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SCHOOL OF HUMANITIES AND SOCIAL SCIENCES

DEPARTMENT OF ENGLISH AND LINGUISTICS

**A COGNITIVE LINGUISTICS ANALYSIS OF GESTURES USED BY MOTORISTS IN
MOMBASA COUNTY**

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**A DISSERTATION SUBMITTED TO THE SCHOOL OF HUMANITIES AND SOCIAL
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DECLARATION

This dissertation is my original work and has not been presented for a degree in any other university.

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DEDICATION

I dedicate this work to my wife Mary Karuana Githara, my son Kevin Chuchu, and my daughter Ruth Wanjiru. May you live to testify and enjoy the fruits of my hard work and determination that I have achieved during my life as a Scholar

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DEFINITION OF TERMS

- Cognitive linguistics:** An approach on language study that is based on people's experiences of the world and the way they perceive and conceptualize them.
- Conceptual domain:** The entire field of attributes that come to mind at the mention of something.
- Figurative language:** All language that involves figures of speech or symbolism and does not literally represent real things.
- Gesture:** A movement of the body, especially a hand, leg or the head, to express an idea or meaning.
An action performed to convey one's feelings or intentions.
A part of the psychology of speaking, along with, and not fundamentally different from, speech itself".
- Metaphor:** The comprehension of one thing "A" as if it is another thing "B"
A word or phrase that is used in an imaginative way to show that something or somebody has the same qualities as another. It may be interpreted as the dream work of language whose interpretation reflects as much on the interpreter as on the originator.
- Source domain:** A field of attributes from which we draw metaphorical expressions
- Target domain:** A field of attributes that we try to understand.
- Tuk-Tuks:** This is an auto rickshaw, a motor vehicle with three wheels, widely used as transport around the city and its suburbs. No more than three passengers may be carried in a Tuk-tuk.

ABSTRACT

This study sought to investigate on a cognitive linguistics analysis of metaphorical gestures used by motorists in Mombasa County. The research focused on Mombasa due to its uniqueness and being multi-cultural. Mombasa is a hotpot of cultures with people from all over the world calling Mombasa home. This study set out to identify metaphorical gestures used by motorists to communicate various situations on the roads, for example presence of traffic police officers among many others. The study sought to demonstrate that gestures used by motorists in Mombasa county are categorized into either conventional or novel and that both gesture and speech share the burden of conveying information and provide an avenue to understand how humans formulate concepts and how they exploit those formulations while communicating. The study sought to establish whether the social variables of sex, age and level of education affect the interpretation of gestures. It also aimed at making a contribution to cognitive linguistics by analysing gestures within the Career of Metaphor Theory. Further, the researcher presented a questionnaire with a photograph/picture of a gesture and the respondents were required to interpret the gesture and state what they understood the gesture to mean.

CHAPTER ONE

1.0 BACKGROUND OF THE STUDY

1.1 INTRODUCTION

This study sought to establish that gestures are an essential part of communication not only the gesticulatory body language of everyday face-to-face communication and the signing of deaf communicators, but also in co-verbal communication, typing, semaphoring and many other varieties of communication.

According to Duncan (2008), gesture serves to express aspects of the conceptual content of utterances and is not just affective decoration. She identifies gesture being chameleon-like in its form and that form is tied to the function the gesture is serving. When gesture assumes the full burden of communication, acting on its own without speech, it takes on a language-like form. But when gesture shares the burden of communication with speech, it loses its language-like structure assuming instead a global and synthetic form.

In everyday communication people gesticulate to express their feelings and emotions. Body language is also vital in non-verbal communication just like gestures. Use of gestures in communication is triggered by the urge to be emphatic, lack of a suitable lexical item to use while speaking, avoidance of a euphemistic linguistic item for such an item is regarded as a taboo word, the need to transfer supplementary information other than that presented in verbal output, language barrier between speakers, spatial distance between speakers, among a variety of other reasons. According to Casasanto & Lozano (2007), gesture was being studied to gain insights into issues such as the relationship between language and thought, embodiment and cognition, metaphor and thought, the structure of mind, linguistic relativity, thinking for speaking, the cognitive and social processes involved in the development of human semiosis.

Mombasa has a diverse culture from Arabs to Indians to Africans to whites, but majority of local people are Muslims, who are used to speaking Swahili. English is also greatly

used. Two or more people can speak Chinese, Spanish, German or Italian. Research assistants helped the researcher to identify respondents to be used for this study Mugenda & AG (1999). Road driving in Mombasa, is straightforward and the majority of the roads are tarmacked.

Main roads include; Jomo Kenyatta Avenue, Digo Road, Nyerere Road, Nkrumah Road, Moi Avenue, Mama Ngina Drive, Barack Obama Road, Nairobi Highway and Nyali.

Road Highways connect Mombasa to Nairobi, Dar-es-Salaam while northward road link to Malindi and Lamu, which also extends towards the border with Somalia.

