasant sweeteners in foods and drinks. Sugar and honey by their nature are considered sweet and for that reason their sugary content will always be maintained. However, it can be noted that sugar cannot be the only determinant to measure sweet taste. This is due to the fact that taste preference varies from person to person.

In the case of fruits or crops which naturally have sugary content and for that matter are considered to have sweet taste such as *àhwér* 'sugar cane', *àbòrɔ̀bɛ́* 'pineapple', *brɔ̀sówˋ* 'pawpaw' and *màngó*, they are pleasant to taste. Even this preference in taste will vary from percipient to percipient, in that each percipient's orientation towards the choice of these fruits might differ. Some psychological alignment might not allow them to identify these fruits as sweet or some might also specify the level of the sweetness in these fruit as either excessive or even moderate.

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In some context, where the reactant or the percipient of the stimulus wants to confirm extremely sweet pleasant taste, the other forms of *dɛ̀w* such as *dɔ́kɔ́dɔ́kɔ́*, and *fénémféném*, are used. Some plants that can be described as such are: synsepalum dulcificum or miraculous berry— *àtàwá /àt*àá*bá*, and Spondias mombin/yellow mombin/hog plum, i.e. sweet-scented fruit— *às*àá*wá*, fruit juice, chocolate, milk and other drinks that have extremely sugary taste. Below are some examples.

3. Ǹsá nó yɛ **dɔ́kɔ́dɔ́kɔ́**
   drink DEF be sweet
   'The drink tastes very sweet.' (ABAK SP 2)

4. Àtàábá nó mù yɛ **fénémféném**
   fruit DEF inside be sweet
   'The fruit is extremely sweet.' = (*àtáábá* 'miraculous berry'- Synsepalum dulcificum) (ATASP 3)

The taste *dɔ́kɔ́dɔ́kɔ́*, and *fénémféném* represent the state in which we can find the drink and the fruit as illustrated in examples (3) and (4). These two specifically represent sugary taste. In some situations, *dɔ́kɔ́dɔ́kɔ́* can be used to represent enormously sugary taste experience. Sometimes, a phrase like *ésíkyìré wɔ́ mú* 'there is much sugar' can be used to describe objects that have sugary substances.

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4.2.1.3 Dɛ̀ẁ –Non-Sugary Pleasant Taste

In some instances, *dɛ́ẁ* 'pleasant' taste can be identified without necessarily having sugary substances, though associated with food-related objects. These are described as non-sugary *dɛ̀ẁ* 'pleasant' experiences. The pleasantness is determined by the percipient's own psychological orientations and what they examine as pleasant in the foods. Examples are illustrated in (5 – 7) below:

5. Èdzìbàń nó yɛ̀ **dɛ̀ẁ**
   food DEF be tasty
   'The food is tasty.' (ADJAMPSP1)

6. Ǹkwáń nó yɛ̀ **dɛ̀ẁ**
   soup DEF be tasty
   'The soup is tasty.' (ADJAMPSP1)

7. Èdzìbàń nó né ńká yɛ̀ hùàm̀;
   food DEF 3SG.POSS aroma be pleasant
   ɔ̀-bɛ́-yɛ́ **dɛ̀ẁ**
   3SG.SUBJ-FUT-be tasty
   'The aroma of the food is pleasant; it must be tasty.' (ADJAMPSP1)

In the above examples, the Experiencer is always animate [+ human] who possesses the ability to reveal the taste. In (5) and (6), the experiencer is covertly expressed.

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The taster or the Experiencer exhibits mental realisation of pleasantness relative to so many factors they may consider in judging the taste of the food— maybe the ingredients used or how the person prepared it. Where the food is very delicious, the reduplicated form *dɛ́ɛ́dɛ́ɛ́dɛ́ẃ* of the taste category *dɛ́ẃ* is used to express that.

In (7), the percipient makes a prediction on how the food will taste good based on the smell they identify. This time, the aroma becomes a factor in judging how a food will taste good. Thus, the sense of smell can be said to have influence on our taste practices. The satisfaction perceivers get in smelling good aroma of foods can help identify taste in foods. This idea is supported by Djordjevic et al. (2004:199) who mention that "odour-specific effect on taste perception is an authentic perceptual phenomenon… [thus] the notion that odour-induced changes in taste perception are mediated centrally". This shows that odour signals impact on our taste descriptions.

4.2.1.4 The Stimulus Notion of Determining Good Taste

A stimulant like salt[10] also plays a major role in determining tastes of food. Without it the food is not seen to be tasty. Below is an example:

[10]Salt is salty (where there is too much salt), sea is salty and lagoon is salty; the taste of sea and lagoon was used to describe salt because salt is prepared from these two waters. In view of this, salt does not lose its taste like sugar does.

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8. Mè –dzè	ǹkyéń	tò	èdzìbàń		mù	â,		
1SG.SUBJ-take	salt	put	food		inside	CCM		
mé-**tsè**	né		**dɛ́ẃ**,	sɛ̀		ǹkyéń	ǹǹyí	mú
1SG.SUBJ-hear	3SG.POSS		taste	COND		salt	NEG	inside
â	mè-ǹǹ-**tsé**			né		**dɛ́ẃ**		
CCM	1SG.SUBJ-NEG-hear			3SG.POSS		taste		

'When I add salt to (my) food, I feel its good taste, but when there is no salt in it, I don't get its good taste.' (ABAK SP2)

In example (8), the percipient is suggesting that in cooked foods it is the addition of salt that gives taste to food. In this situation the stimulant becomes the indicator for identification of good taste. Even in sugar-based foods where it is supposed to taste sweet, some percipients would still require the presence of salt as a stimulant to measure the taste in the food. This is expressed in the example (9) below:

9. Ésíkyìré	yɛ̀	dɛ̀ẁ	dàdà	nà		
sugar	be	sweet	already	CONJ		
sɛ̀	m-à-m̀m̀-fá		ǹkyéń			
COND	ISG.SUBJ-PERF-NEG-take		salt			
à-ǹǹ-ká	hó	wɔ̀	édzìbàń	mù	à	
PERF-NEG-add	self	at	food	inside	CCM	
ɔ̀-ǹǹ-yɛ́	dɛ̀ẁ					
3SG.SUBJ-NEG-be	tasty.					

'Sugar is already sweet but if I don't add salt to it, it will not give it the good taste that it should have.' (ABAK SP 2)

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In example (9), though salt is salty and sugar is sweet, the percipient indicates that the stimulant, the salt, makes food tasty. This is a clear evidence that *dɛ̀ẁ* as used in example (9) is not necessarily about sweetness.

Another situation is salted fish, *mɔ̀mɔ̀é*. It has varieties depending on the processes it undergoes during the curing (salt preservation). Examples include— *kàkó, kóóbí, súpà, àtsɛ̀nkwáń, ɔ̀hyéé, frófósí, ɔ̀tsɛ̀ mú â ɔ̀dà mú* (all these are kinds of salted fish and are described as salty). It plays the role of a stimulant in cooked foods, especially stews prepared with palm oil. Though the salted (cured) fish has unpleasant scent (it does have bad scent or bad odour) in adding it to stews, it gives it a good taste. It also has appetising flavour that gives the percipient the urge to eat that stew. An example is shown in (10) below:

10.	Mɔ̀mɔ̀é	bɔ̀ǹ	nàásò	ɔ̀-mà	édzìbàń
	salted.fish	smell.bad	but	3SG.SUBJ-give	food
	yɛ̀	**dɛ̀ẁ**			
	be	tasty			

‘Salted fish smells bad, yet, it gives food a good taste.’ (KYSP4)

In example (10), the salt as a stimulant was used to change the nature and taste of the fish— *mɔ̀mɔ̀é. Mɔ̀mɔ̀é* ‘salted fish’ displays the nature of a fish that is salted. This makes the fish taste salty because a lot of salt is added to it. When this is done it gives the fish an unpleasant scent, a kind of smell but it still gives satisfying taste

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to such stews. This happens in most Ghanaian cultures where *mɔ̀mɔ̀é* is added to most palm oil related dishes. However, it is only fish and beef that can be salted to give taste to stews and soups respectively. Also, pork (pig meat) can also be salted into bacon or ham. Poultry and other animal meat can actually be salted in principle but they are not in our context (Akan). In a divergent, since socio-cultural backgrounds differ it is likely that poultry products may be salted in certain cultures which needs further probing.

4.2.2 Extended Meanings of Dɛ̀ẁ - Pleasant Taste

4.2.2.1 Dɛ̀ẁ - Pleasant Taste Perceived through Emotions or Bodily Feelings.

The second major function of *dɛ̀ẁ* 'pleasant' taste is achieved through emotions. In these constructions, the grammatical subject though selects animate argument [+human] as the percipient of the taste; however, the objects that are being perceived can be both inanimate and animate entities. The results observed in this second category are mostly that of satisfaction experience. Here are some examples:

11. M̀fràmá nó yɛ̀ **dɛ̀ẁ**

air DEF be pleasant

'The air is so refreshing.' (KYSP 4)

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12. Ǹsú nó yɛ̀ **dɛ̀ẁ**

water DEF be pleasant

'The water is refreshing.' (KYSP 4)

13. Àwàɾ́ yɛ̀ **dɛ̀ẁ**

marriage be pleasant

'Marriage is sweet.' (ABAK SP 2)

14. Nyímpá yɛ̀ **dɛ̀ẁ**

human being be pleasant

'Human beings are so sweet (to live with).' (ABAK SP 2)

15. Né twɛ́ yɛ̀ **dɛ̀ẁ**

3SG.POSS vagina be sweet

'Her vagina is sweet.' (KYSP 1)

In (11) - (15), the grammatical subjects select [+ human] entities as the percipients but then the perceived objects vary. In examples (11), (12), & (13) the objects being perceived are inanimate entities but in (14) & (15) the perceived object is [+ human, + animate] entity.

In experiencing the *m̀fr̀ámá,* 'air', in (11), the perceiver gets comfort from enjoying the air. The whole human body experiences the physical actions of the air. The blowing of the air becomes the source from which the percipients perceive joy or

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the feelings they get from the activities of the perceived object. The experience is so pleasant that they associate or represent it with sweet taste - *m̀frám̀á nó yɛ̀ dɛ̀ẁ*.

In (12), the refreshing experience the percipient gets from drinking the water or bathing enables him/her to describe the experience as pleasant. The refreshing experience may be associated with many factors that emanate from the brain – people associate chilled water drunk in warm weather as satisfying, or quenching one's thirst with water; which also portrays a refreshing experience. Again, when people take a cool bath in a warm afternoon, the experience they get also allows them to say *ǹsú nó yɛ̀ dɛ̀ẁ*. This experience could also be in the context of swimming. The joy and refreshing moments the water provides give pleasures; these experiences are described as pleasant and enjoyable.

Examples (13) and (14) engage percipients in direct contact activities. Thus, there is face to face personal interaction between the speakers. The subjects and the objects happen to have intimate relations. The objects being perceived in both examples too have social connotations. Mutual understanding, direct contact activities, and other relational factors come into play. When that happens the situation or the experiences obtained from the relationship is seen to be pleasant – perfect understanding, care, protection, sexual satisfaction, good interpersonal relationships, good communication skills, financial satisfaction and so on. When either parties or percipients are well satisfied with these factors and many more, then they can equate the experiences of the state of marriage and the relationship the

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perceived objects give as pleasant or enjoyable or satisfactory. This gives the percipients the joy to describe the state they find themselves in as pleasant. It is more of emotive feelings. This type of experience is more of human relationship [+ human + animate].

In example (15), the object being perceived is the human sexual organ. If the percipient is a male and gets satisfaction from the sex act, he can mention the name of the perceived object, the female organ, to be pleasant. On the other hand, if the percipient, the female, enjoys sexual satisfaction in a sex act she can label the male sex organ to be a pleasant entity. The body organs that are used to perceive the taste are the *kɔ́tsè* and *twé* 'penis' and 'vagina', respectively. In (15) the contact experience and the satisfaction the reactant gets from the sex act allowed him to express the joy he had from the female sex organ (the vagina) , literally, as pleasant experience. Other examples include *ǹdwómɨ́ nó yé dɛ̀ẁ* the song is melodious'.

4.2.2.2 Dɛ̀ẁ - Pleasant Taste Perceived through the Pleasure in Participating in Activities.

With the third major function of *dɛ̀ẁ* 'pleasant' taste, the percipients (the grammatical subjects) are always [+ human] entities but the objects are inanimate (some are anthropomorphic in nature) entities. The taste experience demonstrated in this third category is typically that of satisfaction and joyful experiences in terms

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of inner fulfillment the percipients get. Here, there is direct involvement of the subject and the way they participate in or how the activity is carried out to their satisfaction gives them the joy in expressing inner satisfaction towards it. Here are some examples:

16. Àsɔ́ŕ yɛ́-è **dɛ̀ẁ**
church be-COMPL pleasant
'Church was exciting.' (ABAK SP 3)

17. Ḿ-búùkùú á-kèǹ-káń yɛ̀ **dɛ̀ẁ**
PL.book NOM-REDUP-read be pleasant
'Reading is pleasant.' (ATASP 3)

18. Àkwáńtú yɛ̀ **dɛ̀ẁ**
travelling be pleasant
'Travelling is interesting.' (ATASP 2)

In examples (16-18) above, the perceivers get themselves involved in the activities. There is no physical direct contact with the perceived object. However, their involvement in the activities or how the activities are carried out, determines the joy of it; a pleasant experience and a beneficial one to the percipient.

In example (16) for instance, the joy that the perceiver gets in attending church may be due to so many factors such as the preaching of the word, the scripture readings, the drumming aspect, number of people who attended the church

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and other factors the percipient may use to measure the joy that he/she had in attending church that day. These factors enable them to remark that attending church is enjoyable, joyous or interesting equating it to the pleasant taste, a metaphorical notion

In (17) and (18), the joy or satisfactions they get from reading books and the passion they get from travelling allow them to express their joy towards the activities. Other things we can associate this kind of taste with are *ànànsèsém* 'story telling', *skúúl* 'school', *fìé* 'living in a house', *ǹdá* 'sleep', sìká 'money, *àsáẃ* 'dance' and *àgóŕ* 'play activities' – football, *lùdù, àmpé,* etc.

4.2.3 Salty Taste

An edible entity that tastes salty would have excessive salt. Again, the perception of this taste is user perspective. Though it was understood earlier that salt can be used as stimulant in perceiving pleasant taste in foods, it was also realised that salt can be used to cure fish (stinking fish) which also adds flavour to food prepared with palm oils. In the case of curing fish, a lot of salt is used to do that and that helps in the treatment but when salt becomes excessive in foods it makes the food salty. In Akan (Mfantse) this is expressed as *nkyèǹ* or *nkyèńkyèǹ* (reduplicated form). Even this, the kind of expression of taste is relative to the perceiver.

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19.	Ǹkwáń	nó	yɛ̀	**ǹkyèǹ**
	soup	DEF	be	salt

'The soup is salty.' (ATASP 2)

The taste as expressed in example (19) shows that the salt was used in excess in the food. This condition does not give comfort to the percipients when that sensation is felt. In the very extreme case of the expression of salty taste, the reduplicated form is used. Again, this taste expression might be idiosyncratic to the perceivers. This may apply to all the taste expressions in the language. An example is illustrated below:

	Basic form	reduplication	re-reduplication
20.	ǹkyèǹ 'salty'	ǹkyèńkyéń	ǹkyèńkyéńńkyéń

In example (20), if there is excessive salt in a food, it can be described as salty. This description is expressed through the use of the reduplication of the root word *ǹkyèǹ* 'salty' as indicated in (20) above. Depending on the percipient's taste bud, the expression of excess use of salty may be either extremely salty to one percipient (*ǹkyèńkyéń)* or exceptionally salty (*ǹkyèńkyèǹǹkyèń*) to another. It can be inferred from these discussions that the taste is on the tongue of the taster who perceives the taste. It is noted that in the expression of these taste the noun *ǹkyèǹ* is reduplicated into an adjective. Osam (1999) goes along this tangent of reduplicating nouns to form adjectives, suggesting how widespread this is.

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4.2.4 Sour Taste

We can also have situations where the food can taste sour; *kàẁ, fèm̀,* and *yèrèyèrèẁ*. These are the sour expressions used in Akan to illustrate sour taste. Each of these examples is used in the language depending on which referent is being described. That is, the referent determines the kind of sour type identified. These referents could be described to have circumstantial taste in relation to the taste the referents exhibit. They can also demonstrate both transitive and intransitive constructions.

Syntactically, these sour terms can co-occur with [+ human] and inanimate entities as grammatical subjects and objects. Semantically, percipients involved in the perceptual events are principally human referents. These properties will be addressed in the individual sour terms as the discussions go on.

Kàẁ 'sour - astringent', mostly, relates to foods which are prepared from maize/corn dough. This dough goes through days of fermentation before it is used. In Akan, foods that ferment are described as *kàẁ* 'sour'; so, the sourness comes with the fermented process and this taste reflects in both the cooked and uncooked products. Examples of foods that can be associated with this sour taste include; *bánkú/ètséẃ, Gà* kenkey, Mfantse *dɔ́kɔ́ǹ*, 'cooked corn dough in different forms', and *m̀bɔ̀ŕ kókó* 'maize porridge'. Apart from the fermented characteristics, some citrus fruits can also be described as having *kàẁ* 'sour' taste. Some examples include

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èkùtú 'orange' and *ànkàmá* 'lemon/lime'. Some illustrations of *kàẁ* 'sour' are shown below:

21a. M̀bɔ́ɾ́ nó **kàẁ**
corn dough DEF sour
'The corn dough tastes sour.' (ADJAMP SP2)

21b. Mfantse-dɔ́kóń nó **kàẁ** m'-ádàdàẁ mú
Mfantse-kenkey DEF sour 1SG.POSS-jawbones inside
'The Mfantse kenkey tastes sour in my jawbones.' (ADJAMP SP2)

In (21), the sour expression *kàẁ* 'sour' selects for its arguments *m̀bɔ́ɾ́* 'corn dough' (uncooked) and *dɔ́kóń* (cooked). The percipients [+ human referents] perceive the corn dough and *dɔ́kóń* (the perceived objects) to exhibit fermented taste. This, they describe as kàẁ 'sour', an astringent kind of feeling in the mouth. The construction in (21a) demonstrates intransitive constructions while (21b) illustrates transitive construction.

Fèm̀ 'sour' is another sour term used to describe sour taste in Akan. It involves a type of sour taste that sets the teeth on edge. It is associated with foods that contain high acidic content. This acidic content normally exhibits such sour taste that sets the teeth on edge when eaten. Foods that exhibit acidic taste include *èkùtú* 'orange', *ànkàmá* 'lemon/lime' and *àdásémáábá* 'African star fruit' (chrysophyllum albidum commonly known as white apple).

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22a. Èkùtú nó **fèm̀** **sé**

orange DEF sour teeth

'The orange sets teeth on edge.' (DWSP 2)

22b. Né sé **fém- èè** béŕ â

3SG.POSS. teeth sour-COMPL time REL

ɔ́-nóm̀-m̀ àǹkàmá nó

3SG.SUBJ-drink-COMPL lemon DEF

'His/her teeth were set on edge when he/she drank the lemon.'

In the context of (22), the sour taste is identified through acidic content. All the sour sensations in (22) set the percipients' teeth on edge because the sourness is related to the level of acidity in the orange and the lemon.

In some context, some of the acidic/citrus fruits can be described using terms; *kàẁ, fèm̀, and bìsììẁ*. Such acidic fruits include; *àbrɔ̀bɛ́* 'pineapple', *ékùtú* 'orange', and *àdásémáábá* 'African star fruit' (chrysophyllum albidum commonly known as white apple). Some examples are shown below:

23a. Èkùtú nó **kàẁ**

orange DEF sour

'The orange tastes sour.' (DWSP 2)

23b. Àdásémáábá no à-**fèm̀** mé sé

African.star.fruit DEF PERF-sour 1SG.POSS teeth

nó mú **kàẁ** dódòẁ, á-mà

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3SG.POSS	inside	sour	really	PERF-CAUS
m̀'-énúm̀		á-yɛ̀	**bìsìì̀ẁ**	
3SG.POSS-mouth		PERF-be	sour	

'The African star fruit has set my teeth on edge; it is really sour and has made my mouth sour.'

The different sour taste terms co-occur in the complex construction in example (23). The percipients identify the sour taste sensations of the perceived objects to be displaying the following sour tastes; *kàẁ, fèm̀* and *bìsìì̀ẁ*. The taste condition being shown in (23) is not a pleasant one. Thus, the percipients perception could be that of an unwarranted one. In some situations where there is excessive acidic content, the percipients at this point cannot withstand the kind of sour taste (astringent) in the mouth the object of perception exhibit. These two constructions demonstrate both intransitive and transitive structures respectively.

The sour taste *yèrɛ̀yèrɛ̀ẁ* 'sour' depicts pungent (that relates to a very strong and sharp taste) taste sensation. Thus, the object releases strong sharp taste normally described as unpleasant. In view of these foods that exhibit this kind of taste are described as *yèrɛ̀yèrɛ̀ẁ* 'sour – pungent'. This taste is associated with so many foods such as stews, excessive salt in foods and some acidic foods. Some examples are illustrated in (24).

24a. Tòmáǹtsèsè	frɔ̀wèé	nó	mù	túḿ	yɛ̀
tomato	stew	3SG.POSS	inside	ability	be
yèrɛ̀ẁyèrɛ̀ẁ					

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sour

'A tomato stew could taste sour– pungent.'

24b.	Àǹkàmá	nó	mú	yɛ́	**yèrɛ̀wyèrɛ̀w**
	lime/lemon	3SG.POSS	inside	be	sour

'The lime tastes sour – pungent.' (KYA SP 2)

The *yèrɛ̀yèrɛ̀w* taste exhibited in (24a) and (24b) do not have the same predictable substance though they have the same taste sensation descriptions. In (24a) the predictable factors in measuring the *yèrɛ̀yèrɛ̀w* 'sour' taste might be due to excessive additives or spices added to the stew that might cause that taste. If the percipients notice such substances, they might describe the taste as *yèrɛ̀yèrɛ̀w*. In (24b) the acidic substance allows some percipients to describe the lime as exhibiting *yèrɛ̀yèrɛ̀w* taste.

It could be noted from the discussions that the sour taste experiences percipients perceived from objects are based on properties that perceived object exhibit. These predictable substances the perceived objects display may be critical from percipient to percipient and the judgement on each sour taste type may be based on the percipient's taste buds experience.

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4.2.5 Bitter Taste

Some edible entities can exhibit bitter taste – *wèǹ*. Some green plants that are edible, traditional plant medicines and some fruits are normally associated with bitter taste in the language. Examples are illustrated here.

25. Ábóódéè èdúŕ nó yɛ̀ **wèǹ**

neem.tree medicine DEF be bitter

'The neem tree medicine tastes bitter.' (Neem tree - Azadirachta indica) (ATASP 4)

26. Bɔ̀wéń àhàbáń yɛ̀ **wèǹ**

bitter leave be bitter

'Bitter leaf is bitter.' (ATASP 4)

27. Bèsé yɛ̀ **wèǹ**

kola.nut be bitter

'Kola nut is bitter.' (ATASP 4)

In the language, plant medicines or majority of traditional medicines prepared from plants, some foods and other orthodox drugs are perceived to have bitter taste. Some examples are shown in examples (25) to (27). All the objects being perceived in examples (25) to (27) are by nature bitter so there is no way they can taste differently apart from their original bitter taste. However, in some foods, some seasonings that are added to the food can cause the food to taste bitter. In the very extreme case of

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a particular bitter taste, the reduplicated form is used. Examples are illustrated below:

	Basic form	reduplication	re-reduplication
28.	wèǹ ‘bitter’	wèéwéń	wèéwééwéń

In example (28), if there is excess expression of bitterness of an entity, it can be described as *wèéwéń* or *wèéwééwéń*. This taste is expressed through reduplication of the root word *wèǹ* ‘bitter’; indicating the great bitter nature of the entity. The variations that come with this taste experience depend on percipients’ taste buds and their orientation towards bitter taste. How one expresses extreme bitter taste will definitely be different from another percipient. That is, what might be bitter with one percipient will not be bitter for the other. So the expression of extremely bitter to one percipient (*wèéwéń*) or unusually bitter (*wèéwééwéń*) varies. This manifestation of taste varies from percipient to percipient in terms of their perception towards their preference to bitter taste.

4.2.6 Insipid/Bland Taste

Akan has additional taste form; that is, *táblábáá* ‘bland’ which means a taste devoid of any taste. That is, this taste neither shows sweet, bitter, salty, pleasant, nor sour taste. For instance, when there is absence of salt, pepper and other seasonings in a

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cooked food, we describe that kind of taste as *táblábáá,* just tasteless. An example is shown below:

29. Ǹkwáń nó yɛ̀ **táblábáá**
soup DEF be bland
'The soup is tasteless.' (ASB SP 2)

30. Ǹfàǹtsè-dɔ́kóń yɛ̀ **táblábáá**
Mfantse-kenkey be bland
'Mfantse kenkey is tasteless.' (ASB SP 2)

In (29) and (30), the taste form *táblábáá* as used in the constructions shows that the soup and the kenkey exhibit tasteless perception. The percipients describe this taste as bland or tasteless. Consequently, the percipients in these constructions anticipated to identify some additives or substance to be present in the food. Especially, the percipients expected to recognise a good blend of salt and sugar in liquid foods (porridges); in soups and in solid foods may be salt and pepper or certain additives. However, since these additives were not present, they considered the food to exhibit bland taste. It should be realised that different kinds of foods taste differently as well as the various additives that are added. This depends largely on the percipient's mental processing.

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4.2.7 Congealing Taste

Another taste form that Akan realises is the taste expressing congelation – *dà énúm*. This taste is normally associated with oily foods. When the ingredients used in preparing the oils get spoilt before they are used, the finished product of the oil tends to exhibit the congealing taste. Thus, the state of palm-oil congealing in the mouth while eating sauce prepared with it (it is heavy on the tongue).

An example is shown in (31) below:

31. Ngó nó **dà** **ènúḿ**
palm oil DEF lie mouth
'The palm oil congeals in the mouth.' (AMADJ SP 2)

In example (31) the percipient is indicating that the palm oil congeals in the mouth. This means as they tasted the oil, this congealing feeling was perceived. As explained earlier, this perception can be aligned to the fact that the nuts used in preparing the food were spoilt and not fresh and that this affected the resultant product, the oil, which exhibits this kind of taste. The taste is normally experienced when the stew or the food is cold unlike in its warm state. Other oils kept for long duration develop such congealing taste.

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4.3 Metaphorical Extensions of Taste Expressions in Akan

Gibbs et al. (2004) observe that metaphors are grounded in embodied experiences and they display the line of our thought. This shows that there is a connection between the embodied world and our understanding of things in the world.

Agyekum (2005:147) also points out that metaphors are "conceptually grounded on "physical and mental experiences." Thus, in every aspect of human life in terms of feelings, state of mind, beliefs and practices, metaphorical contributions are central.

Taste expressions can also demonstrate metaphorical meanings in Akan. These metaphors can be grouped under the five taste categories as well. Just as we saw a wider coverage of meanings in the physiological and extended meanings of pleasant taste, the same reflects the metaphorical meanings. Some of the taste metaphors are associated with the body parts such as *ànò/ènúḿ* 'mouth', *tsíŕ* 'head', *àsèn/sìsí* 'waist', *yáḿ* (yafun) 'stomach', and *hó* 'the body itself'

The sections that follow discuss some examples of metaphorical expressions of the sub-categories of taste. We begin with pleasant taste metaphors.

4.3.1 Pleasant Taste Metaphors in Akan

In this section, we illustrate some metaphorical concepts that relate to usage of pleasant taste in Akan. Metaphorical extensions of pleasant taste may connote

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flattering, pleasant feelings, persuasion, passing stool often, character traits, sexual stimulation and having lots of money. We show some examples below:

32. Né tsír mù yɛ̀ nò **dɛ̀ẁ**
3SG.POSS head inside be 3SG.OBJ pleasant
'S/he is pampered.' (ABSP 4)

33. N'-énúḿ ásɛ́ḿ yɛ̀ **dɛ̀ẁ**
3SG.POSS-mouth speech be pleasant
'S/he speaks well.' (ABSP 3)

34. Nó hó yɛ̀ nò **dɛ̀ẁ**
3SG.POSS self be DEF pleasant
'S/he is easily aroused sexually.' (ATASP 3)

All the examples in (32–34) discuss pleasant taste in relation to socio-physical and mental experiences. These examples demonstrate the bodily states in which we find the objects in question. Each example codes different meaning through different body part (32) head, (33) mouth and (34) the body itself. Some of the examples may express character traits or personal behaviours and emotional experiences of the perceived objects. These traits may connote either positive or negative idiosyncrasies of the person in relation to the cultural values members of Akan community have placed on behaviours in general. The connotations come about due

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to the "cognitive realizations of using the body as a concrete entity to comment on emotions, physical states and abstract notions" (Agyekum 2018: 253).

The percipient identifies the perceived object in (32) as someone who wants attention or seeks out care. This human trait occurs with younger people seeking attention from older people; this may typically be that case but certainly not exclusive. Sometimes these perceived objects needed to be provided some upkeep that comes in so many forms depending on the events, situations and the people involved. So, behaviours that can be described as 'head inside sweet' — pampered vary from person to person and that can be contextual. According to Agyekum (2018), the locative marker *mù* 'inside' in the construction shows that the experience that happens or goes on in the head is an imperceptible event and for that matter connects to our biological and psychological orientations — pleasant (the concrete domain). No one sees what goes on in the head, making the person feel good (pleasant) about his/her attitude. The 'pleasantness' is demonstrated in the behaviours (the concrete experiences) they put up which unearth the abstract events that go on in the head. The abstract event is then mapped unto the behaviours they exhibit which perceivers can identify to be an attitude of pampering.

The locative marker indicates that there is a place in the head of the perceived object that displays pleasant things like pleasure, self-satisfaction, enjoyment of material things and many more which makes them feel better than other people.

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The expression in example (33) may be seen to also express either positive or negative senses. In Akan, utterances are assessed in line with cultural values. So whatever values society places on a particular utterance renders it either positive or negative. The context in (33) may either mean the speaker speaks fluently, sounds flattering or speaks softly and gently. These expressions are subject to the percipient's psychological orientation towards what he/she hears. The percipient's mental construal will determine what kind of message the object is portraying by assessing it to be positive or negative. In (33), the concept of pleasantness, the abstract event and the source domain is connected to how the perceived object speaks or utterances that they utter *ásɛ̀m* 'speech' — the concrete event. That is, the manner in which the speech is expressed exhibits the pleasantness; the how and the context in which the speech is expressed may connote the various semantic expressions of flattering, bragging or speaking gently.

Example (34) is a character trait expression which depicts negative character of the person in the context of values of the Akan culture, as agreed or rejected by members of the community. According to Agyekum (2018: 248-249) the word *ho* 'self' in Akan refers to "the entire body- bodily state (that is, the personality, behaviour, emotion, social and mental realisations".) He explains that Akans sometimes use *ho* 'self' to express some abstract and emotive concepts in the language. Also, *ho* 'self' can be used to demonstrate varied conceptual meanings in relation to the body. So in example (34), there is a correlation between pleasantness

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and the entire body *ho* 'self'. The abstract notion of pleasantness (source domain) is mapped onto the entire body which connotes sexual likeness in the Akan. Another version of the expression in (34) is illustrated in (35) below:

35.	N'-áséń	mù	yɛ̀	nò	**dɛ̀ẁ**
	3SG.POSS-waist	inside	be	DEF	pleasant
	'S/he likes sex.'				

Example (35) is expressing euphemism—idiomatic expression where the experience demonstrated by the perceived object is likened to sex). It is a character trait behaviour used to describe such participants. The experiencer demonstrates some sexual behavioural characteristics which allow percipients to describe them so. The inference of their behaviour is what is equated to sex. The perceiver finds the perceived objects to be associated with someone who happens to enjoy sex a lot due to some experiences they exhibit. Their emotional feelings towards sex are connected to their enjoyment in doing it habitually (pleasantness). The sexual emotional feelings or experience in the waist—*ásén mù* (pleasantness — source domain), the abstract activity which we cannot see physically stimulates the perceived object to go in for sex — the target experience. The pleasantness is aligned to the waist since the sexual activity is connected to that body part. The abstract event is then mapped unto the behaviours they exhibit which perceivers can identify to be sexually active.

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In another context when the perfective marker is added to the verb of the same expression as shown in example (36), the context changes from the notion of 'self-loved' to the notion of someone who has gotten enough money on them.

36. Nó	hó	á-yɛ̀	**dɛ̀ẁ**
3SG.POSS	self	PERF-be	pleasant

'S/he has money on them.'

In example (36), the taste expression is referring to having enough money. The percipient is identified to having lots of money; the concept of money and pleasantness are different but the idea about what money can do is regarded in terms of pleasantness. Thus, when we think of enjoyment, joy, love, and power associated with pleasantness we can also think of money conveying the same impressions. Here, the basic idea of having money is embedded in the expression *hò àyɛ̀ dɛ̀w* 'self becoming pleasant'. Thus, having money gives access to a lot of pleasurable activities. The abstract meaning of pleasantness is understood in relation to a concrete domain of having money. Thus, the chracteristics of the concept in the source domain—pleasantness is transferred to the target domain— money.

Another notion of pleasantness is linked to the notion of passing stool frequently (diarrhoea) and lies. Examples are illustrated in (37) & (38) below:

37. Né	sìsì	mú	á-yɛ̀	nò	**dɔ́kɔ́dɔ́kɔ́**
3SG.POSS	waist	inside	PERF-be	DEF	sugary

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'S/he has been passing stool frequently.' (Lit.: His/Her waist inside has become sweet) (ATAK SP 2)

38.	Né	tɛ̀kyèrɛmá	yɛ̀	**fénéḿfénéḿ**
	3SG.POSS	tongue	be	pleasant

'S/he is a liar.' (Lit.: His/Her tongue is sweet)

In (37), sweetness, the abstract notion —source domain is associated with a disease — diarrhoea (the target domain). In Akan, the activity leading to the condition (diarrhoea) of passing frequent stool is connected to sweetness in the waist. When the perceived object experiences the sense or feeling of wanting to pass stool in recurring manner, especially associated with children who pass continuous stool containing mucus, then the situation is described as sweetness in the pelvic bones. This sensation or the feeling to pass stool in recurring manner is referred to as sweet—the source domain and the target domain is the resulting experience of the passing of the frequent stool.

In example (38), the taste expression *fénéḿfénéḿ* 'extremely sweet taste' is referring to making a fallacious or incorrect statement; also, creating false impression. The perceived objects have the intent to deceive their listeners. Relating to extremely sweet taste *fénéḿfénéḿ*, the percipient identifies the perceived object's message to be extremely sweet to believe; an exaggerated statement, a hyperbole, in terms of pleasantness. Thus, when we think of fallacious, incorrect statement and creating false impression associated with extremely sweet taste we can also think of

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lies conveying the same impressions. Here, the basic idea of having lies is embedded in the expression *tɛ̀kyèrɛ́má yɛ̀ fénémfénémʹ* 'tongue becoming extremely sweet'. The abstract meaning of extremely sweet taste is understood in relation to a concrete domain of lies — creating false impression. Thus, the chracteristics of the concept in the Source domain— extremely sweet taste is transferred to the target domain— lies.

Sometime in a context where percipients want to indicate that perceptual views do not taste sweet, the negative marker in Akan *n/nn* is used to indicate that. Consequently, in the metaphorical sense, when we have such expressions the negative marker is attached to the taste expressions to convey the meanings. We illustrate some examples below:

39.	Né	ńkɔ̀m̀bɔ̀dzí	ǹǹ-yɛ́	**dɛ̀ẁ**
	3SG.POSS	conversation	NEG-be	pleasant

'Conversing with him/her is not interesting.'
(ATAK SP 2)

The expression in (39) refers to behaviour or attitudinal activity. The source event, pleasant is mapped unto the perceived object's way of conversing— that is the target domain. The abstract notion of pleasantness is associated with the manner in which the perceived object talks or converses; the aesthetic style which was expected from the talk was missing, rendering the event unexciting. The missing artistic style is what is equated to the unexciting conversation. Thus, the expression *né ńkɔ̀m̀bɔ̀ dzí*

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ǹǹyɛ́ dɛ̀ẁ literally could mean that the perceived object's conversation is bland or not tasteful; that is the conversation is not pleasurable. Other examples are shown in (40) below:

40a Àsɛ́m	â	í-rí-dzí	yí	ɔ̀-ǹǹ-yɛ́	
matter	REL	2SG.SUBJ-PROG-eat	DEM	3SG.SUBJ-NEG-be	
dɛ̀ẁ					
pleasant					

'The way you are presenting the case is just not good.'

40b. Àsɛ́m	â	é-ré-ká	yí	á-tó	mú	
matter	REL	2SG.SUBJ-PROG-say	DEM	PERF-put	inside	
ńkyéń						
salt.						

'What you are saying is exaggerated.' (Lit.: You've added salt to what you are saying)

The context in (40a) is relative and can be interpreted in so many ways. However, the basic meaning of this construction is that the perceived object is seen to be at fault in whatsoever he/she is doing. The percipient identifies the perceived object's utterances as not encouraging; that which lacks good flavour to satisfy the heart. Also, the percipient's interpretation of the perceived object's behavior will determine the meaning that should be ascribed to the context.

In (40b), the percipient identifies the perceived objects to be exaggerating on the issue they are presenting. Thus, the perceptive recognises that the objects

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might not be presenting exact information they are supposed to – thereby giving inaccurate evidence.

In example (40a) & (40b), the taste expressions are referring to concept of unfairness and inaccurate evidence, respectively. The concept of unfairness and inaccurate presentation are regarded in terms of taste relations; not pleasant and excessive salt conveying the same impressions. Here, the basic idea of showing unfairness (which can damage social interpersonal relationships) and presenting inaccurate issues are embedded in the expression *ɔ̀nnyɛ́ dɛ̀ẁ* 'it is not pleasant' and *à-tò mú ǹkyɛ̀ǹ,* 'putting in lots of salt'. The abstract meanings of not pleasant and excessive salt are understood in relation to a concrete domain of unfairness and illustrating inaccurate issues.

4.3.2 Metaphors of Bitterness in Akan

In expressing metaphors of bitterness in Akan, bitter taste expressions are used to describe arguments that refer to painful, hateful, distasteful, mocking, derisive, cynical, and intolerable flavours. Percipients may relate metaphors of bitterness to speeches that are described as 'sharp-tongued' comments. That is, the taste experience or sensations associated with the meanings of these words cannot display sweet, sour, salty or bland flavours. Thus, the notion of bitterness (which are hard to bear when taking them or have intense sensations which are difficult to stand) —

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the source domain is transferred to metaphors of bitterness to reflect the target domain experience. Something hateful, distasteful, mocking, derisive, cynical, intolerable and unpleasant is hard to bear or very painful. Sometimes it can lead to struggle, aggression, jealousy, antagonism and hatred when the notion expressed relates to [+human] entities are all mapped of metaphors of bitterness.

In Akan some taste expressions can reveal metaphors of bitterness experiences. These bitter metaphors are seen to connote negative events or unpleasant behaviours. Some of the bitter metaphors are associated with the body parts such as *ànó* 'mouth' and yám (yafun) 'stomach', while others are connected to other events in the world. An example is illustrated in (41) below:

41. Né yámù yɛ **wèǹ**
3SG.POSS stomach.inside be bitter
'S/he is stingy.' (ATAK SP 2)

According to Agyekum (2018:287), the activities of the stomach manifest realisations that are connected to the heart, womb, mind and chest. These realisations are revealed in the various bodily experiences. He also explains that Akans believe that "sicknesses, emotions, compassion and human values are believed to emanate from the stomach." These sentient experiences are exposed in the metaphors. In some cases the 'stomach is described as the CONTAINER FOR THE HEART' (that is, issues relating to emotions). For example, in (41), the

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stomach *yámù* 'the stomach' contains bitter experiences such as mean, ungenerous, grudges, hatred, harshness and the like. Thus the percipient identifies the perceived object to be demonstrating bitter experiences from the stomach which is not of a kind one. The bitter experience is connected to the event that does not depict kindness. So the source experience of bitterness is mapped unto the experiences he/she exhibit from the stomach. What the heart releases into the stomach is what the perceived object shows. Consequently, the bitter experience is not that pleasant; it connotes negative impressions. Agyekum (2018:293) confirms this in Twi, another dialect of Akan which uses the word "*ayamuɔnwono"* to refer to wicked-heartedness or cruelty, thus "BITTER STOMACH IS STINGINESS". This idea is also confirmed in Mfantse where someone can be described as being stingy — *àyámúwén* 'bitter stomach'.