The cognitive linguistic approach to metaphor launched by among others Black (1962); Kovecses (2002); Lakoff & Johnson (1980), has been essential for the development of cognitive linguistics as a branch of linguistics and has affected other disciplines concerned with the study of metaphor, including philosophy, poetics, psychology, discourse analysis, communication studies, and anthropology (Gibbs, 2008).

The relationship between the on-going psychological processes and their products and the linguistic forms and conceptual structures of metaphor analyzed as signs or symbols attracts interest and reason for inquiry. The problem here is that what is analyzed in cognitive linguistics as metaphorical in the linguistic and conceptual structures of discourse does not have to be a one-on-one reflection of the psychological processes of human verbal and cognitive behaviour in discourse (Muller, 2008).

There are therefore fundamental theoretical and empirical questions about the cognitive-linguistic approach to metaphor. The empirical findings of our research were to be novel and could be interpreted within the three dimensional framework for metaphor in usage developed by Steen (2008) and therefore, by definition, not listed in the dictionary.

Gestures will offer a new, usage-based perspective for the debate about metaphor in cognitive linguistics, and raise new questions for future collaboration between cognitive linguists and other linguists. According to the Conceptual Metaphor Theory advanced by

Lakoff and Johnson, (1980/2003) gesture is a part of the psychology of speaking and is not different from speech itself. In the words of Sapir (2011), he defines a gesture as an elaborate and secret code that is written nowhere, known to none, and understood by all. It is extra ordinary that humans have such a complicated, underlying communication system parallel with verbal speech that is taken for granted.

Charles Forceville (2007) argues that a pragmatic component should be added to the cognitive metaphor approach in order to account for metaphor processing.

Our body movements always convey something about us to other people. The body "*speaks*" whether we are sitting or standing, talking or just listening. Almost always involuntarily, gestures tip us off to love, hate, humility and deceit. Yet for years, scientists have spent surprisingly little time studying them, because the researchers presumed that hand and arm movements were mere by-products of verbal communication. That view changed during the 1990s, in part because of the influential work of psycholinguist Studdert-kennedy (1993) of the University of Chicago. He noted that gestures are "*windows into thought processes*" work and numerous studies since then have shown that the body can underscore, undermine or even contradict what a person says. Gestures play a role whenever we attempt to explain something. At the very least, such motions are co-verbal; they accompany our speech, conveying information that is hard to get across with words.

Hand movements can display complex spatial relations, directions, and the shape of objects. They enable us to draw maps in the air that tell a puzzled motorist how to reach the turnpike. People who do not gesture rob themselves and their viewers/listeners of an important informational channel. Brain damage that leads to the loss of mobility in limbs can compromise verbal communication. Patients with aphasia find it difficult to gesticulate or understand signs by others. This demonstrates that speech and gestures are essential medium of communication.

This study sought to demonstrate that both gesture and speech share the burden of conveying information and provide an avenue to understand how humans formulate concepts and how they exploit those formulations while speaking.

It is interesting to notice that motorists while driving gesticulate to each other either to alert on some issues likely to be experienced in the course of driving such as, indications to express intention to turn either left, right or slow down, expression of ill feelings towards a careless driver, alert on the presence of traffic police officers ahead, informing other drivers that all is well on the road, as well as communicating various other messages that this research seeks to establish.

A gesture is a movement of body limbs, especially a hand, leg or the head, to express an idea or meaning. It is therefore an action performed to convey one's feelings or intentions. Gestures influence comprehension of linguistic expressions. The 'Purpose' of gesture is to fuel and propel thought and speech.

Use of gesture spontaneously in contexts suggests that gesture is another form of human behavior in which we may see the expression of metaphors. It is on this basis that this study made an entrance into introspection of gestures used by motorists in Mombasa County and aligned their interpretation to justify the position of conceptual metaphor in cognitive linguistics.

A study by Morrel-samuels & Krauss (2001) indicates that gestures occur extremely near to their lexical affiliates, and a gesture's duration is closely related to how long it takes a speaker to retrieve a word. Conjointly, it appears that more lexical gestures occur during spontaneous speech compared to rehearsed speech, indicating that gestures may be more prevalent in more hesitant speakers, and are performed to facilitate word retrieval. Continuing this line of research, Rauscher, Krauss, & Chen (2014) showed that when gesture was constrained, participants spoke more slowly, but only when the content of speech was spatial in nature; this supports the idea that gestures may maintain spatial

representations and assist in memory retrieval. While verbal language is processed in the left hemisphere of the human brain, metaphor is processed in the right hemisphere.

These results have been further supported by Pine, Bird (2006) when they found that, during a naming task; children could name more words correctly and complete more 'tip-of-the-tongue' tasks when allowed to gesticulate than when their movements were restricted. Gestures are used in communication and are therefore, as linguistic as words, phrases or even sentences. Body language, like spoken language, is completely arbitrary; a gesture considered to be an insult in one culture might be perfectly harmless or even meaningless in another.