Another way of expressing metaphors of bitterness is through the use of *ànó* 'the mouth'. The mouth represents the active experiencer object in taste activities as well as in communication. It is one of the active parts of the body that can demonstrate both good and undesirable experiences of the world. Mouth metaphors are prevalent in Akan and examples are illustrated in (42a-c) below:

42a. N'-ánò	yɛ	**wèǹ**
3SG.POSS-mouth	be	bitter
'S/he is foulmouthed.'		

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42b.	N'-ánò	kásá	ǹn-yɛ̀	**dɛ̀ẁ**
	3SG.POSS-mouth	speech	NEG-be	pleasant
	'S/he is foulmouthed.'			

42c.	N'-ánò	kásá	yɛ̀	**dɛ̀ẁ**
	3SG.POSS-mouth	speech	be	pleasant
	'S/he speaks well.'			

All the examples in (42a) and (42b) are associated with bitter experiences; the mouth is seen to carry issues that concern pain. That is, the source experience of bitterness is linked to the utterance of the perceived object which carries pain. In (42a), the perceived object conceptualises thought which is always seen to be that which discourages, disheartens, demoralises and is crushing. The bitter experience is mapped unto these behaviours which the perceived object demonstrates. Every speech he/she utters is not a good one but a bitter one. In a context where the percipients do not want to portray the bitter situation bluntly, they use the negative form to express the same bitter sentiments. This is demonstrated in (42b); the negative marker still explains the bitter notion. So the expression *ǹǹyɛ̀ dɛ̀ẁ* denotes unpleasant expression. The perceived object does not speak kind words that soothe or which are tasteful. The utterance is seen not to be sweet; it could be bitter, blunt, or other negative forms. In the same way the bitter or negative experience which is the source domain is mapped unto these behaviours which the perceived object demonstrates; the target domain.

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However, if the percipients want to mention that the perceived object speaks very well it can also be expressed using the mouth metaphor as shown in example (42c). An example of this was also discussed under sweet taste metaphor.

In extreme bitter experiences the reduplicated form of the verb *wèǹ* 'bitter' is used. Examples are illustrated in (43) & (44).

44. Ɔ̀bɨ́á nyé nó è-dzì nò
life be.with 3SG.OBJ PERF-eat 3SG.OBJ
wèé-wéé-wéń
REDUP-REDUP-bitter
'Life has not been kind to him/her.'

43. Àbáń ḿbɨ́á nyé nó é-dzì
government law be.with 3SG.OBJ PERF-eat
nò **wèé-wéé-wéń**
3SG.OBJ REDUP-REDUP-bitter
'The law has dealt with him/her ruthlessly.'

Examples (43) and (44) demonstrate metaphors of bitterness in which the experiences reveal perilous situations; this is indicated by the use of the reduplicated form of the verb *wèǹ* 'bitter' into *wèéwééwéń;* indicating the intensity of the bitter circumstances/conditions/ situations the perceived object has gone through. That is,

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the situation illustrates the intensity of bitter experience the perceived object has been involved in. In (43), the use of the reduplicated verb *wèéwééwéń* displays life's difficulties the perceived object has gone through. The conceptualisation of the notion of bitterness *wèéwééwéń* (the source domain) is compared with difficulties in life (i.e. the target domain). Thus, the notion of bitterness is mapped unto life's difficulties which recur in life as threatening issues which normally lead the perceived object in that condition to feel bitter. In (44), the bitter expression *wèéwééwéń* shows how the law of the country has punished the perceived object unduly and unfairly. The connotation of *wèéwééwéń* means the percipient expected a kind of pleasant treatment from the law. However, judgment that was given portrayed extreme penalty. In the same way, the notion of *wèéwééwéń* was transferred unto the judgment that was given and described as bitter experience. So we can describe this metaphor as BITTERNESS is Excessive/Difficult/Offensive/Intensive etc. The next section discusses sour metaphor expressions in Akan.

4.3.3 Metaphors of Sourness

Another taste metaphor is a metaphor that expresses sourness. Sour taste expressions are used to refer to events that denote sense of regret, disappointment, shocking,

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awful and distress. These metaphors are not really predominant in the language. Some examples are illustrated in (45) & (46) below:

44.	Mé	sè	á-**fèm̀**	wɔ̀	àsɛ́ḿ	nó	hó
	1SG.POSS	teeth	PERF.sour	at	issue	3SG.POSS	self

'I am astonished about the matter.'

45.	Nó	-hó	**kàẁ**	pápá
	3SG.POSS	self	sour	well

'S/he stinks.'

In example (45), having sour teeth *(se afem)* experience or sensation connotes signs of regret, disappointment or unexpected behaviour, or a surprise. The surprise could be positive or negative; in this case it is a negative surprise. Thus, the notion of sour— the source domain is transferred to the condition that was unexpected— the target domain experience. Something unexpected becomes surprising or puzzling. It can sometimes lead to a failure or disillusionment. In (46), however, the metaphor of sourness refers to extremely awful body odour on the part of the perceived object. The percipient perceives sour taste *kaw* 'sour' to depict extremely bad body odour. The notion of sour taste is now transferred to bad scent; that is a bad body odour which is so heightened, intensified or so sharp.

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4.3.4 Metaphor of Blandness

Evidence from the language also points out that there can be metaphors of blandness and this normally connects with dressing and not edible entities. If someone's dressing tastes bland it means he/she has not dressed properly or well. An example is shown below:

47.	Esi	n'-áhòsìèsíé	á-yɛ̀	**táblábáá**	ńdɛ́
	Esi	3SG.POSS-dressing	PERF-be	bland	today

'Esi is not well-dressed today.'

The expression of blandness is compared to improper dressing in example (47). The source notion of bland taste is linked to the target idea of inappropriate dressing. That is, perceived object missed certain things in her dressing.

4.4 Summary

The chapter sought to investigate expressions of taste in Akan and the various meanings they exhibit in the language. It is found that taste expressions in Akan can demonstrate physiological and extended meanings. Findings also showed that there are five taste categories in English (sweet, salty, bitter, sour and umami). However, Akan realizes six taste categories, in contrast to English where there are five. It was noted that the pleasant and sour taste have variants of their taste forms. Again, it was

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realised that all the perceptual concepts - Activity, Experiencer, and Stative, that Viberg (1984) mentioned are proven in Akan.

It was also found that from the ethno-cultural perspective of Akan, *dɛ̀ẁ* is a type of pleasant taste that comprises +/- sugary entities, non-food related experiences and has wider usage than all other taste forms. The expression *dɛ̀ẁ* can select an animate argument [+/-human] as the percipient of the taste but the perceived objects being perceived can be either inanimate entities or animate [+/-human – bodily feelings].

Unlike in English where sweet flavours relate to sugary entities, in Akan, pleasant taste *dɛ̀ẁ* has a wide range of usage. This usage can be grouped into three broad areas: (1) pleasant taste perceived through the mouth, (2) pleasant taste perceived through emotions or inner bodily feelings and (3) pleasant taste perceived through the pleasure in participating in activities. These events govern the perceiver's choice of usage in the expression of pleasant taste. It can also be established that *dɛ̀ẁ* 'pleasant' taste is a polysemy which illustrates various related meanings. A polysemy reveals all the related senses of a word; these connected meanings revolved round the main sense of the word *dɛ̀ẁ* 'pleasant' in diverse discourses. The different domains or contexts in which the related meanings were realised demonstrate the sense of the core meaning.

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Another observation is that the notion of taste conveys evaluative impression or perceptual judgments about things in the world. This was proven in all the taste expressions illustrated in the discussions. These evaluative impressions result from the perspective of the percipients' voluntary act because the perceiver has to purposefully perform the taste activity in order to give the satiating feelings he/she evaluated.

The chapter also noted that the negative connotation of taste can be associated with the concept of lack of properties. But the meaning of the negative concept is derived from the perceptual angle of perception.

Also, this chapter confirms Brenzinger & Fehn's (2013) assertion in the literature that 'taste' has fundamental meaning which means 'to perceive' which points to terms as, 'sour/ rough', 'nice/sweet', 'bitter', 'hot', and 'tasteless.' Some of these notions were realised in the metaphorical expressions of the taste expressions in Akan. These evaluative notions are culture specific as authors such as Majid & Levinson (2011) and Majid et al. (2018) pointed out in their studies.

Finally, expressing taste, thus, can be linked to the personal idiosyncratic frame of mind of the perceiver. Therefore, it is recommended that issues concerning sensory signals of taste must not be downplayed because it explicates people's experiences, their cognitive understanding and or the various preferences they have towards things in the world.

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CHAPTER FIVE

THE SEMANTICS OF OLFACTORY, AUDITORY AND TACTILE EXPRESSIONS

5.0 Introduction

This chapter explores the semantic properties of olfactory (smell), auditory (hear) and tactile (touch) expressions in Akan. In Akan, the notions of smell, hear and touch have a core meaning expressed from the basic word *tsè* 'to perceive'. However, these senses profile different semantic functions of the verb *tsè* 'to perceive' in the language though their syntactic structures may be the same. Other lexical verbs and adjectives in Akan are also used to express sensory notions of smell, hear and touch. Each will be examined for its prototypical and extended meanings.

This chapter is structured into three sections: section 5.1 discusses smell (olfactory) expressions in Akan. It examines the semantic interpretations of smell expressions in the language. Sections 5.2 and 5.3 talk about how hearing (auditory) and touch (tactile) perceptions are expressed in the language. It also looks at their diverse usages in the language.

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5.1 Smell/Odour (Olfactory) Expressions in Akan

This section discusses smell (Olfactory) expressions in Akan. In the literature, the concept of smell is also known as olfactory. Majid & Kruspe (2018) point out that with issues relating to sensory perceptions, little attention has been given to the olfaction domain. It has also been argued that the smell sense cannot exhibit much extended meanings including metaphorical concepts (Viberg 1984; Sweester 1990). Conversely, a study conducted by Ibarretxe-Antuñano (1999) showed that though the sense modality of smell has not developed much like the sense of vision, it has been proved that sense of smell can demonstrate a number of extended meanings (Ibarretxe-Antuñano, 1999). She points to the fact that, though there is only one physical extended meaning of smell i.e. '*to trail something'*, shown in the three languages; English, Basque and Spanish, a number of metaphorical meanings have been established in these three languages (English, Basque and Spanish). These arguments may be true for some languages but it may prove otherwise in other languages. It is imperative then to relate these discussions to language specifics and not to be generalised for all languages.

In view of that, a more recent study by Kövecses (2018) shows that olfaction is similarly significant in sensory perception just as other senses reveal and it has rich information in English. So, it is important to study smell sense the same way we study the other senses.

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5.1.1 Basic Expressions of Smell in Akan – Physical Notions

Considering the conceptualisation of smell in Akan, Agyekum (2018) indicates that Akan uses the verb *hùà* or *tè….ǹká* to represents the notion of 'smell/snuffle'. He explains that in expressing *hùà* 'smell' or *tè .... ǹká* 'snuffle', an external stimulus reaches the brain through the nose and the nose reveals the kind of smell that was emitted. Herz (2001:1) explains this as follows:

> "Odours are volatile molecules; they float in the air. When we breathe, air enters the nostrils and is swept upward into the nasal passages, where odour molecules settle on a mucous membrane called the olfactory epithelia. The olfactory epithelia contain olfactory sensory neurons, small nerve cells covered with cilia that protrude into the mucus that coats the nasal epithelium. These cilia, which are actually the dendrites of olfactory neurons, have odorant receptors on their tips…..From the olfactory bulbs, sensory information is routed to the primary olfactory cortex, part of a brain area called the piriform cortex that is connected to the limbic system, where brain structures responsible for emotion are found" (Herz 2001:1).

It is through the processes outlined above by Herz (2001) that percipients learn to distinguish different odours they come into contact with.

In the Mfantse dialect of Akan there are basic terms used to denote smell. These are shown below:

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Basic Categories of Smell in Akan	**Gloss**
nk̀á ……..	scent
m̀fár̀ ……	scent, (stale)
yì /tù ǹká ……..	to emit a bad or a good scent
tsè ǹká …….	to perceive a scent
tù/yì húá ..……	to emit a good smell
húám̀ …….	to emit a good scent
bɔ́ǹ ……	to stink
nyàǹ …….....	nauseating (bad)
nyìnyà ……	putrid (getting to the spoiling stage)
hùà …….....	smell/sniff

These terms are normally used to express physical concepts relating to scent in general. Some of them can demonstrate good scent; others represent bad odours, while some can be used to represent both good and bad scent depending on the context in which they are used. *Ǹká* and *m̀fár̀* are described as generic terms used to describe scent in general found in the air. *Nyàǹ* and *nyìnyà* can illustrate nauseating effect because the two can exhibit an outcome which could lead to vomiting. Relating to this, Floyd et al. (2018:8) point out that two major ways that languages describe olfactory experience are (i) by use of 'words that refer to events of perceiving and emitting odours (ii) by using words that refer to the qualities of

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odours'. Thus, olfactory experiences can be realised through perception about the perceived object or can be done through active sniffing of the object. These descriptions are demonstrated in the examples that are discussed in this section.

The concept of smell— ǹká 'scent', *yì /tù ǹká* 'to emits scent', *tsè ǹ*ká 'can perceive smell', and *wɔ̀ ǹkà* 'has/emits scent' relates to odours from both recognised and unknown objects that perceivers passively perceive in the environment whether a good one or a bad one. The percipients can go further to explain this kind of scent by using either intensifier *áńkásá* 'very', or positive adjectives *pa 'good'* or *bɔ́ń* 'bad smell' and adverbs *pápá 'a lot', yíé 'well'* to explain further the kind of scent they are experiencing. The auditory events perceivers experience are acts of perception without any volitional role; it comes naturally.

Ǹká is seen as one of the cover terms used to describe general scent in the language but the contextual (linguistic and extra linguistic features in the construction) events could constrain a positive reading or a negative reading (bad scent) or even neutral interpretations. Syntactically, *ǹká* can co-occur with both animate [+/- human] and inanimate entities to function as grammatical subjects. Semantically, percipients involved in the perceptual events are principally human referents, though some non-human animate entities have a sense of smell. Similarly, the precepts could be both animate and inanimate objects.

As noted earlier, *ǹká* 'scent' is seen as neutral and can exhibit positive or negative scents. This normally depends on the item being described. That is, the

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referent determines the kind of scent that will be emitted whether good or bad. For instance; if *ǹká* 'scent' is used to describe a human referent in a construction, the olfactory perception that is revealed always has negative connotation (bad odour) more especially if there is no modifier attached to the olfactory concept *ǹká* 'scent' to distinguish which kind of smell being perceived whether good or bad. Also, when *ǹká* 'scent' is used to describe non-human animate entities, the general perception assigned them is also a negative connotation (bad odour). And when the concept of *ǹká* 'scent' is connected to inanimate referents, the olfactory perception is based on contextual experience to determine the scent. Thus, to identify the kind of smell about the entities - good, bad or neutral depends on the percipients' psychological orientation perceiving the scent. These notions are evidenced in the examples below:

1. Àbòfrá nó nó hó wɔ̀ **ǹká**
   child DEF 3SG.POSS self be scent
   'The child smells.' (ABASP 2)

2. Àbówáfúń nó né **ńká** bɔ̀ǹ árá yíé
   carcass DEF 3SG.POSS scent smell.bad very well
   'The carcass of the animal smells very badly.' (ABASP 2)

3a. Èdzìbáń nó né ńká yɛ̀ hùàm̀
   food DEF 3SG.POSS aroma be pleasant
   'The aroma of the food is pleasant.' (ADJAMPSP1)

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3b. Mɔ̀mɔ̀é	né	**ǹkà**	fà	wó	hwéń
salted.fish	3SG.POSS	scent	pass/HAB	2SG.POSS	nose
mù	â	ɔ̀-bɔ́-dɔ̀	wó	kɔ́ń	
inside	CCM	3SG.SUBJ-FUT-love	2SG.POSS	neck	

'When you smell the scent of the stinking fish you would wish to taste it.' (ABSP1)

4. Ì-túm̀	gyìná	nàḿ	né	**ńká**	dò
2SG.SUBJ-able	stand/HAB	fish	3SG.POSS	scent	on
kyèrɛ́	dɛ̂	à-bèǹ	ànáá		
show/HAB	COMP	PERF-cook	or		

ɔ̀-ré-hyèẁ

3SG.SUBJ-PROG-burn

'You can rely on the scent of the fish to tell whether it is cooked or it is burning.' (ABSP 2)

All the examples in (1) to (4) demonstrate involuntary olfactory acts of perception in which percipients naturally experience without any volitional action. In all these constructions, the referents involved determine which scents to expect. In Akan, the sense connected to *ǹká* 'scent' in example (1), connotes bad and unpleasant scent (that which is associated with the body). In this context *ǹká* 'scent' relates to [+ human] entity. In this construction, since there was no modifier attached to the olfactory term to confirm the particular scent (good/bad) we are describing, then, as

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generally accepted in the language, the scent or odour that is emitted from the body of the child (a human referent) is seen to be that of a bad one. So, the concept of *ǹká* here is perceived to be negative as is usually perceived in the language.

In example (2), the idea of bad smell is also recognised, though the referent is non-human animate entity, the olfactory perception that is normally associated with animal carcass is negative (bad odour).

The impulse for good scent in (3a) is that, this time there is a modifier (a positive adjective) *hùàm̀*'good/pleasant' attached to the concept of *ǹká* scent'. This modifier connotes good aroma (scent) which appeals to the percipient's interest in liking the scent associated with the food. The same sentiment (preference for love of something) is also portrayed in example (3b). Thus, scent of the stinking fish in food revitalises the memory by whetting the appetite for its eating.

The notion of *ǹká* 'scent' can sometimes refer to a condition where the scent of something can be used to measure its state. For instance, in example (4), the kind of smell which the smoked fish produces, can be the basis to measure whether the fish is well cooked or is getting burnt.

Again, the notion of *ǹká* 'scent' can also depict a very strong odour (unusual or unwarranted) which may disorient the percipient who perceives it so. An example is illustrated in (5).

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5. Èdúŕ	nó	né	**ńká**	yɛ̀	dzèǹ
medicine	DEF	3SG.POSS	scent	be	strong

'The scent of the medicine is pungent.'

In (5) the concept of smell, *ǹká* 'scent' describes a condition which the percipient perceived to be an unusual one. In this context, the percipient at this point cannot withstand the kind of odour the object of perception *èdúr* 'medicine' emits. It is an unusual odour which the percipient cannot bear or stand. The odour *ǹká dzèǹ* 'strong scent' which emanates from the object of perception is what disorients the percipients. This is an odour that is not normal (not preferred) in the mental inclination or frame of mind of the percipients. So, the percipients may find this an unpleasant odour. This condition may affect the emotional feelings (signs of discomfort) of the percipients. Sometimes, these unwarranted odours may trigger allergic reaction in some percipients. Supporting this, Kadohisa (2013:1) states that *"odours can influence* psychological and physiological states … and can arouse emotions which can lead to the recall of emotional memories". It can be noted that, *ǹká* 'scent' may be understood to conflate the concepts of good, bad, fragrance, stench and disapproving ideas in portraying smells (odours).

We notice from the discussion of the semantics of *ǹká* 'scent' that even though there are few instances where *ǹká* 'scent' does not have a negative connotation, in most cases it does, and perhaps the non-negative connotation can be explained in context. That is where we have to modify *ǹká* 'scent' with positive

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adjectives to get the positive connotation but we do not necessarily need a negative modifier to get a negative connotation. Perhaps its neutral use is connected with food.

The concept of *yì ǹká* 'emits smell' naturally connotes negative scent (bad odour) whether the referents associated to it is animate or inanimate. Again, modifiers attached to the concept *yì ǹká* will show which olfactory perception (good or bad) is being communicated. Some examples are illustrated in (6-8):

6. Àbòfrá nó n'-ámáádzé yì **ǹká**
   child DEF 3SG.POSS-armpit emit scent.
   'The child's armpit smells.' (ABASP 2)

7. Ǹsú yí yì **ǹká**
   water DEM emit scent
   'This water has odour.' (DW SP 5)

8a. Ǹhyíréń yí yì **ǹkà** pá
   flower DEM emit scent good
   'This flower has good scent.' (ABASP 2)

8b. Ǹhyíréń yí yɛ̀ **hùàm̀**
   flower DEM be good.scent
   'This flower smells good.' (ABASP 2)

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The notion of *yì ǹká* 'emits smell' as expressed in example (6) connotes negative (bad odour). It is noted that, the odour that comes from the child's armpit *àbòfrá nó n'ámáádzé* 'the armpit of the child' is not a good one. This indication might be due to many factors that might have accounted for that; excessive sweat, he/she might have not taken their bath, dirty clothes among others.

In example (7), the referent of yì *ǹká* 'emits odour' is *ǹsú* 'water'. Naturally, water does not smell bad or does not have any scent. However, if the water in (7) is being referred to as emitting smell - yì *ǹká* 'emits odour' then it means certain impurities or entities might have gotten into contact with the water and have caused it to smell bad. *Yì ǹká* here gain carries the negative implications of bad smell. Also, when bottled water and sachet water are kept for a very long period, they are seen to emit scent. Even when chemicals used in preserving water are perceived to be in excess, water is described to emit scent. This latter experience may be critical from percipient to percipient and the judgement may be based on the percipient's psychological experience.

The expression for good scent in (8a) is that, this time there is a positive modifier *pá* 'good' attached to the notion *yì ǹká* 'emits scent'. This modifier connotes good smell which in my view allures the percipient to the object. It can be indicated here that since there are different kinds of flowers with their varied scents, it is imperative to indicate the kind of scent a particular flower has with a modifier. Without the

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modifier, the flower can be described as having neutral (depending on the percipient's inclination towards odours) scent because not all flowers emit good scents.

Also, the notion of *hùàm̀*'good scent' can be used instead of the use of the positive adjective *pá* 'good' to express how good a scent is as illustrated in (8b). This concept suggests a preferred scent which gives comfort to the percipients and their liking for the object being perceived.

The olfaction concept of *tù ǹká* 'to perceive good/bad smell' characteristically exhibits two concepts; positive and negative perceptions.

When *tù ǹká* occurs with cooked foods especially those that are being prepared, *tù ǹká* specifies good smell (good aroma). On the other hand, in physical events, when *tù ǹká* occurs with animate entities the perception perceived is inferred to be negative. However, when *tù ǹká* co-occurs with human referent to express metaphorical concept, the perception created is that of positive impression. (the metaphorical examples will be discussed under extended meanings in section 5.1.3). Some examples of *tù ǹká* are illustrated in (9 – 11).

9. Ǹkwáń nó é-tù **ǹká**
   soup DEF PERF-fly scent
   'The soup has aroma.' (ABASP 2)

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10. Ǹtàŕ	nó	nó	mù	tù	**ǹkà**	pá	
PL.dress	DEF	3SG.POSS	inside	fly	scent	good	

'The clothes smell good.'

11. Nó	-hó	**ńká**	é-tú
3SG.POSS	self	scent	PERF-fly

'The bad scent on him/her has evaded the air.'

In Akan, the sense connected to *tù ǹká* 'to perceive good smell' in example (9), connotes good scent (that which displays good aroma). In food preparation, for instance, when the food is well prepared and, in the process, good aroma emanates from it, it can be expressed as such. This can result in food memories on the part of the percipient. In example (10) *tù ǹká* occurs with a positive adjective *pá* 'good' to describe the inanimate entity *ǹtàŕ* 'clothes'. The percipient's positive perception about the objects means that he/she has good inclination towards that scent. In example (11), the olfactory idea of *hó ǹká é-tú* is displaying negative concept – bad odour. That is, when *tù ǹká* is associated with human body – 'self' as it was demonstrated with *yì ǹká*, the concept of *tù ǹká* as it occurs with the human referent conceivably reflects negative odour. So, in example (11) the body is seen to emit bad odour.

*Tsè ǹ*ká 'can perceive smell', can be said to relate to both identifiable and unidentified scents that come from the environment. The expression normally re-

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counts a percipient's experiences in relation to some kind of odour he or she perceives. An example is shown below.

12.	Mé-tsè	ŋ̀ká	bí	wɔ̀	há
	1SG.SUBJ-hear	scent	INDEF	at	here

'I perceive a certain scent around here.'

In example (12) the percipient perceives a certain odour in the atmosphere which he or she cannot determine. Through inquiries h/she might be able to describe the kind of scent. Here, his/her mental disposition relating to the odour will help specify the kind of odour whether it is a good or bad scent.

Tú húà/húáḿ 'good odour' is normally associated with good scents that emanate from flowers, perfumes in clothing or on the body, foods and objects that give out good scent. These are illustrated in (13) to (16).

13.	Mɔ̀mɔ̀é	mà	fɔ̀wèé	yɛ̀	**hùàm̀**
	salted.fish	CAUS	stew	be	good.scent

'Salted fish gives stew good aroma.' (ABSP2)

14.	N'-átáŕ	mù	ŋ̀ká	yɛ̀	**hùàm̀**
	3SG.POSS-dress	inside	scent	be	good.scent

'His/Her dress smells good.' (ABSP2)

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15. Nó -hó yɛ̀ **hùàm̀**

3SG.POSS self be good.scent

'S/he smells good.' (ABSP2)

16. Ǹhyíréń yí yɛ̀ **hùàm̀**

flower DEM be good.scent

'This flower smells good.' (ABASP 2)

The concept of *húáḿ* 'good scent' as expressed in examples (13) to (16) connotes positive (good scent). This concept suggests a preferred scent for the percipients and their liking for the object being perceived.

In (13), for example, the use of the stimulant *mɔ̀mɔ̀é* 'stinking fish' made the stew produce a good smell in the percipient's acuity.

In (14) and (15), the perfume used and good personal hygiene practiced may have contributed to the experience of good smell in the dress as well as on the body.

With example (16), this concept of *húáḿ* 'good scent' suggests a preferred scent which gives comfort to the percipients. Thus, the flower emits good scent which in my view allures the percipient to the object.

Examples (13) to (16) point to affirmative expressions of a favourable scent which the percipients seem to have delight in its use.

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M̀fáŕ 'scent - stale' which is also another cover term to express scent in Mfantse can also be used to describe odour that emanates from damp clothing that has been kept in bags for longer periods and rooms closed for very long time without good ventilation. Keeping clothes that are not well dried can also generate such scent. This kind of odour does not emit a good scent and a welcoming one. It is normally associated with the notion of stuffiness or mustiness. An example is illustrated in (17) below:

17. Dáń nó mù á-gyè **m̀fáŕ**
room DEF inside PERF-take stale/stuffy
'The room has become stale.'

In (17), the notion of smell *m̀fáŕ* 'stale' has been used to indicate that the room has been kept for very long time without being used and there is no proper ventilation, thereby making it stuffy. As this situation occurs, the scent that emanates from the room is that of staleness. Consequently, the concept of staleness cannot be associated with food, animals and human odours; though *m̀fáŕ* can be used to describe other things in the environment in the language.

Nyàǹ 'nauseous' is used to describe nauseous scent. There might be varied circumstances that might cause percipients to feel nauseous. For example, odours relating to entities like blood, sea foods (fresh fish), and the sea itself might cause percipients to feel nauseous. Also, on occasion when some people don't keep proper

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personal hygiene, they also discharge this kind of *nyàǹ* ‘‘nauseous’. Occasionally, people can feel nauseous without necessarily relating to sea foods, blood and body odours but may be due to their mental disposition to certain scents they may not be comfortable with. This nauseous scent is also perceived not to be a pleasant scent. Sometimes, this scent can cause percipients to nauseate or feel sick depending on their mental disposition in relation to how they react to scent. Some examples are shown in (18) and (19).

18	Nó	-hó	yɛ̀	**nyàǹ**	áńkásá
	3SG.POSS	self	be	nauseous	very

‘S/he has a nauseating body odour.’ (ABSP1)

19.	Náḿ	yɛ̀	**nyàǹ**
	fish	be	nauseous

‘Fish emits nauseous scent.’ (ABSP1)

In example (18) and (19), nauseous is associated with the human body odour and scent from fish. In this context, the perceivers observe that the perceived objects emit odour that can make you nauseous.

Another similar odour which demonstrates nauseating effect in Akan is *nyìnyà* ‘putrid’. This concept is linked to stews, soups and cooked food in general when they are not preserved well, especially when they are not well heated and are not

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preserved in fridges. This odour makes it difficult for the soups or the stews to be eaten at that stage. It demonstrates that the object is getting to the spoiling stage; it has not gotten spoilt yet. It means the perceived object is in the process of going bad. Thus, the level of spoilage will determine the nauseous odour in relation to the percipient's orientation towards the putrid state of the food. When that state is recognized, the notion of *nyìnyà* 'putrid' is used to describe such states. An illustration is indicated in (20) below:

20. Ǹkwáń	**nyìnyá**	sɛ̀	à-ǹǹ-ká
soup	get.bad	COND	PERF-NEG-drive
nò	hyéẃ	â	
3SG.OBJ	heat	CCM	

'Soup becomes nauseous when it is not heated.'

In (20) this is the state in which we find most soups if they are not well heated, we find them going bad. The Akans measure this state as one that can be treated to be used again, and there are so many ways this can be done. Most commonly used entity to treat this situation is by the use of charcoal or little ash and applying strong heat. When that is done that *nyìnyà* 'putrid' scent will be dispelled and the food can be eaten again. When perceivers sometimes measure *nyìnyà* 'putrid' odour in foods to be excessive, they might consider that state bad and may avoid its eaten the food.

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Occasionally, some modifiers are used to describe the extent of bad smell being emitted from the perceived object. In Mfantse, some of these modifiers are listed below:

Modifiers to Describe Intensity of Bad Smell	**Gloss**
bɔ̀ǹ	bad smell
sùòǹǹ	fetid
káńkáń	stink
sùkùsùkù	putrid
kòóò	bad smell
hùǹtùǹǹ	foul smell

These modifiers are used depending on the referent they occur with. They show the extent of very bad and extreme odours (unbearable) associated with objects that smell bad. When perceivers observe that some objects emit excruciatingly bad odours these modifiers are used to describe the state.

The modifier (adjective) *bɔ̀ǹ* 'bad odour' can be conceptualised in different ways to depict varied bad scents depending on the context. It can be used alone in context to indicate bad scent as shown in (21a) or sometimes other intensifiers like

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áńkásá 'very' and adverbs such as *pápá 'a lot', yíé 'well'* can co-occur with this modifier *bɔ̀ǹ* 'bad odour' to express the intensity of the bad scent, shown in (21b).

21a. Àdzé yí **bɔ̀ǹ**
thing DEM smell.bad
'This thing smells bad.'

21b. Àdzé yí **bɔ̀ǹ** áńkásá
thing DEM smell.bad very
'This thing smells very bad.'

On the other hand, these modifiers *sùòǹǹ, kòóò, káńkáń, hùntùǹǹ* and *sùkùsùkù* only depict very extreme bad odours. They also co-occur with *bɔ̀ǹ* to express the same concept of extremely bad odours. Some of these modifiers can be reduplicated to express further the great intensity of the bad odour which the object releases. All these modifiers normally demonstrate the state of the objects being perceived and can be associated with both animate and inanimate entities as grammatical objects that emit the odours (the olfaction experience). Examples are shown in (22).

22a. Àbówá nó nó hó **bɔ̀ǹ** **káńkááńkáń**
animal DEF 3SG.POSS self smell.bad stink.REDUP
'The animal stinks very badly.'

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22b. Èdzìbàń	nó	**bɔ̀ǹ**	**kànkáánkáń**	
food	DEF	smell.bad	stink.REDUP	

'The food stinks very badly.'

22c. Àbòwá	nó	á-**bɔ̀ǹ**	**sùòǹǹ**
animal	DEF	PERF-stink	very.bad.odour

'The animal stinks.'

22d. Ǹká	**sùòǹǹ**	wɔ̀	dáń	yí	nó	mù
scent	very.bad.odour	be	room	DEM	3SG.POSS	inside
há						
here						

'This room smells very bad/ This room has a very bad smell.'

All the odorous products in (22a-d) can co-occur with the modifiers*; kànkáánkáń* and *sùòǹǹ*. The modifiers show the degree of deterioration of the objects and their associated odour they emit. Sometimes, the constructions can make grammatical meaning without the modifiers.

Hùà 'sniff/smell' is the active or conscious (voluntary) way perceivers experience odours in the environment. This notion is normally expressed when the perceiver consciously wants to make effort to be sure of the scent of an object or in identifying the kind of scent (odour) the object emits. It is a wilful process to check the certainty of scent (odours) of an entity. Sometimes, the conscious activity is done

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for relaxation, satisfaction, love of and to detect preference of the odour of an entity. It selects animate argument as grammatical subjects. Examples are show in (23) below:

23a. Màámé	nó	**húà-à**	ǹkú	nó	
woman	DEF	sniff-COMPL	shea butter	DEF	

'The woman smelled the shea butter.'

23b. Bɔ̀dɔ́ḿ	nó	**hùà-húà-à**		Pàpá	nó
dog	DEF	sniff-REDUP-COMPL		man	3SG.POSS
-hó					
self					

'The dog sniffed the man.' (ABSP3)

23c. Mú	**húà-à**		nó		-hó	nó,	
1SG.SUBJ	smell-COMPL		3SG.POSS		self	DCM	
ńnà	nó	-hó	ńká	yɛ̀		hùàm̀	
then	3SG.POSS	self	odour	be		good.scent	
pápá							
well							

"When I smelled him/her, I realised s/he smells good.' (ABSP3)

23d. Mù	**hùá**	ǹhyíréń	nó	à	
1SG.SUBJ	smell/HAB	flowers	DEF	CCM	
né	ńká	mà	m'-ényí		
3SG.POSS	scent	CAUS	1SG.SUBJ.POSS-eye		

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gyè
happy

'When I smell the flower, its fragrance gives me pleasure.' (ABSP3)

All the examples in (23a-d) describe how the percipients made conscious effort towards the objects they perceive. In (23a), the woman smelled the shea butter for purposes best known to her. May be it was to check or be sure of the exact scent; whether it smells good or otherwise. Her olfaction experience towards the object might give her the opportunity to give the precise judgement on the object being perceived. In (23b), the dog did series of checks through the use of the reduplicated verb *hùàhúà*; that is, sniffing' several times on the man. It did so by making sure who that person was, or it wants to be sure whether the man is a familiar person. In (23c), there was a confirmation of identifying a good scent from someone. So, there was double-checking activity to be certain. In (23d), the percipients observe that the fragrance that flower emits gives them joy. It can be noted that consciousness in smelling a particular object helps in the proper identification of its nature. Thus, becoming aware of a particular scent through familiarity may either attract or repel someone (percipients).

Generally, the perception of smell might differ from one percipient to another. This is because establishing a particular scent will be subjective to individual idiosyncratic experiences in relation to their perceptual understanding towards smell/odour. Also, the frame of mind of a percipient might contributes to how they

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react towards various odours they encounter in the environment. The concept of smell can display the idea of experiencer, active and source; these are discussed in the section that follows.

5.1.2 Extended Meanings of the Olfaction Senses in Akan

The sense of smell in Akan does not only reveal physical meanings but also illustrates metaphorical meanings, although they are not many. The few that are identified are discussed in (24 & 25) below:

24a.	Àbòfrá	nó	à-**bɔ̀n**	**sùònn**
	child`	DEF	PERF- stink	very.bad.odour
	'The child is daft.'			

24b.	Àbòfrá	nó	á-**bɔ̀n**	**kòóò**
	child	DEF	PERF- stink	very.bad.odour
	'The child is daft.'			

25a.	N'-énúḿ	ásɛḿ	**bɔ̀n**
	3SG.POSS-mouth	matter	smell.bad
	'S/he does not know how to speak well.'(Lit.: his/her mouth matter bad)		

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25b. Nó	hwéń	mú	**bɔ̀ǹ**	
3SG.POSS	nose	inside	smell.bad	
nò				
3SG.OBJ				

'S/he is haughty.' (Lit.: His /her nose inside smells to him/her)

The notion of bad odour exhibited in example (24a & b) is linked to the notion of low intelligence. For that reason, the percipient perceives the child to lack intellectual skills. This shows that the problem of low intelligence can be conceptualised as bad odour. The modifiers *sùòǹǹ* and *kòóò* in the constructions are meant for emphasis.

In (25a), the notion of *bɔ̀ǹ* 'bad odour' is extended to the concept of 'trash talking' – belligerent offensive speech. Example (25a) means that the words of the perceived object stink. This means that offensive or unpleasant words can be conceptualised as bad odour. In example (25b), the notion of bad odour relating to degeneration is mapped unto a bad smell in the nose. This literally means the perceived object has bad breath or has bad smell in the nose. This perception is conceptualised in Akan to mean sense of hostility. The concept of unfriendliness and haughtiness are mapped unto the concept of bad odour.

26a.Nó	súbáń	**é-tù**	**ǹká**
3SG.POSS	character	PERF-fly	scent

'His/her behaviour (bad/good) is well known.'(Lit.: his/her character fly scent)

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26b. Adoma **ǹkà** á-táhyè bèébíárá

Adoma scent PERF-spread everywhere

'Adoma has become famous.'

26c. Nó -hó ásɛ́m **bɔ̀ǹ**

3SG.POSS self matter smell.bad

'S/he has a bad attitude or behaviour.' (Lit.: Matter about him/her badly)

In example (26a & b), the concept of *ǹkà* 'scent' is conceptualised in relation to character and fame. Just as we explained early on, the notion of *ǹkà* 'scent' could be positive or negative. In (26a), the conceptualization is that which can be associated with either bad or good character while in (26b), it refers to fame. In Akan, if people have fame and demonstrate good behaviour, they ascribe it to good odour. So, becoming famous is mapped unto the idea of emitting good scent. On the other hand, if a debauched character is portrayed as shown (26c), it is conceptualised to emit bad odour. So, in (26a), the percipients had to indicate through their perceptual experiences which kind of odour is the percipient's character portraying (Is it a behaviour that defines a good one or a bad one?). In (26b), the perception of the subject is made clear – a behaviour that is perceived to connote a good scent. Also, if someone is seen to be a wicked and dishonest person as shown in example (26c), the behaviour is conceptualised to emit bad odour.

27. N'-ánò kásá yɛ̀ **hùàm̀**

3SG.POSS-mouth talk be good scent

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'S/he is eloquent/well-spoken.' (Lit.: His/Her mouth talk smells good)

In example (27) the concept of *hùàm̀* 'good odour' in Akan, is extended to the perception of 'good mouth talk' – good speech or eloquent speech. The example in (27) is conceptualised to mean that the speech of the speaker has good flavour or has good odour which implies that the subject knows how to speak well. It can also mean that the message is interesting. So, in Akan, good speech or an eloquent speech is conceptualised as good scent/odour. In effect the good scent/odour (that is the effective way of conveying thought) complements the speech of the subject.

28. Esi é-**nyínyá** n'-ényím̀
    Esi PERF-frown 3SG.POSS-face
    'Esi has frowned.'

In (28), the scent of putrid is linked to frowning, so the behavior of frowning is conceptualized as putrid scent, something which is undesirable.

Some of these constructions discussed in (24- 28) can accept direct objects while others cannot. For instance, in examples (24-27) all the constructions have no direct objects making them intransitive constructions. However, (28) has direct objects, producing transitive construction.

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5.2 Auditory (Hearing/Listening) Perception in Akan

This section discusses hear/listen (auditory) expressions in Akan. It explores their semantic interpretations in the language as well.

5.2.1 The Physical Experience of the Auditory Sense

The two main verbs in English analysed in auditory sensory domain are 'hear' and 'listen'. Akan (Mfantse) has a similar case in point where these two basic verbs in the language; *tsè* 'hear' and *tsíè* 'listen' are discussed in the auditory sensory domain.

'Hearing' refers to a non-controlled (uncontrolled) conceptual activity of detecting sounds; and 'listening' designates a controlled event of perceptible means of identifying a sound (De Vries 2013). With the activity of *tsè* 'hearing', the percipient does not consciously make effort in the auditory sense event. With the controlled activity of *tsíè* 'listen', the event requires conscious activity in the auditory experience. I will argue that the controlled activity in the auditory sense may be described as a two-way experience. For instance, the percipient (the listener) can activate the auditory event of listening by him/herself through a conscious act or may experience the auditory event unconsciously in the environment.

Semantically, meanings derived from these two verbs; *tsè* 'hearing' and *tsíé* 'listen' differ in terms of the context in which they occur. But the two verbs exhibit

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auditory sense through the ear receptor. Syntactically, these two verbs may have similar syntactic structures in terms of the arguments they select. Thus, *tsè* and *tsíè* co-occur with only animate [+ human] entity as the percipient as well as the grammatical subjects, but the perceived objects could be both animate and inanimate objects. In terms of semantics, the percipient involved in the perceptual events of the audition is principally a human referent. Sometimes some non-human animate entities also hear and can respond to stimulus around them. These properties are evidenced in the examples discussed in this section. We illustrate some examples below:

29. Yɛ-á-tsè dɛ̂ Èdwúmákó nà
1PL.SUBJ-PERF-hear COMP Edwumako CONJ

nó ńkwàá dò hà, Édwúmákó Tàkyímàǹ
3SG.POSS suburb LOC here, Edwumako Takyiman

nà wɔ́-bɔ̀ àkwáń á ɔ́-yɛ̀
CONJ 3PL.SUBJ-play PL.road CCM 3SG.SUBJ-be
dɛ́ẃ
pleasant

'We have heard that the Edwumako Takyiman festival celebration is the most interesting among the Edwumako towns.' (ADAM SP 2)

30. Yé-tsíè-è Édwúmákó Tàkyímàǹ hó
1PL.SUBJ-hear-COMPL Edwumako Takyiman self
àbákɔ́sɛ́ḿ
history
'We listened to the history of Edwumako Takyiman.' (ADAMP SP 2)

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Examples (29 & 30) demonstrate concepts of the auditory experiences in Akan. In (29), the notion of auditory sense *tsè* 'hear' could describe both uncontrolled and controlled experiences. In one situation, the context may mean that the Experiencers heard in passing that the festival celebration of *Édwúmákó Tàkyímàǹ* is interesting or they were reliably informed that the celebration of the *Édwúmákó Tàkyímàǹ* festival is interesting. In the latter discussion, the controlled activity (the listening event) is covertly conveyed. In (30) the Experiencers consciously made practical effort to perform the auditory sense activity by listening to what was said about the history of *Édwúmákó Tàkyímàǹ*. These explanations show that the perception experience involved with *tsè* and *tsíè* are marked with +/- volitional acts.

In another argument, Agyekum (2002) mentions that in Akan (Twi), *tè* 'hearing' shows "a passive act on the part of the Experiencer, while *tie* 'listen' specifies that an agent is making a deliberate or intentional effort to perceive something" (2002:104). For example: *'mè-tè-è dwòm nò'.* This example reflects a passive act on the part of the Experiencer. It is clear in Mfantse that the verb *tsé* 'hearing' not only can it demonstrate passive act, but also can allow the percipient to perform the active role of making intentional act of perceiving something. But I believe this might be true for the Twi dialects as well. Instances are shown in the examples below:

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31. Wíádzé yí mù dzé, àsòtsèé bèbr̀èè nà

world DEM inside DCM hearsay many CONJ

yɛ́-tsé

1PL.SUBJ-hear

'We hear a lot of rumours in this world.' (Lit.: In this world there are so many hearsays we hear) (AB SP 2)

32. Kyɛ̀n w'-ásó nà è-bɛ́-tsé

tune.in 2SG.POSS-ear CONJ 2SG.SUBJ-FUT-hear

'Be attentive and you will hear (what I am saying).' (ASB SP 3)

33. Br̀ɛ̀ w'-ásó àdzè mà

bring 2SG.POSS-ear lower give

mè, nà tsié

1SG.OBJ CONJ listen

'Listen closely.' (ASB SP 3)

Example (31) illustrates both controlled and uncontrolled activities of auditory experiences. Thus, the auditory activity of alertness in (31) comes unconsciously to the experiencers as speakers hinted. The experiencers receive the auditory event (*tsè*) in an unconscious manner. Or the Experiencers have been listening (*tsíé*) to issues going on in the world with a conscious effort.

In example (32) the percipient impels the grammatical subject to pay attention to what is being said. This signal indicates that the subject might not be paying attention or does not hear properly due to certain factors that might have been a barrier in the listening process. That is, if the subject gives listening ear to what is said, he or she will hear well. In the same way, in example (33), the

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percipient encourages the subject to be attentive or listen with rapt attention so that they can listen well. In this construction, the lowering of the ear is linked with attentiveness.

Another point is that the two verbs can co-occur in the same construction. An example is illustrated in (34) below:

34. Tsíé nà à-tsè
listen CONJ 2SG.SBJV-hear
'Pay attention so you can hear well.'

In example (34) the auditory events go beyond the physical listening to illustrate deeper meanings. That is, the two auditory senses express controlled notions where the Experiencer is made to make a purposeful listening so they can hear well and also to understand well, and possibly take some lessons from there.

The auditory senses can also demonstrate other extended meanings in the language. The section that follows discusses the extended notions of auditory senses.

5.2.2 Extended Meanings of the Auditory Senses

Auditory verbs are also noted to have cognition-related meanings. Supporting this claim, Aikhenvald & Storch (2013) observe that auditory perception (hearing) can be associated with cognitive processes of 'understanding', 'knowing' and remembering in Indo-European languages. De Vries (2013:127) who conducted a

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similar study remark that a West Papuan language, Korowai relates auditory sense ‘hear’ to a cognition-related meaning ‘know’ when the “referent of the object of the verb is an audible entity that can be perceived with the ears”. The overlap between hearing and cognition that arises in the context of comprehending language is widespread (see also Vanhove 2008; Aikhenvald & Storch 2013), and such uses have indeed been suggested as important bridging context to cognition meanings in relation to auditory terms in different cultures (Evans & Wilkins 2000). Evans & Wilkins (2000) indicate two extended meanings of the verb hear as to 'obey' (Danish) or 'to attend to' (Swedish).

Also, one extended meaning of ‘hear’ found in a cross-linguistic study (in Spanish, English and Basque) by Ibarretxe-Antuñano (1999) is ‘to heed, to pay attention’. This extended meaning has two explanations (i) the speaker demands attention from the hearer, (ii) the speaker does not only demand attention, but also that the hearer does what he is telling him to do. She also equates this auditory process of ‘hearing’ to ‘obedience’, ‘to be told’, ‘to be informed’ and ‘to understand’. In Basque, two more extended meanings of ‘hear ‘were identified, that is, ‘to be educated’ and ‘to have an agreement’. Ibarretxe-Antuñano (1999) elaborates that the interpersonal connection that exists between the hearer and the listener in this sensory domain causes the semantic shift in the events process as illustrated below:

35. hear → heed → obey.

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According to Agyekum (2012) in the Twi dialects of Akan, a similar notion of auditory perception indicating cognitive processes is possible, where the verb *tè* 'hear' demonstrates other extended meanings such as 'understand', 'comply', 'agree', 'pay heed to', and 'obey' (abide). He explained that for instance, before the meaning of 'to understand' is derived, the verb *tè* 'hear' is combined with the preposition *àsèɛ̀* 'under'. He illustrates an instance in context in the example below:

36. –tè + àsèɛ̀ 'hear under' ⟶ 'to understand'

Thus, one has to move from the surface to the deep level to grip the base of the message for clarification.

This cognition related notion of auditory sense is also realised in the Mfantse dialect of Akan where the verb *tsè* 'to hear' + *àsè* 'under' plays the same roles as indicated by Agyekum (2012) and functions in similar ways to the English expression 'to understand'. This meaning is illustrated in context with example (37) below:

37.

Àkàsàákásá		bà	ná	hómˊ	wɔ̀
misunderstanding		come/HAB	CONJ	2PL.SUBJ	have
hómˊ	hó	ńtsèàsèé		â,	òyé
2PL.POSS	self	understanding		CCM	good

'Sometimes there is misunderstanding, and it would be good if you understood each other.' (ABAK SP 2)

Other auditory extended meanings realised in Akan include 'to investigate', 'to give a hearing' (in the legal context), 'to agree', 'to permit', 'to listen without prejudice',

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'obedience', 'to act on hearsay', 'pretence', and 'paying attention (listening) to get the right information'. Some of the notions are expressed in the examples below:

38. À-pòrísì-fó nó tsìè-tsíè-è ǹ-sɛ́ḿ nó
PL.Police.PL DEF hear.REDUP-COMPL PL-matter DEF
mù hú- ù dɛ̂ ɔ̀-yɛ̀ nòkwár̀
inside see-COMPL COMP 3SG.SUBJ-be truth
'The police delved into the issues and realised it was the truth.' (AMP SP 4)

39. Wɔ̀ péè-ǹ dó dɛ̂
2PL.SUBJ agree-COMPL on COMP
wò-bé tsíè nò wɔ̀ àhèm̀fíé hɔ́
2PL.SUBJ-FUT listen 3SG.OBJ at palace there
'They agreed to give him/her a hearing to the issue at the palace.'

40a. Mè tsíè nò
1SG.SUBJ listen/HAB 3SG.OBJ
'I listen to him/her'/I permit him/her.'

40b. Ò-tsíè nó àsò pá mù
3SG.SUBJ-listen 3SG.OBJ ear good inside
'S/he listens without prejudice.'

In example (38), the use of the reduplication of the auditory sense *tsíè* 'to listen' shows that the process of the auditory activity was done in a recurring manner by listening to or investigating the issue. The listening was done a number of times before the conclusions were drawn in the case under investigation (the object of the

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auditory perception). So, in (38), the grammatical subject *Àpòrísì-fó* 'the Police' illustrated the controlled auditory event.

In example (39), *tsíè* 'to listen' has been used to refer to legal context; 'to give a hearing to' to an issue in the law court. According to Sato (2016) auditory sense that refers to action discusses a process that is consciously controlled by a human agent. In (39), the hearers; the chief and his elders in the Ghanaian traditional court become the grammatical subject of the controlled auditory event.

In example (40a), the meanings need to be contextualised, thus, the meaning component is crucial. The use of the auditory sense in (40a) reveals multiple meanings; (i) the meaning can refer to the idea of consenting to the object by giving permission on some grounds and (ii) the subject listened attentively. The auditory term *tsíè* 'to listen' in (40a) could be described as playing the role of homophony. In example (40b), the act of auditory perception was not that of a physical listening. There was an emotional aspect attached to the event. In the process of carrying out the event, the subject created the environment for the person (object) to know that someone is listening to him/her. This context carries some amount of empathy.

Other contexts in which the two auditory verbs occur are illustrated below. All the examples in (41) have imprint on the mind of the percipients.

41a. Á-tsè ḿpó â, ńń-tsé-è
PERF-hear even CCM NEG-hear-COMPL
'Pretend you have not heard.'

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41b. Esi tsíè nè màámé ásɛ́ḿ
Esi listen/HAB 3SG.POSS mother issue
'Esi is obedient to her parent.'

41c. N'-ásó tsè àsɛ́ḿ
3SG.POSS-ear hear/HAB word
'S/he is obedient.'

41d. Ò-tsíè ǹkòrɔ̀fó ánò
3SG.SUBJ-listen people mouth
'S/he acts on hearsays.'

All the examples in (41) demonstrate that the listeners act depending on what they hear/listen to. In (41a), the auditory experience is related to the event of pretence. As established earlier, the concept of listening is done for purposes of capturing information in the environment. Nonetheless, in the context of (41a), the listener is to pretend not to have heard what information they had through listening.

In (41b), the auditory experience expresses the meaning of obedience. Thus, the concept of obedience (referring to submission, compliance, respect, duty and meekness) is mapped unto the idea of listening.

In (41c) the auditory event is allied to the concept of loyalty (following instructions through listening). So, the attitude of being loyal or faithful can be associated to the concept of listening.

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The auditory experience in (41d), show that the listener (the subject) does not verify information they acquire through listening and eventually act. The percipient always acts on hearsays; thus, he/she does not figure out things for him/herself.

Apart from the extended meanings auditory sense can also demonstrate other figurative meanings. Some examples are shown below:

42. W'-ásówá mù ǹǹ-dá hɔ́ â,
2SG.POSS-ear inside NEG-sleep there CCM
è-ré-ǹǹ-tsé ásé
2SG.SUBJ-PROG-NEG-hear under
'If you are not an attentive listener, you will not understand.' (AB SP 4)

43. È-bɛ́-tsé w'-ásó mù
2SG.SUBJ-FUT-hear 2SG.POSS-ear inside
'You will hear the real details.' (AB SP 4)

44a. N'-ásówá mù yɛ̀ dzɛ̀ǹ, ǹtsí ɔ̀-ǹǹ-tsé
3SG.POSS-ear inside be strong so 3SG.SUBJ-NEG-hear
ásɛ́ḿ
issue
'S/he has a hearing impairment, so s/he cannot hear.'(AB SP 4)

44b. N'-ásó ǹǹ-tsé àsɛ́ḿ
3SG.POSS-ear NEG-hear/HAB issue
'S/he is stubborn or disobedient.' (AB SP 4)

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We realised that the general role of auditory signals is to mark the ability to hear. In examples (42) to (44) reference is made to the auditory organ, the ear. It is clear that the role of the ear is to transmit sounds to the brain through the parts of the ear; the outer, the middle and the inner. Looking at the examples in (42) to (44), it can be noted that the examples are not referring to any physical problems associated with the various parts of the ear but relating to deeper meaning of having clear mind to listen.

In example (42), the percipient is drawing attention to the fact that if someone is not intelligent enough, whatever is being said will be difficult for him/her to understand. Thus, the attitude of not being wise or being intelligent can be linked to inability to comprehend something. However, in (43), the percipient emphasizes on the fact that one listens well in the ears to hear well. Thus, '*hearing inside the ear'* connotes the extended meaning of 'to hear the unexpected', 'surprise', 'first-hand information' or 'the truth or the details'. Not just listening for listening sake but getting the details or the reality of the story. Example (44) can points to two meanings (i) (44a) indicate difficulty in hearing; a defect in the ear which prevents the listener to hear well and (ii) (44b) points towards an attitude of stubbornness. The percipient is seen to refuse to act on instructions and obey rules. This behaviour of disobedience is linked to the idea of not hearing well.

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5.3 Perceptions of Tactile/Haptic (Touch) Expressions in Akan

This section discusses the basic concept of the sense of touch in Akan. Similar to all other senses discussed earlier, the sense of touch also enables percipients to gather evidence about people, their emotions, feelings and the characteristics of other objects they come into contact with. The two main concepts identified with the sense of touch are tactile and haptic sensations. Ariza & Santís-Chaves (2016) distinguish between these two concepts (haptic & tactile) in touch sense. They show that the term haptic refers to the broad notion of touch which indicates all forms of activities involving touch or identifying objects through the process of touch. This includes coercive touch, emotional touch, painful touch, touch of love, taps, vibrations and many more. Thus, haptic is used to refer to all activities that relate to touch. On the other hand, tactile refers to all kinds of responses that result from the touch experiences. These received reactions are realised either on the skin (the body) or as emotional sensation.

Pramudya & Seo (2019:3) make clear the difference between haptic and tactile concept of touch. They explain that

> …. the 'haptic system' helps us to perceive external stimuli through the sense of touch. Haptic sensations perceived through somatosensory receptors are categorized into two types: tactile sensation and kinesthetic sensation (or proprioceptive sensation). Tactile sensation, typically associated with the sensation of pressure, orientation, curvature, texture, thermal properties,

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> puncture, and vibration, is perceived primarily through stimulation of the skin where mechanoreceptors and thermo receptors are located. Kinesthetic sensation, associated with body position and movement, is perceived through stimulation to the Kinesthetic receptors located in the muscles, joint and tendons (Pramudya & Seo 2019:3).

5.3.1 The Sense of Touch

Gardner (2010) describes the sense of touch as a coming together of two physical entities. She points out that the experience of the body contact is observed in the conscious mind. She mentions that some of the touch involves vigorous movement such as stroking, scraping, tapping or pressing. These touches may either express physical or emotional feelings depending on the nature of the touch and the receptors involved.

In support of Gardner's assertion above, Jakobi & El-Guzuuli (2013) mention that the sense of touch could be done by directs contact which could express both physical and emotional sensations. They explained further that the tactile experience could be experienced through uncontrolled tactile event which demonstrates expression of feelings. This means that the sense of touch can allow percipients to identify how something looks like or is (the texture—rough, smooth, hard, soft, cold, hot etc.). Again, the sense of touch could also allow percipients to express their

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emotions or feelings through the close contact experiences. The sense of touch that expresses emotions could communicate friendship, warmth, love, and care which may further lead into enjoyment we experience from close contact interactions. According to Jenkins & Lumpkin (2017:4078) "what sets touch apart from other senses is its intimacy activity, as it requires direct contact with skin, the sensory organ of tactile sensation". That is the emotive knowledge the entire body discloses.

The literature attests that the skin as the main organ of the sense of touch acts as the engine that provides the brain a wealth of evidence about things we feel and touch. Supporting this claim, Federico (2017:1) mentions that "the sense of touch is a distributed system, with multi-sensory receptors embedded throughout the entirety of the human body". Thus, the whole human body can experience the sensations of the sense of touch. A 2019 Science Report (Home Science Tools) (2019:1) also states that "the skins 'sense of touch' is what gives our brains a wealth of information about the natural environment, including temperature, humidity, and air pressure". The report also indicates that the skin is controlled by large nerves and touch receptors known as somatosensory system. This system becomes accountable for all touch sensations we encounter. There are three types of touch receptors on the skin; (1) mechanoreceptors interpret touch sensations that reveal texture, pressure and vibration. (2) Thermoreceptors interpret touch sensations that connect to temperature (hot and cold) and (3) Pain receptors (nociceptors) reveal sensation of pain to the body. The report again points out that apart from these three receptors

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there are also over 3 million pain receptors and other touch receptors found in the skin muscle bonds. All these receptors together help us identify the different touch experiences percipients encounter. The next section discusses the basic notions of touch in Akan.

5.3.2 The Basic Notion of Touch in Akan

In the Mfantse dialect of Akan, though the core meaning of touch can be expressed from the basic word *tsè* 'to perceive', there are also other verbs which appear in serial to illustrate the sense of touch. Such examples include *kà……hwɛ́* 'touch and see', *sùóḿ….hwɛ́* 'touch and see' and *mìá….hwɛ́* 'press to see' - 'to touch'. These serial verb structures allow three semantic roles; the Instigator, the Source and the End. At one point, the percipient becomes the grammatical subject who functions as the Instigator of the action. At another time, the Instigator may not be the grammatical subject or the percipient but an external force from elsewhere; this could be a tangible or an intangible force. The Source is the object that is touched or felt while the End is the result.

In Akan, the simple meaning allied to these serial verbs (*kà……hwɛ́, sùóḿ….. hwɛ́* and *mìá..hwɛ́*) does not only relate to physical seeing but more of intellectual assessment – to find out. Floyd et al. (2018) in support of this discussion point out that the sense of touch literally means 'hold-grasp-see'. In these touch experiences

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there are direct contact (close touch) activities between the Instigator and the Source. The two entities could sometimes function as percipients at one point in time where both entities are [+ human] and the expression of the sense of touch relates to manifestation of touch of love or other emotional feelings. In this situation, both entities involved become Experiencers as well. At other times, though the Instigator and the Source are + human referents, the subject plays the role of percipient whiles the object, the Source. In some circumstances too the percipients can have + human referent while the source could be both [- human] and [inanimate] entities or other exterior forces. Various meanings that can be associated with these touches could be 'to check', 'to feel someone/something', 'to find out how something is' 'to caress', etc., when such contacts occur, the Instigator involved function as the percipient in the experience (physical) in the interaction. Some of the examples are indicated in (45- 48).

One thing worth mentioning is that any physical part of the body can be used to express the sense of touch but the hand becomes the most obligatory body part that is used frequently to express the sense of touch. Supporting the notion that the hand plays a major role in tactile activities, Gardner (2010:1) indicates that "touch allows us to recognize objects held in the hand, and use them as tools".

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5.3.2.1 Physiological Experiences of the Tactile Sense

The touch experience involving *kà……hwɛ́, sùóḿ….. hwɛ́* and *mìá..hwɛ́*) 'to touch' could be both physical and emotional encounters. Some physical examples of these touch events in Akan can reveal textures like *wíkyíréé* 'hard rough', *krékréẃ* 'coarse', *mòtòò* 'smooth', *àbònàbòn* 'scally', *krékòòẁ* 'hard' and *pɛ̀kyɛ̀pɛ̀kyɛ̀*/bètɛ̀bètɛ̀ 'very soft'. All the activities involved in *kà……hwɛ́, sùóḿ….. hwɛ́* and *mìá..hwɛ́*) 'to touch' are performed in a controlled, conscious manner. Some examples are illustrated below:

45. Dátsɛ̀r̀ nó ká-à àbòfŕá nó
datser DEF touch-COMPL child 3SG.POSS
hó hwɛ́-ɛ̀ dɛ̂ à-dɔ̀ â
self see-COMPL COMP PERF-hot CCM
'The doctor felt the body of the child to find out whether it was warm.'

46. Mè -dzè mé ńsá ká-à
1SG.SUBJ take/HAB 1SG.POSS hand touch-COMPL

bèá â ɔ́-yɛ̀ mè yáẃ nó
place REL 3SG.SUBJ-be 1SG.OBJ pain DCM

'I touched where I feel the pains.'

47. Wɔ̀ -míá-míà-à hɔ̀ńn hó
3PL.SUBJ massage-REDUP-COMPL 3PL.POSS self

hwɛ́-ɛ̀ dɛ̂ hɔ̀ńn ényí bɛ́-gyé
see-COMPL COMP 3PL.POSS eye FUT-take
â
CCM
'They caressed each other to find out whether they will be happy.

48. Ama súò-ò náḿ nó mù hwɛ́-ɛ́
Ama touch-COMPL fish DEF hold see-COMPL

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nó	ńna[11]	á-yɛ̀	bɛ̀tɛ̀bɛ̀tɛ̀
DCM	CL PART.	PERF-be	soft-REDUP

'When Ama touched the fish to check it, it was very soft.' (ABAK SP 5)

All examples in (45- 48) engage three participants; the Instigator, the Source and the End. In example (45), the Instigator is the doctor who felt the body of the child by touching parts of the body to be sure of the temperature of the child. The child is the Source (object) whose body was examined and the End becomes the result the doctor got. In this context, the Instigator and the Source are both [+ human] entities but the activity is not done to establish emotional feelings. The Instigator becomes the percipient in the activity. This act of touching is performed in a conscious effort.

In example (46), when the percipient (the subject) touched the Source (the leg), he/she noticed some pains on the part where he/she touched. The Instigator is unknown; that which might have caused the pain. The pain the percipient feels represents the End of the action. The feelings might have been experienced either in a conscious or unconscious manner.

[11]"Nna' seems to be the variant of 'ná' in Mfantse. Saah (nd: 12) refers to this marker 'na/nna' as formative /particle. According to Saah "the absence of preverbal particles or auxiliary verbs does not prevent the language from forming complex tenses". As Osam (2004:13) correctly indicates, "the language uses a periphrastic means as well as the discourse context" to achieve this objective. It involves the use of the pre-clausal particle **n**á. Also, 'nna' is not the normal conjunction, as we find in example (48) the use of 'ńnà' links the initial tense of the earlier clause to the other clause that followed in the complex sentence. It is in view of this that I gloss 'nna' in (48) as clausal particle (CL PART.)

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In (47), the Instigators double up as the Experiencers and percipients. The bodies of both Instigators function as the Sources of the action of caressing. The result they both experience is the End. Here, it is observed that both Instigators are [+ human] entities and the activities of their touching experience are done for purposes of love. Their physical activities result in emotional feelings (the End).

In (48), the investigation was done in a conscious way as the fish (the source) was examined by Ama, the Instigator who also functions as the percipient. The percipient's perception came out that, the fish appeared very soft. In this context, the texture of the fish was examined and identified as very soft, which is the End.

We notice in the discussions above that the principal purpose of these tactile events is to get into contact with objects to examine their physical characteristics. These activities go beyond physical examination to express feelings and emotions through touch. This form of touching may mean expressing comfort, subduing, pleasing, loving, stimulating, reaching, intimate relationship and other painful expressions. These findings have also been proven cross linguistically in earlier works (Agyekum 2018; Ibarretxe-Antuñano 1999).

The next section that follows discusses metaphorical experience of the tactile sense.

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5.3.3 Metaphorical Experiences of the Tactile Sense.

In this section, we demonstrate some metaphorical concepts that relate to the sense of touch in Akan. Metaphorical extensions of touch may connote chaste, sexual desires, painful impressions taking possessions etc. Some examples are displayed below:

49a. Àbòfŕá	nó	kà	n'ényím̀	sì	àbéŕ
child	DEF	touch/HAB	3SG.POSS-face	together	time
bíárá					
always					

'The child always frowns.'

49b. Ǹdwóḿ	nó	ká-à	n'ákòmá
music	DEF	touch-COMPL	3SG.POSS-heart

'The music touched his/her heart.'

49c. Bànyìm̀bá	nó	kà –à	n'ánò
boy	DEF	touch-COMPL	3SG.POSS-mouth
èdúŕ	wú-ì		
medicine	death-COMPL		

'The boy poisoned himself to death.' (DWEN SP 5)

49d. Pápá	â	ɔ́-yɛ́-è	mé	nó
good	REL	3SG.SUBJ -do-COMPL	1SG.OBJ	DCM

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á-ká m'-ákòmá

PERF-touch 1SG.POSS-heart

'S/he has touched my heart with his /her kindnesses.'

Examples (49) are emotional touch experiences of anger, joy, death and pleasing, respectively. The sensational feelings expressed in example (49a) connote psychological experience of anger, displeasure, unhappiness or displeasure. The expression of anger demonstrated on the face of the child is mapped unto the concept of touch (frowning). The act is controlled activity that is illustrated by the percipient.

In (49b), the music with its accompanied lyrics and messages moved the heart (an emotional feeling) of the percipient and therefore aligned this experience to the act of touch. This kind of sensation the percipient experience is an uncontrolled touch that demonstrates 'love for' or 'liking towards' or 'affection for' music.

(49c) is a controlled event where the Experiencer touched his mouth with a tangible object (poisonous medication) that caused his death (not all poisoning result in death). The touch of the poisonous medicine served as a stimulant or instigator in the touch process causing the end result, death.

In (49d), the percipient makes reference to the impact an action of benevolence on his/her emotions. This action of kind-heartedness plays the role of

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an instigator which creates a good impression on the mind of the percipient as well as on the heart. The mind of thoughtfulness sinks into the heart and therefore aligned this experience to the act of touch, a kind of gratitude, but an emotional feeling.

50. Esi	n'-ényí	ká	fámù	
Esi	3SG.POSS-eye	touch/HAB	ground	
'Esi is humble.'				

The notion of touch in example (50) connotes humility. That is, literally explained as the face of the percipient touches the ground. The concept of humility is mapped unto the touch on the ground relating it to the concept of soberness, carefulness, and humility as expressed in the context.

51 Pàpá	nó	dzè	nó	-hó	ká-à
man	DEF	take/HAB	3SG.POSS	self	touch-COMPL
bàsìàbá	nó				
girl	DEF				

'The man had sexual intercourse with the girl.' (Lit.: The man's body touched the girl)

The notion touch in (51) could be two-fold; the first intention could connote normal body touch experiences and secondly the notion of sexual contact. The sense of touch is a physical, controlled and emotional experience on the part of the Experiencer (the percipient- the grammatical subject). In this context the object

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becomes the patient. The notion of sexual interaction is mapped on the concept of touch where touch is conceptualised as sexual contact.

52.	Òhìá	néménémé	á-ká	èbùsùá	nó
	poverty	abject	PERF-touch	family	DEF

'The family lives in abject poverty.'

In example (52), an uncontrolled intangible force (poverty) is seen to have touched the family. This touch is emotionally and physically experienced by the object that is affected. The object functions as the Experiencer in this unrestrained event. We realised that the notion of abject poverty is mapped unto the inadequate needs of the family. Therefore, the inadequate needs conceptualised as abject poverty is understood as touch experience.

53.	Yàŕbá	à-ká	àbówá	nó
	disease	PERF-touch	animal	DEF

'A disease has attacked the animal.'

In example (53), the concept of touch connotes afflictions or diseases. This context shows that the source (the body of the animal) is afflicted by an external force (disease) which is the instigator. So, the instigator, the uncontrolled force (the disease) has come into direct contact (touches) with the body of the animal. The touch is physically realised on the body of the animal and the end could be the feeling of unwellness (the effect of the disease) or other signs the animal exhibits. The disease that comes into contact with the body is conceptualised as touch.

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54. É-tòẁ	édúŕ	bɔ́ń	â	bí	kà
2SG.SUBJ-throw	medicine	bad	CCM	some	touch/HAB
w'ánò					
2SG.POSS-mouth					

'When you hatch an evil plan, you are likely to become a victim too.' (DW SP4)

In example (54), the activity of practicing mis-deeds plays the role of instigator leading to receiving its punishment. The patient in this event becomes the Experiencer (being touched) of the punishment. Thus, the punishment one receives from his or her bad deeds is connected to the concept of experience of touch. The conceptualisation of getting a punishment as a result of demonstrating bad deeds is linked to the concept of touch.

5.4 Summary

This chapter sought to discuss the semantics of olfactory, auditory and tactile senses. It was clear from the discussions that though these senses derive their core meanings from the basic word *tse* 'to perceive', they illustrate varied semantic meanings. Akan provides other ways of representing and interpreting basic and extended meanings of olfactory, auditory and tactile sensory information.

Generally, it was also revealed that all events that characterize these senses (olfactory, auditory and tactile) come in uncontrolled and controlled ways. Findings

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also show that while animate entities could function as grammatical subject in constructions of olfactory and auditory sense experiences, both animate human entities and inanimate entities (‘yàŕbá’ &, òhìá) function as the grammatical subject in tactile constructions.

It was also observed that while olfactory and auditory allows two semantic participants; the percipient and the object in their constructions, the tactile sense engages three semantic participants; the Instigator, the Source and the End.

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CHAPTER SIX

SUMMARY AND CONCLUSIONS

6.0 Introduction

This thesis examines linguistic expressions in Akan that describe the various senses of the body such as tasting, seeing, touching, smelling and hearing. It adopts the cognitive linguistics approach which helps to explain how these senses capture our cognitive experiences as they relate with things in the world. Principally, this thesis sought to achieve the following objectives:

(1) Provide an exhaustive inventory of cognition and perception expressions in the Mfantse dialect of Akan.

(2) Analyze the formal and semantic properties of cognition and perception expressions in Mfantse.

(3) Examine the role of context (structural and social context) in the construction and interpretation of perception and cognition meanings cross-linguistically and also cross-culturally.

These objectives have been addressed in the preceding chapters.

The expressions that communicate things we see, touch, smell, taste, and hear are what this thesis discusses under the concept of Perception and Cognition.

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This final chapter provides the summary of the findings of the study and the conclusions drawn. The chapter is made up of three sections: Section 6.1 discusses the summaries of the findings of the study. Section 6.2 looks at the theoretical implications of the study and projections for future research, while Section 6.3 presents the concluding remarks.

6.1 Summary of Findings

In examining the five sensory signals of the body under the broad heading Perception and Cognition and their usage in Akan, one thing that becomes evident in the discussions is that the two phenomena (perception and cognition) integrate ideas to bring clarity in conceptual experiences. That is, they interlink ideas to unearth diverse meanings relating to the five senses (sight, touch, smell, taste, and hear) which serve as the basic channel to experiences in the world.

6.1.1 Findings of the Semantics of Perceptive Verbs Hwɛ́ and Hú

In discussing the semantics of the perceptive verbs *hwɛ́* and *hú* in Akan, various constructions and meanings that characterise this domain are examined. The discussions infer that *hwɛ́* 'look' and *hú* 'see' hinge on the ability to recognise the relevant entities in the real world through either a conscious (deliberate action) or

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unconscious (spontaneous effect) means. This helps to identify the several eye responses (detailed information of experiences in the world) that emanate from the sensory organ.

The semantics of these two verbs show that activity of sight can either happen instantaneously or over a period of time and the events can be volitional or non-volitional. The results indicate that perceptive verbs in Akan can exhibit other extended meanings relating to intra-psychological and socio-psychological views. The intra-psychological experiences capture visual notions connected to self-philosophies such as personal opinions/beliefs, principles and values while social-psychological visual experiences describe the notion of interdependency. Below are illustrations of some of the extended meanings of the perceptive verbs:

Hwέ - to visit, to nurture, to monitor, to examine, to observe, to take care, to study, to search, to decide, to investigate, to wait patiently, to look for something to eat, to desire for, to ascertain, to measure, to take precaution and to take good care of.

Hú – to seek help, to love (love at first sight), to consult, to foresee, to experience, to be enlightened, to figure out, to be abreast with time, to get to know the truth, to identify, to understand, to know, to sleep with or have sexual intercourse, to find out, to discover, to discern, to notice, to familiarise, and to distinguish.

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These extended meanings which sometimes also connect directly to metaphors and other idiomatic expressions are described as secondary elements to the core meanings of the perceptive verbs in Akan.

The two perceptive verbs obligatorily require objects in their constructions, making most of the constructions a transitive one.

6.1.2 Findings of the Semantics of Taste (Gustatory) Expressions

In the discussion of the semantic properties of taste (gustatory) expressions in Akan, the following findings emerge.

Akan realises six primary taste sensations in the language *dɛ̀ẁ* 'pleasantness', *ǹkyèǹ*, 'saltiness', *kàẁ, fèm̀*, and *yèrɛ̀yèrɛ̀ẁ* 'sourness', *wèǹ*, 'bitterness', *dà ànómú* 'congealing', and *táblábáá* 'blandness'.

From the ethno-cultural background, the taste category, *dɛ̀ẁ* 'pleasant' can be described as a type of pleasant taste that includes +/- sugary entities, and non-food related experiences and exhibits varied extended semantic meanings than the other taste forms. The expression *dɛ̀ẁ*, can select an animate argument [+/-human] as the percipient of the taste but the perceived objects can be inanimate or animate [+/- human bodily feelings].

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The study shows that Akan has different forms of expressing sour taste—*kàẁ, fèm̀,* and *yèrèyèrèẁ* 'sour'. These sour expressions are used in the language depending on which referent is being described. The taste sense, *táblábáá* 'bland', does not depict: sweet, bitter, sour, or salty taste.

The finding is that, the kind of expression of taste in salty taste is relative to the perceiver. Thus, depending on the percipient's taste bud, the expression of excess use of salt may be either extremely salty to one percipient *(ǹkyèńkyéń)* or exceptionally salty *(ǹkyèńkyéńńkyéń)* to another.

Also the variations that come with bitter taste experience depend on percipients' orientation towards bitter taste. How one percipient expresses extreme bitter taste will definitely be different from another percipient.

Apart from the physiological roles, majority of the meanings that taste expressions reveal are metaphorical, especially with regard to *dɛ́w* 'pleasant' taste. The different domains or contexts in which the related meanings are realised demonstrate the core meaning of the sense. A summary of metaphorical meanings of taste are as follows: pleasantness– gentle speech, speaks well, having enough money, sexual enjoyment, flattering and bragging; blandness – improper dressing; sourness – regret, disappointment; bitterness – offensive, difficulties in life, excessive judgment and stinginess; saltiness – dishonesty, not sweet and not interesting.

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The general observation from this section is that the choices for a specific taste display the perception people have for liking something. Taste thus is linked to the personal idiosyncratic frame of mind of the perceiver as well as their cultural background.

6.1.3 Findings of the Semantics of Olfactory, Auditory and Tactile Expressions

A detailed evaluation of the olfactory, auditory, and tactile notions in Akan shows that these three senses derive their core meanings from the basic word *tsè* 'to perceive'. However, the language also displays other ways of representing and interpreting basic and extended meanings of olfactory, auditory and tactile sensory information.

Generally, in the domain of smell, the following terms *ǹká* 'scent', *m̀fár̀* 'scent' (stale), *yì /tù ǹká* 'to emit a bad or a good scent' *tsè ǹká* 'to perceive a scent', *tù/yì húá* 'to emit a good smell', *húám̀* 'to emit a good scent', *bɔ́ǹ* **'**to stink', *nyàǹ* 'nauseating' (bad), *nyìnyà* 'putrid' (decaying), *hùà* 'smell/sniff" describe the various perceptions of smell in Akan. *M̀fár̀*/*Ǹká* 'scent' may be understood to conflate the concepts of good, bad, fragrant, stench and disapproving concepts in portraying smells (odours) in Akan. Findings also show that the semantics of *ǹká* 'scent' demonstrate that though there are few occurrences where *ǹká* 'scent' does not have a negative connotation, in most cases it does, and perhaps the non-negative

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connotation can be explained in a context where the concept of *ǹká* 'scent' needs to be modified with positive adjectives to get the positive connotation. Perhaps its neutral use is connected with food. While *bɔ̀ǹ* becomes the general basic term assigned to bad odours, *nnyàǹ* represents nauseous state and *nyìnyá* for putrid smell which also portray kinds of bad odours. On the other hand, where the odours are in extreme state Akan (Mfantse) uses these terms: *sùòǹǹ, kòóò, káńkáń, hùǹtùǹǹ* and *sùkùsùkù* to specify that.

Conceptualising the state of *bɔ̀ǹ*, this study illustrates that *bɔ̀ǹ* can display the concept of bad human body odour, lack of intellectual competencies and overall bad odour. However, in the state of good odours, the term *húáḿ* is used. The results also reveal that the olfactory experience of *hùà* 'to sniff/smell' is for relaxation, satisfaction, love and detection of preference of the odour of an entity.

This section also shows extended meanings of olfactory experiences in the language; a summary of which is as follows: *húáḿ* 'good odour': 'good mouth talk' 'good speech' or 'an eloquent speech'; *bɔ̀ǹ* 'bad odour': 'bad mouth-talk' – loud-mouthed or offensive speech; 'bad breath/bad smell in the nose' hostility, unfriendliness; 'self-matter smells' bad character or behaviour. *Ǹká* 'scent' (positive/negative) 'good or bad character'.

The auditory discussions show that Akan identifies two auditory terms: *tsè* 'hear' and *tsíè* 'listen'. Semantically, meanings derived from these two verbs, *tsè*

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'hear' and *tsíè* 'listen' differ in terms of the context in which they occur. However, the two verbs have similar syntactic structures in terms of the arguments they select. They co-occur with only animate [+ human] entity as the percipient as well as the grammatical subjects, where the perceived objects can be both animate and inanimate objects, though some non-human animate entities also hear and can respond to stimulus around them. The two verbs, *tsè* 'hear' and *tsíè* 'listen' can also demonstrate both controlled and uncontrolled events (i.e. the perception experience involved with *tsè* and *tsíè* are marked with +/- volitional acts).

The findings also indicate that the auditory sense can reveal other extended meanings as follows: *tsìètsíèè* 'to investigate', *tsíè* 'to give a hearing' (in the legal context), *tsíè no* 'to agree'/'to permit', *tsíè nó àsò pá mù*: 'to listen without prejudice', *tsíè /tsè… àsɛ́m* 'obedience', *tsíé … ànó* 'to act on hearsay', *à-tsè â ńńtséè*: 'pretence' and *tsè àsó mú*: 'listening to the right information'.

The discussion on tactile sensation shows that Akan has these expressions to demonstrate the sense of touch in the language: *kà…hwɛ́, súóḿ…hwɛ́* and *míá… hwɛ́* 'touch'. The expressions of touch involve the hand as the most obligatory body part. The observation here is that the serial verbs *kà…hwɛ́, súóḿ… hwɛ́* and *míá…. hwɛ́* 'touch' deal with direct physical or close contact between two entities to examine physical characteristics. These activities go beyond physical examination to express feelings and emotions through touching. Activities performed using these expressions are done in a controlled, conscious manner. Findings show that the

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activities involving these touchings express comfort, subduing, pleasing, loving, stimulating, reaching, intimate relationship and painful expressions.

This section also makes clear that apart from the physical meanings of touch, the touch sense can demonstrate other extended meanings as the following exemplify: *n'ényí ká fámù* 'he's humble'; *Òhìá á-ká èbùsùá nó* 'poverty has gripped the family'.

This study also finds that while olfactory, auditory, cognitive perceptive expressions and gustatory expressions allow two semantic participants, the percipient and object, in their constructions, the tactile sense engages three semantic roles – the Instigator, the Source and the End.

Further, it is clear from the discussions in this study that, the nature of the various events illustrated by the various sensory signals is such that all events can be demonstrated in controlled as well as uncontrolled manner. The events can also happen instantaneously or over a period of time.

Again, it has been shown that, percipients involved in the perceptual events in olfactory and auditory senses as well as in gustatory sense are principally animate [+/- human] referents and can also function as grammatical subjects in their constructions. However, only animate human entities function as the grammatical subject and percipient in tactile constructions. With perceptive expressions both

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animate [+/- human] and inanimate entities are permitted to fill the Experiencer (subject position) slot of constructions associated with these sensory signals.

6.2 Projections for Future Research /Theoretical Implications

It would be interesting to have further research done in other African languages to find out how the hierarchy turns out. Further research can be conducted to find out whether or not Kwa languages exhibit the same or diverse hierarchical information relating to Perception and Cognition expressions.

The study establishes that in Akan (Mfantse), the sense of taste demonstrates basic and numerous extended meanings in natural discourses as this is contested in earlier linguistic literature to be the least preferred in terms of the meanings it exhibits. It is therefore imperative that further research is carried out in other Kwa languages in order to make a generalisation on the sense of taste. Further, research can be carried out in other Kwa languages to find out whether there are other adjectives to distinguish taste categories before generalization can be made.

Ten basic smell terms and six modifiers were established with the auditory sense. This observation needs to be probed further in other African languages in order to draw characteristic conclusions.

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This study also shows that touch is the least mentioned sense in perception and cognition domain in Mfantse. This observation needs to be probed further in other African languages in order to draw characteristic conclusions.

It may be of interest that this notion of a sense revealing several senses seems to be universal among some African languages as the literature attests. Further studies can be conducted in other African languages, especially in Kwa languages, to find out whether the notion of one sense modality exhibiting other sense modalities pertains in those languages before authentic generalisations can be made.

6.3 Concluding Remarks

The differences in linguistic expressions of sensory imageries depend largely on how community members interact with the environment they find themselves in.

This thesis is thus, one of the novel studies on perception and cognition in Akan (Mfantse) analysed from the cognitive linguistic view. It is imperative to also note that the data source in this study is native speakers who use the language in their everyday life experiences.

Research in perception and cognition is very important since the various concepts about the sensory signal help in understanding cognitive and perceptual issues of things in the world. The findings of this study will help preserve the language and also help uncover the linguistic structures of sensory information in

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the language. This study will also add to the existing literature on perception and cognition for further references of research in this area.

In addition, this study records a lot of metaphorical ideas which will benefit linguists by way of sharpening their language skills as they use these metaphors.

Evaluation on the proposal that advanced a single general hierarchy guiding the cross-linguistic coding of sense modalities show that the principle on the hierarchy has been challenged on several front and does not hold true for all languages. In view of that this thesis proposes that a preferred sense on a hierarchy should be what society values in terms of its usage and beliefs attached to it.

Finally, the Mfantse data make a connection between the findings and the theoretical/conceptual positions as well as the literature by establishing that the concept of perception and cognition normally move in pairs as state and non-state pairs in Akan. The state refers to the concrete/non-metaphorical uses while the non-state roles are expressed abstractly/metaphorically. These pairs play a major role in the syntactic and semantic contexts of perception and cognition meanings cross-linguistically and cross-culturally. It is also established in this study that the sense modalities in Mfantse employ lexical items such as verbs and adjectives in expressing the various senses. Basically, all the sense modalities in Mfantse have verbal forms as a principal coding lexical item for expressing perception and cognition. Nevertheless, adjectives were central to linguistic expressions for

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gustatory and olfactory senses. Also, the sensate objects which encode the various sense modalities come as nominals. In some constructions of the senses, adverbs are used for emphatic purposes. These findings vary cross-culturally and cross-linguistically as noted in the literature (Majid et al. 2018; Majid & Kruspe 2018; Levinson & Majid 2014; Aikhenvald & Storch 2013; Majid & Levinson 2011; Evans & Wilkins 2000). However, one notable finding which Mfantse (Akan) finds, and for that matter makes it a shared feature among languages reviewed, is the concept of one sense modality functioning as a principal coding strategy for other senses. In the case of this study, the verb *tse* 'to perceive/ hear' was identified to encode other senses such as taste, touch, hear, and smell. It is expected that comparable research will spring up from closely related dialects in other Ghanaian languages, the Kwa language family, as well as African languages in general to bring out similarities and differences in the linguistic analysis of these sensory modalities.

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APPENDIX I – INTERVIEW QUESTIONS

Smell

List all the smell terms in the language. In what contexts or circumstances are these terms used?

What are some of the things that smell? Can you mention them and describe them as well?

How do you distinguish between the different kinds of smell in the environment and among people?

What kind of scent or smell do you pay attention to and which ones do you try to avoid?

Which scent or smell are you uncomfortable to be associated with?

Taste

List all the taste terms in the language. For example, for sweet, sour, salty, bitter etc.

How do you distinguish between these different types of taste forms?

Tell us the taste of sugar, honey, salt, lime, food, soup, drinks, fruits etc and their behaviour as we taste them.

What are the differences in taste of these objects earlier mentioned?

Apart from these items described what other items or objects can we associate taste to?

Tell us how you prepare your favourite meal, different dishes and other food processing.

What are your likes and dislikes?

What are some of the things we associate taste to?

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Hearing

Can you hear? If you can hear what are some of the things you hear around you and listen to?

What kind of information do you hear and listen to?

What are some of the different stories, music and messages do you listen and hear?

What sound do you love hearing and listen to?

How do you listen?

Do you have good listening skills?

What do you hear at various times of the day? (e.g. what do you hear in the morning, afternoon and in the evening, etc?

What do you hear that reminds you of something, or something you like or enjoy?

Apart from humans do we have other objects that also use their ears in some other way?

What do other people listen to?

Sight

How do we use our sense of sight? Can you see? If you see what are some of the things you see around you?

What do you see at various times of the day? (e.g. what do you see in the morning, afternoon and in the evening, what about the weather etc?

What do you see that reminds you of something, or someone's behaviour?

What do you see in the environment? Can you describe some of the things you see?

What is different each time you look at your environment?

Mention some of the things you use your eyes to do?

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Apart from humans do we have other objects that also use their eyes in some other way?

Touch

How do we feel and observe the human body and other objects around us?

What are the terminologies used to describe items we feel with our hands and in what contexts or circumstances are these terms used?

How do we describe the various textures that we have?

What other descriptions do we give to sense of touch?

General questions

Can you share with us some of the Akan proverbs you know and more especially that relates to the senses?

Tell us about steps you take when you want to marry.

Narrate how you go for hunting and the process of searching for the animals.

Narrate some of the food processing you know. How do you celebrate your festivals?

Tell us about a story.

How do you take care of your things, things around you and that of others?

How do you take care of close contact and friends?

Can you describe the kind of relationship that exist between you and your partner?

How do people care for others? e.g. doctors, relatives, partners, churches etc

How do you look for jobs?

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Narrate how the following activities are performed: funeral rites, marriage rites, marriage experiences, and encountering problems (assessing emotions, feelings, thinking etc.)

Give description of symptoms of diseases and how medications are administered.

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APPENDIX II – SAMPLE TEXTS WITH GLOSSES

Sample texts that form part of the data

Vision

- Me yɛ nyimpa yi dze mu hu
  1SG.SUBJ be human DEF TOP 1SG.SUBJ see
  adze
  something
  'The fact that I am a human being, I can see things.'

- Mu hu hɔn a wɔ e-twa
  1SG.SUBJ see/HAB 3PL.OBJ REL be PERF-surround

  mo ho e-hyia yi
  1SG.SUBJ self PERF-round DEM
  'I see all those who have surrounded me.'

- Me-nn-hyɛ-ɛ-da-ara mu-nn-hu-u
  1SG.SUBJ-NEG- order-COMPL-day-INT 1SG.SUBJ-NEG-see-PERF

  obi a wɔ-dze aton a-wo
  someone REL 2SG.OBJ-take blacksmith PERF-birth
  no gyedɛ o-sua ana.
  3SG.OBJ unless 3SG.SUBJ-learn before
  'I have not taken critical look at someone who has been born with the gift of being a blacksmith unless he/she learns on apprenticeship.'

- Awar dze, i-tum hwɛ ɔbaa
  marriage TOP 2SG.SUBJ-able look/HAB woman

  a no ho yɛ fɛw na a-war
  REL 3SG.POSS self be beautiful CONJ CONS-marry

  no
  3SG.OBJ

  'For marriage, you can admire a beautiful lady and then marry her.'

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- Oh, m-e-hu ɔbaa bi
  oh, 1SG.SUBJ-PERF-see woman INDEF
  e-sie a mo-bɔ-war no
  PERF-hide REL 1SG.SUBJ-FUT-marry 3SG.OBJ
  'Oh, I have mottled a particular woman I would like to marry.'

- Mber bi wɔ hɔ a, i-bo-hu dɛ
  time INDEF be there CCM 2SG.SUBJ-FUT-see COMP
  ɔbaa a-yɛ bra no nna
  woman PERF-be menstruation DEF then
  ɔ-dze nyinsɛn nam, ntsi ɔbaa no
  3SG.SUBJ-hold pregnancy walk so, woman DEF
  mo-hwɛ no kakra na
  1SG.SUBJ-see 3SG.OBJ for a while CONJ
  yɛ-a-kɛ-yɛ no ho gyaa;
  1PL.SUBJ-CONS-go-do 3SG.POSS self talk.to
  me-kyerɛ y-e-ko-hu egya no. Ntsi
  1SG.SUBJ-show 1PL.SUBJ-CONS-go-see father DEF so
  sɛ e-ro-war a ɔ-wɔ dɛ
  when 2SG.SUBJ-PROG-marry CCM 3SG.SUBJ-be COMP
  e-hwe-hwɛ obi a e-nye
  2SG.SUBJ-look-REDUP someone REL 2SG.SUBJ-be.with
  no nam a wo ho bɔ-tɔ
  3SG.OBJ walk CCM 2SG.POSS self FUT-dropdown

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wo

2SG.OBJ

'Sometimes, as for a woman, before you become aware of her menarche, she would already be pregnant. So, I study the lady for a while then we go and talk it over with the father. So, when you decide to marry, look for a partner you will feel comfortable with.'

- Sɛ yɛ-kɔ ha a, yɛ-dze

  when 3PL.SUBJ-go/HAB hunt CCM 1PL.SUBJ-do-take/HAB

  gya na yɛ-dze hwe-hwɛ abowa no

  fire FOC 1PL.SUBJ-do-take look-REDUP animal DEF

  'When we go for hunting, we use fire to look for the animal.'

- Oh dɔkon edwuma no m-e-hu

  oh kenkey job DEF 1SG.SUBJ-PERF-see

  n'-enyi do, ntsi, eburow a
  3SG.POSS-eye on so dɔkon REL

  wɔ-dze yɛ dɔkon no
  3PL.SUBJ-take/HAB do kenkey DCM

  mo-hwɛ no yie ana
  1SG.SUBJ-look/HAB 3SG.OBJ well before

  m-a-fɔw.

  1SG.SUBJ-PERF-wet

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'Oh, for the kenkey job, I have become skilled enough on the job. So, I examine the maize I use to prepare kenkey very well before soaking it in water.'

- M-a-yɛ edwuma no a-kyɛr ntsi,
  1SG.SUBJ-PERF-do job DEF PERF-long so,

  me-dze m'-enyiwa na
  1SG.SUBJ-take/HAB 1SG.POSS-eye FOC

  me-dze hwɛ dɛ eburow
  1SG.SUBJ-take/HAB look/HAB COMP maize

  no o-tu ana m-a-fɔw
  3SG.OBJ 3SG-rise before 1SG.SUBJ-PERF-wet

  'I have done this job for long so I use my eyes to ascertain whether the maize can rise before soaking it in water.'

- Sɛ obi yar a mo-kɔ
  when someone sick CCM 1SG.SUBJ-go/HAB

  kɔ-hwɛ no wɔ ayaresabea hɔ.
  go-look/HAB 3SG.OBJ at hospital there

  'When someone is sick I pay him/her a visit at the hospital.'

- Sɛ o-du beebi a, ye-ko-hu
  when 3SG.SUBJ-reach certain.time CCM 1PL.SUBJ-go-see

  a-sɔfo no ma wɔ-bɔ mpaa
  PL-pastor DEF COMP 3PL.SUBJ-strike/HAB prayer

  ma hɛn
  give/HAB 1PL.OBJ

  'At certain time we go and consult the pastors to pray for us.'

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- Asɔr no so hwɛ a-bɔbɔfo anaa e-hia-fo
  church DEF also see/HAB PL-needy CONJ NOM-need-PL
  'The church also takes care of the needy and the poor.'

- Yɛ-hwɛ dwuma a ye-ri-dzi
  1PL.SUBJ-see/HAB work REL 1PL.SUBJ-PROG-eat
  na yɛ-dze bɔ mpaa wɔ afahyɛ
  CONJ 1PL.SUBJ-take/HAB strike/HAB prayer at festival
  da no
  day DEF
  'We base our prayer on the programme during the time of the festival.'

- Ntsi yɛ-hwɛ mu a, ɔman no yɛ
  so 1PL.SUBJ-look/HAB inside CCM town DEF be
  Takyi dze ntsi na yɛ-frɛ no
  Takyi own so CONJ 1PL.SUBJ-call/HAB 3SG.OBJ
  Takyiman
  Takyiman
  'So, we realised that the town is for Takyi that is why we call it Takyiman'.

- Yɛ-hwɛ n-da no na
  1PL.SUBJ-see/HAB PL-day DEF CONJ
  yɛ-dze hyɛ afahyɛ da no ansaana
  1PL.SUBJ-take fix festival day DEF before
  yɛ-a-hyɛ ase
  1PL.SUBJ-PERF-fix begin.
  'We use the calendar to calculate the date for the festival before commence.'

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Abɛbu	dze	beberee,	bi	yɛ:
Proverb	FOC	many	some	be

'There are many proverbs, some are:

- Èhubida ntsi na abowa aserwa gyegye
  experience that CONJ animal sparrow collect.REDUP/HAB
  ne ba agor a, o-yi
  3SG.POSS child play CCM 3SG.SUBJ-pick/HAB
  n'-enyi to nkyɛn
  3SG.POSS-eye put/HAB side

  'It is out of caution that when the sparrow plays with the child it looks elsewhere.'

- E-dze bɔ-hwɛ obi ne ba
  2SG.SUBJ-take/HAB FUT-look someone 3SG.POSS child
  dze fa tɔ akokɔ nyɛn
  DCM pick/HAB buy/HAB chicken rear/HAB
  no
  3SG.OBJ

  'It is better to rear a hen than to nurture someone else's child.'

- Hwɛ do ma me nn-yɛ dɛ
  look/IMP on give 1SG.OBJ NEG-be COMP
  wo-ara
  2SG.REFL

  'It is better to take good care of your own things than allowing someone to do so.'

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- Hwɛ pete ne n-tɛkyerɛ mu
  look/IMP vulture 3SG.POSS PL-feather inside
  'Use every possible means to uncover the truth.'

Taste

- Mu-hu dɛ esikyire yɛ dɛw
  1SG.SUBJ-see/HAB COMP sugar be sweet
  'I find that sugar is sweet.'

Ndzɛmba a o-bo-tum a-yɛ dɛw
PL.thing REL 3SG.SUBJ-FUT-able PERF-be tasty

anaa fenemfenem anaa dɔkɔdɔkɔ dɔɔso ntsi ye-tum
or sweet or sweet many so PL.SUBJ-able

ka dɛ
say/HAB COMP

'Things that can be tasty are many, so we can say that:'

- Nsa yi yɛ dɔkɔdɔkɔ
  drink DEF be sweet
  'The drink tastes very sweet.'

- Ataaba no mu yɛ fenemfenem
  fruit DEF inside be sweet
  'The fruit is extremely sweet.' (*ataaba* 'miraculous berry')

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- Nsu no yɛ dɛw

  water DEF be pleasant

  'The water is refreshing.'

- Ewo yɛ dɛw

  honey be sweet

  'Honey is sweet.'

- Mframa no yɛ dɛw
  air DEF be pleasant

  'The air is so refreshing.'

- Awar yɛ dɛw

  marriage be pleasant

  'Marriage is sweet.'

- Mu-tum ka dɛ me yer
  1SG.SUBJ-able say/HAB COMP 1SG.POSS wife
  ne twɛ yɛ dɛw, ah fa bi

  3SG.POSS vagina be sweet ah take some

  yɛ serew.
  be laugh.
  'I will be able to say that my wife's vagina is sweet, ah just laugh over it.'

- Edziban so yɛ dɛw

  food also be tasty

  'Food is also tasty.'

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- Nkwan so yɛ dɛw

  soup also be tasty

  ‘Soup is also tasty.’

- Nkwan no bi tum yɛ nkyen sɛ
  soup DEF some able be salt COND
  salt dɔɔso wɔ mu a
  nkyen many be inside CCM

  ‘Some soup becomes salty if there is too much salt in it.’

- Me –dze nkyen to edziban mu a,

  1SG.SUBJ-take/HAB salt put food inside CCM

  me-tse ne dɛw, sɛ nkyen nnyi

  1SG.SUBJ-hear 3SG.POSS taste COND salt NEG

  mu a me-nn-tse ne dɛw

  inside CCM 1SG.SUBJ-NEG-hear/HAB 3SG.POSS taste

  ‘When I add salt to my food, I feel its good taste, but when there is no salt in it, I don’t get its good taste.’

- Esikyire yɛ dɛw dada na

  sugar be sweet already CONJ
  sɛ m-a-mm-fa nkyen

  COND ISG.SUBJ-PERF-NEG-take salt

  a-nn-ka ho wɔ edziban mu a

  PERF-NEG-add self at food inside CCM

  ɔ-nn-yɛ dɛw
  3SG.SUBJ-NEG-be tasty
  ‘Sugar is already sweet but if I don’t add salt to it, it will not give it the good taste that it should have.’

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- Sɛ edziban no ne nka fa wo

  when food DEF 3SG.POSS aroma pass 2SG.POSS

  hwen mu a ɔ-bɛ-yɛ wo dɛw

  nose inside CCM 3SG.SUBJ-FUT-be 2SG.OBJ tasty

  'When you smell the aroma of the food it will water your mouth.'

- Mɔmɔe bɔn naaso ɔ-ma
  salted.fish smell.bad but 3SG.SUBJ-give/HAB

  edziban yɛ dɛw
  food be tasty

  'Salted fish smells bad, yet, it gives food a good taste.'

- Bɔwen ahaban yɛ wen

  bitter leave be bitter

  'Bitter leaf is bitter.'

- Bese yɛ wen

  kola.nut be bitter

  'Kola nut is bitter.'

- Abode edur so yɛ wen

  neem.tree medicine also be bitter

  'The neem tree medicine tastes bitter.'

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- Ngo dze ɔ-da enum

  Palm oil TOP 3SG.SUBJ-lie mouth

  'For palm oil it congeals in the mouth.'

- Mbɔr so kaw

  corn dough also sour

  'Corn dough also tastes sour.'

- Mfantse-dɔkon dze o-tum kaw
  Mfantse-kenkey TOP 3SG.SUBJ-able sour

  m'-adadaw mu
  1SG.POSS-jawbones inside
  'For Mfantse kenkey it tastes sour in my jawbones.'

- Ekutu dze ɔ-fem se o-tum

  orange TOP 3SG.SUBJ-sour/HAB teeth, 3SG.SUBJ-able

  so kaw

  also sour

  'For orange it sets teeth on edge, it can also be sour too.'

- Ankama dze no mu yɛ yerɛwyerɛw

  lime/lemon TOP 3SG.POSS inside be sour

  'For lime, it tastes sour – pungent.'

Bɛ no bi so wɔ a ɔ-kasa

Proverb DEF some also be REL 3SG.SUBJ-speak/HAB

fa 'taste' ho

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pass taste self

'Some of the proverbs also describe taste.'

- N'-ano yɛ wen
  3SG.POSS-mouth be bitter
  'S/he is foulmouthed.'

- Aban mbra nye no e-dzi
  government law be.with 3SG.OBJ PERF-eat
  no wee-wee-wen
  3SG.OBJ bitter-REDUP-REDUP
  'The law has dealt with him/her ruthlessly.'

- Ɔbra nye no e-dzi no
  life be.with 3SG.OBJ PERF-eat 3SG.OBJ
  wee-wee-wen
  bitter-REDUP-REDUP
  'Life has not been kind to him/her.'

- Ne yamu yɛ wen
  3SG.POSS stomach.inside be bitter
  'S/he is stingy.'

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- Ne sisi mu a-yɛ no dɔkɔdɔkɔ

  3SG.POSS waist inside PERF-be DEF sugary

  'S/he has been passing stool frequently.'

- Ne tsir mu yɛ no dɛw

  3SG.POSS head inside be 3SG.OBJ pleasant

  'S/he is pampered.'

- No ho yɛ no dɛw

  3SG.POSS self be DEF pleasant

  'S/he is easily aroused sexually.'

- N'-enum asɛm yɛ dɛw

  3SG.POSS-mouth speech be pleasant

  'S/he speaks well.'

Smell

- Sɛ me-tse dɛ adze bɔn
  when 1SG.SUBJ-hear/HAB COMP thing smell.bad

  a mo hwe-hwɛ beebi a ɔ-wɔ
  CCM 1SG.SUBJ look-REDUP where REL 3SG.OBJ-be
  'When I realised that that something smells I search for where it is.'

- Sɛ adze bɔn a kwan a
  when something smell.bad CCM way REL

  me-fa do hu nye dɛ

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1SG.SUBJ-pass/HAB on see/HAB be COMP

nsaman fi mu ba
PL.maggot come/HAB inside come/HAB
'If something smells what I use to observe is that maggot comes out of it.'

- Sɛ abowa bi bɔn a o-yi

when animal INDEF smell.bad CCM 3SG.SUBJ-emit/HAB

nka suonn wɔ mfikyiri hɔ
scent very.bad.odour at backyard there.

'When an animal smells, it emits bad smell at the backyard.'

- Abowafun dze ne nka bɔn ara yie

carcass TOP 3SG.POSS scent smell.bad very well

'The carcass of the animal smells very badly.'

- Sɛ biribi bɔn wɔ mpata mu a

when something smell.bad at area inside CCM

ɔ-bɔ-bɔn dɛ mɔmɔe.
3SG.SUBJ-FUT-smell COMP stinking.fish
'When something smells in the environment, it will smell like a stinking fish.'

- I-tum gyina nam ne nka do
2SG.SUBJ-able stand/HAB fish 3SG.POSS scent on

kyerɛ dɛ a-ben anaa

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show/HAB COMP PERF-cook or
ɔ-re-hyew
3SG.SUBJ-PROG-burn
'You can rely on the scent of the fish to tell whether it is cooked or it is burning.'

- Nam no bi so ne nka bɔn
  fish DEF INDEF also 3SG.POSS scent smell.bad

  ntsi ɔ-kyerɛ dɛ nam no
  so 3SG.SUBJ-point/HAB COMP fish DEF
  a-sɛe.
  PERF-spoil
  'Some of the fish can smell bad, when that happens then it means the fish has got spoilt.'

- Nam so yɛ nyan
  fish also be nauseous

  'Fish also emits nauseous scent.'

- I-bo-hu dɛ nam no nka a-ba
  2SG.SUBJ-FUT-see COMP fish DEF scent PERF-come
  mu ntsi ɔ-nn-yɛ dɛw
  inside so 3SG.SUBJ-NEG-be sweet
  'You will realise that there is scent in the fish so it does not make the fish tasty.'

Dɛm ndzɛmba yi nyinara so ye-tum dze
DET PL.thing DEM all also 1PL.SUBJ-able take

bɔn, kankaankan, suonn, koo,
smell.bad stink.REDUP, very.bad.odour very.bad.odour

sukusuku, anaa huntuun gyina hɔ ma

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putrid	or	foul.smell	stand/HAB	there	give/HAB

hɔn,	ntsi	ye-tum	ka	dɛ
3PL.OBJ	so	1PL.SUBJ-able	say/HAB	COMP

'All these things can be associated with modifers that describe bad smell, so we can say that'

- Abowa no -ho bɔn kankaankan
  animal 3SG.POSS self smell.bad stink.REDUP
  'The animal stinks very badly.'

- Edziban no bɔn kankaankan
  food DEF smell.bad stink.REDUP
  'The food stinks very badly.'

- Abowa no a-bɔn suonn
  animal DEF PERF-stink very.bad.odour
  'The animal stinks.'

- Nyimpa no no ho bɔn kankaankan
  human being DEF 3SG.POSS self smell.bad stink.REDUP
  'The person smells badly.'

- No -ho yɛ nyan ankasa
  3SG.POSS self be nauseous very
  'S/he has a nauseating body odour.'

- Nam no bɔn kankaankan
  fish DEF smell.bad stink.REDUP
  'The fish smells badly.'

- No ho a-bɔn suonn
  3SG.POSS self PERF-stink very.bad.odour
  'S/he smells bad.'

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- Abɔfra no a-bɔn suon anaa
  child DEF PERF-smell.bad very.bad.odour or

  kooo
  very.bad.odour
  'The child is daft.'

Ye-tum so ka dɛ nsu yi yi nka
1PL-able also say/HAB COMP water DEM emit/HAB scent
'We can also that this water emits scent.'

- Abofra no n'-amaadze yi nka

  child DEF 3SG.POSS-armpit emit/HAB scent.

  'The child's armpit smells.'

- Nsu yi yi nka

  water DEM emit scent

  'This water has odour.'

- Nhyiren yi yi nka pa

  flower DEM emit scent good

  'This flower has good scent.'

- Nhyiren yi yɛ huam

  flower DEM be good.scent

  'This flower smells good.'

- Ye-tum so ka dɛ
  1PL.SUBJ-able also say/HAB COMP

  n'-atar mu nka yɛ huam anna

  3SG.POSS-dress inside scent be good.scent or

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no	ho	nka	yɛ	huam	anaa	
3SG.POSS	self	scent	be	good.scent	or	
no	ho	nka	yɛ	ahomka,	anaa	
3SG.POSS	self	scent	be	nice	or	
so	n'atar		mu	tu	nka	pa
also	3SG.POSS-dress		inside	fly/HAB	scent	good.

'We can also say that s/he has good scent or s/he smells good or s/he has nice scent.'

- N'-enum asɛm bɔn

  3SG.POSS-mouth matter smell.bad

  'S/he does not know how to speak well.'

- No hwen mu bɔn

  3SG.POSS nose inside smell.bad

  no

  3SG.OBJ

  'S/he is haughty.'

- Nyimpa so ho yɛ nyan ntsi ye-tum

  human being also self be nauseous so 1PL.SUBJ-able

  ka dɛ no ho a-yɛ

  say/HAB COMP 3SG.POSS self PERF-be

  nyan ankasa

  nauseous very

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'Human being can also emit nauseous scent so we can say that s/he has a nauseating body odour.'

Hear

- Hɛn mpataa ha yi mu dze yɛ-a-tse
  1PL.SUBJ area here DEM inside TOP 1PL.SUBJ-PERF-hear

  dɛ Edwumao na no nkwaa do ha,
  COMP Edwumako CONJ 3SG.POSS suburb LOC here,
  Edwumako Takyiman na wɔ-bɔ akwan
  Edwumako Takyiman CONJ 3PL.SUBJ-play PL.road
  a ɔ-yɛ dɛw
  CCM 3SG.SUBJ-be pleasant
  'In our area here, we have heard that the Edwumako Takyiman festival celebration is the most interesting among the Edwumako towns.'

- Oh, ye-tsie Edwumako Takyiman ho
  oh, 1PL.SUBJ-hear/HAB Edwumako Takyiman self
  abakɔsɛm paa
  history often
  'Oh, we often listen to the history of Edwumako Takyiman.'

- Nn-yɛ ɔno nko, wiadze yi mu dze,
  NEG-be 3SG.OBJ alone world DEF inside TOP
  asotsee bebree na yɛ-tse
  hearsay many CONJ 1PL.SUBJ-hear/HAB
  'Not only that but we hear a lot of rumours in this world.'

- Sɛ i-kyɛn w'-aso a
  when 2SG.SUBJ-tune.in 2SG.POSS-ear CCM

  e-bɛ-tse
  2SG.SUBJ-FUT-hear
  'When you become attentive you will hear what is going on.'

- Sɛ e-tse dɛ wo
  when 2SG.SUBJ-hear/HAB COMP 2SG.POSS

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kun	a-fa	ɔbaa	anaa
husband	PERF-take	woman	or
ɔ-a-bɔ		ɔbaa	bi
3SG.SUBJ-PERF-strike		woman	INDEF
enyinkam	a	e-bɛ-yɛ	dɛn?
face.mark	CCM	2SG.SUBJ-FUT-do	what

'If you hear that your husband is dating another woman, what will you do?'

- Me-dze m'aso bɔ-to famu
  1SG.SUBJ-use 1SG.POSS-ear FUT-put down
  na m'-e-tsie mu
  CONJ 1SG.SUBJ-PERF-listen inside
  'I will listen attentively about it.'

- Obi so bo-tum e-yi me aso
  someone also FUT-able PERF-pick 1SG.SUBJ ear
  tsir
  head
  'Someone can also inform me or bring me information.'

- Sɛ i-kyɛn w'-aso a
  when 2SG.SUBJ-tune.in 2SG.POSS-ear CCM
  e-bɛ-tse na mbom w'-asowa mu
  2SG.SUBJ-FUT-hear CONJ also 2SG.POSS-ear inside
  nn-da hɔ a, ɛ-re-nn-tse, ntsi
  NEG-sleep there CCM 2SG.SUBJ-PROG-NEG-hear , so
  akasaakasa ba na hom wɔ
  misunderstanding come/HAB CONJ 2PL.SUBJ have
  hom ho ntseasee a, oye
  2PL.POSS self understanding CCM good

  'When you become attentive you will hear but if you are not an attentive listener, you will not hear, so, when sometimes there is misunderstanding and you understand each other, it is good.'

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Touch

- Nam no bi wɔ hɔ a ɔ-yɛ
  fish DEF some be there REL 3SG.SUBJ-be
  abonabon ntsi yɛ-twerɛtwerɛw ho na
  scally so 1PL.SUBJ-scrape.REDUP self CONJ

  bi so no ho yɛ wirekyiree na
  some also 3SG.POSS self be hard.rough CONJ

  bi so ho yɛ tor
  some also self be slimy
  'Some of the fish have scales and need to be descaled, some have hard rough skin and some also have smooth body.'

- Nam no bi so tum yɛ pɛkyɛɛ, ɔno
  fish DEF some also able be very.soft 3SG.POSS
  no na ɔ-kyerɛ dɛ a-sɛe
  DCM CONJ 3SG.SUBJ-point/HAB COMP PERF-spoil
  'Some of the fish also becomes very soft; this shows that it is spoilt.'

- Ama suo-o nam no mu hwɛ-ɛ no
  Ama touch-COMPL fish DEF inside see-COMPL DCM
  nna a-yɛ bɛtɛbɛtɛ
  CL PART. PERF-be soft-REDUP
  'When Ama touched the fish to check it, it was very soft.'

- Sɛ dɔkon ben a me-dze
  when kenkey cook-COMPL CCM 1SG.SUBJ-use
  me nsa ka hwɛ anaa
  1SG.SUBJ hand touch see/HAB or
  mi-mia hwɛ dɛ
  1SG.SUBJ-press/HAB see/HAB COMP
  a-ben a
  PERF-cook CCM
  'When kenkey is cooked I touch it or press it to check whether it is cooked.'

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- Sɛ me pɛ dɛ mu-hu
  when 1SG.SUBJ like COMP 1SG.SUBJ-see/HAB

  dɛ abɛ a-ben a mi-mia

  COMPL palm.nut PERF-cook CCM 1SG.SUBJ-press/HAB

  hwɛ dɛ a-gow a
  see/HAB COMP PERF-soft CCM
  'If I want to check that palm nut is cooked I press hard to find out whether it is soft.'

- Sɛ mo-kɔ asopetse a datser no
  when 1SG.SUBJ-go hospital CCM doctor DEF

  ka abofra no ho hwɛ dɛ
  touch/HAB child 3SG.POSS self see/HAB COMP

  a-dɔ a
  PERF-hot CCM
  'When I go to the hospital, the doctor feels the body of the child to find out whether it is warm.'

- Me-dze me nsa ka-a
  1SG.SUBJ-take/HAB 1SG.POSS hand touch-COMPL

  bea a ɔ-yɛ me yaw no
  place REL 3SG.SUBJ-be 1SG.OBJ pain DCM
  'I touched where I feel the pains.'

Bɛ no bi so wɔ hɔ a

Proverb DEF some also be there REL

ɔ-kasa fa nsuom ho

3SG.SUBJ-speak/HAB pass touch self

'Some of the proverbs also describe touching.'

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- E-tow edur bɔn a bi ka

  2SG.SUBJ-throw/HAB medicine bad CCM some touch/HAB

  w'ano

  2SG.POSS-mouth

  'When you hatch an evil plan, you are likely to become a victim too.'

- Banyimba no ka –a n'ano

  boy DEF touch-COMPL 3SG.POSS-mouth

  edur wu-i

  medicine death-COMPL

  'The boy poisoned himself to death.'

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APPENDIX III – ETHICAL APPROVAL



UNIVERSITY OF GHANA
ETHICS COMMITTEE FOR THE HUMANITIES (ECH)
P. O. Box LG 74, Legon, Accra, Ghana

My Ref. No.....

24th October, 2018

Ms. Emma Sarah Eshun
Department of Linguistics
University of Ghana
Legon

Dear Ms. Eshun,

ECH 150/17-18: EXPRESSIONS OF PERCEPTION AND COGNITION IN AKAN

This is to advise you that the above reference study has been presented to the Ethics Committee for the Humanities for a full board review and the following actions taken subject to the conditions and explanation provided below:

Expiry Date:	31/07/19
On Agenda for:	Initial Submission
Date of Submission:	31/07/18
ECH Action:	Approved
Reporting:	Annually

UG/LISSER/ECH VALID UNTIL 31 JUL 2019 APPROVED DOCUMENT

Please accept my congratulations.

Yours Sincerely,

Prof. C. Charles Mate-Kole
ECH Vice Chair

Cc: Prof. Kweku Osam, Department of Linguistics
Prof. Nana Aba Appiah Amfo, Department of Linguistics
Dr. J. A. N. Saanchi, Head of Department, Department of Linguistics
Prof. K. Saah, Department of Linguistics

Tel: +233-302913866 Email: ech@ug.edu.gh

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APPENDIX IV – CONSENT FORM

UNIVERSITY OF GHANA

Ethics Committee for Humanities (ECH)

Official Use only
Protocol number

PROTOCOL CONSENT FORM

Section A- BACKGROUND INFORMATION

Title of Study:	”EXPRESSIONS OF PERCEPTION AND COGNITION IN AKAN”
Principal Investigator:	EMMA SARAH ESHUN
Certified Protocol Number	ECH 150 -17-18

Section B– CONSENT TO PARTICIPATE IN RESEARCH

GENERAL INFORMATION ABOUT RESEARCH

The study examines verbal expressions that represent relationship between the various sensory signals of the mind and the core beliefs in human thought that enable

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one to give justification to the various experiences in the world. These verbal expressions are allied to the broad group classified under the term Perception and Cognition verbs. This cluster of verbal expressions discusses emotions, intentions, and thought. The principal feature of this class of expressions is their relationship with the human state of mind which code information in the physical world as well as provides evidence of human understanding. Languages differ in their expressions of thought (mind). Thus, structures of different languages determine the cognitive capabilities of how people view the world. For example, people see differently and the implications of their reactions towards what they perceive may arise as a result of what was in their minds. Exploring Akan perception and cognition expressions, this study gives an account of the relationship between the various sensory signals of the mind such as see, hear, smell, taste and touch and the core beliefs in human thought that enable them to give explanation to the various experiences in the world.

This study adopts descriptive linguistic fieldwork design. This design is appropriate because it will allow the researcher to carefully investigate language through direct contact (one-on-one conversation, direct observation with participants to establish how people describe perception and cognition concepts and what resources there are in the language. Mfantse native-speaking participants will be engaged in semi-structured interviews and direct observation of procedural events. Video recordings will be purposively done to capture various scenes as well as complement ideas of concepts raised during the interview sessions. a probability sampling technique will be used to select the sample size in the Central Region for the study. Four Mfantse speaking districts i.e. Mfantseman Municipal Assembly, Ajumako-Enyan-Esiam district, Gomoa East district and Abura-Asebu-Kwamankese district will be purposively sampled for data collection. The study will be conducted in these Mfantse communities because they are known to have variation of dialectal significance which will help unearth the various expressions of perception and

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cognition in the language. Two towns in each district whose dialects have not had a lot of contact with other speakers will be conveniently sampled for dialectal variation purposes. These towns include Kyakor, Dwendaama, Ampiah-Ajumako, Atakorase, Nyanyano, Ojobi, Asebu and Abakrampa. Five (5) bona fide native-speakers from each town will be randomly sampled for interviews. In all, a total of 40 participants will be sampled for the study. The 40 participants that will be sampled for data collection will involve ages 20 and above who have lived in the communities not less than 10 years. Various background searches such as knowledge of language and education will be considered in the selection procedure.

Benefits/Risks of the study

The study will help reveal the various meanings and events structure of perception and cognition expressions in Mfantse and later serve as reference material for those who would want to study the language. There are no conceivable risks associated with this study but only that participants would have to spend some of their time to be interviewed. Apart from the money for their time spent individuals will not benefit directly but in the long run their dialect will be generally improved upon.

Confidentiality

Only consented participants will be allowed in the study after the objectives have been explained. Recordings of data will be accessible to only the principal investigator and trained research assistants. Transcribed data will be placed on a special project computer with codes which will be accessible to only the principal investigator. Special codes will be placed on the files in a folder on the special computer. Data will be kept confidential for about two - five years and will not be released to a second or a third party for whatsoever reason.

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Compensation

Participants who will be involved in the study will be remunerated GHS 20 per day. This remuneration is just a token for compensating participants for their time spent. However, those who do not offer to take part in the study will in no way be given any remuneration.

Withdrawal from Study

Participation in this research is voluntary, so one may choose to participate or not at any time. You will not be penalized should you decide to withdraw from the study. Again, if you think some form of information that will be recorded will not be appropriate to you, attention should be drawn so that it will not be recorded or deleted if already recorded.

Contact for Additional Information

If you have any concerns or questions about this study, please contact Emma Sarah Eshun at eseshun@st.ug.edu.gh or 0209341491

OR

The Administrator of the Ethics Committee for Humanities, ISSER, University of Ghana at ech@isser.edu.gh/ech@ug.edu.gh or 00233-303933-866.

Section C- PARTICIPANT AGREEMENT

"I have read or have had someone read all of the above, asked questions, received answers regarding participation in this study, and am willing to give consent for me, my child/ward to participate in this study. I will not have waived any of my rights by signing this consent form. Upon signing this consent form, I will receive a copy for my personal records."

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_____

Name of Participant 13TH APRIL, 2018

_____ Date

Signature or mark of Participant Date

_____

If participant cannot read and or understand the form themselves, a witness must sign here:

I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered and the volunteer has agreed to take part in the research.

_____

Name of witness

_____

Signature of witness / Mark Date

_____

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

_____

Name of Person who Obtained Consent

_____

Signature of Person Who Obtained Consent Date

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