A few hand signals while innocuous to the Western cultures may carry much more offensive connotations in other parts of the world. The following sampled gestures by Bink Baulch (2013) demonstrate this fact:-



Fig. 1.1

The Okay gesture

When one makes a circle with their thumb and index finger and keeps the remaining three digits extended Americans know all is well. But in Greece or Turkey, this gesture symbolizes the male and female reproductive organs. The implication of the signal is that the recipient is a homosexual.



Fig. 1.2

Thumb up gesture

This gesture is usually considered as a sign of approval. However extending one's thumb to the sky is considered pretty rude throughout the **Middle East, Mediterranean, and Latin America**, because it implies the recipient can take whatever he/she is discussing at the time and swiftly deposit it in their posterior cavity. So while one may be thinking that they are expressing satisfaction during a conversation or business transaction, they are essentially telling the other person to shove it.



Fig 1.3

The Metal gesture

In the U.S, an extended index finger and pinky denotes one who is currently rocking out, or planning to do so in the near future. However, this gesture implies something quite different in Italy, Spain, Portugal, Brazil, and Colombia, as well as some of the Baltic States. Known as the *corna*, the signal is used to discreetly inform a man that his wife is adulterous.



Fig. 1.4

The Thumb Bite

In India or Pakistan, placing a thumb in or around your mouth strongly resembles a gesture known as the *cutis*, which effectively tells the recipient that, his/her entire family is worthless.

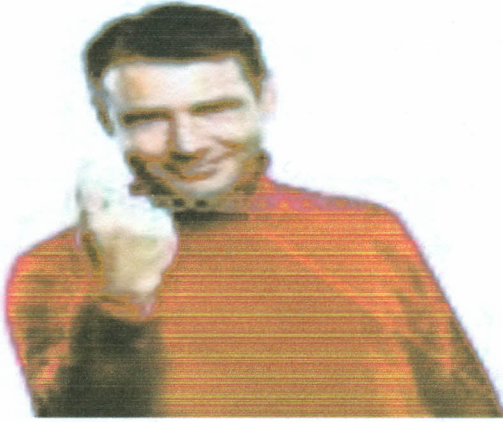


Fig. 1.5

The Beckon

Extending one's forefinger and beckoning to someone might be perceived as rude in a lot of places, but in Singapore, the gesture has a much more sinister connotation namely, that the recipient is about to die because Death is coming for them. In other Asian countries, such as Japan and Malaysia, the signal isn't malicious, but is considered somewhat rude. And in the Philippines, beckoning is reserved for dogs and those who summon other people this way may face criminal charges. Instead, extending the arm, pointing the hand towards the floor and making a scratch motion is gesture which has been used throughout East Asia safe alternative to the standard beckon.



Fig.1.6

The Peace sign

When one is saying 'peace out' or 'peace, my brother', the extended index and middle finger gesture is pretty innocuous throughout the United States. However, in other English-speaking countries — namely Great Britain, Ireland, Australia, and New Zealand — the 'V' symbolizes a vagina as long as the back of the gesturer's hand is facing the recipient. Palms out, on the other hand, represent 'victory'.

Well, when one's thumb protrudes between the index and middle finger in Italy, the implication isn't, poking the nose, but rather, interested in sexual engagement. This might seem crude but not necessarily insulting, except that 'the fig', as it's now known, has come to express derision in Italy, as well as Turkey and India; think of it as the equivalent of a good old fashioned American middle finger.

In Mombasa, and most parts of Kenya, a protruding middle finger extended facing upwards conveniently insults 'fuck' and attracts a lot of fury from all those who happen to see the flashing of the gesture.

1.2 STATEMENT OF THE PROBLEM

Several studies have been conducted on metaphors. Some of these focus on multi-modal metaphors, others on semantics. However, studies on conceptual gestures have not been conducted. The researcher found it necessary to conduct a study on conceptual gestures so as to authenticate that gesture and speech share the communicative burden to express one and the same metaphor, which means that metaphor is not limited to the verbal medium of expression. Gestures are a deep feature of cognition that cannot be dissociated from the intellectual feat accomplished by individuals. Research across cultures not only shows that gestures are pervasive Adam Kendon (2004) but also, that they are deeply integrated with other intellectual abilities such as navigation and orientation

competencies, sense of direction, language, and narrative structures (Havilland, 1993). According to Lakoff, G., & Johnson (2003) Conceptual Metaphor Theory, mental concepts structure what human mind perceives and how the concepts relate to other people.

The human conceptual system plays a central role in defining everyday realities. This then suggests that our conceptual system is largely metaphorical, and what we do every day is very much a matter of metaphor.

Conceptual domain (A) as/is conceptual domain (B), which is what is called a conceptual metaphor, consists of two conceptual domains, in which one domain is understood in terms of another and has come to be referred to as A is B linguistics. This has come to be ridiculed because A is not B.

This evidently leaves a gap to research on how metaphorical gestures contribute to cognitive linguistics. This study should be seen as equating gestures to other linguistic elements used for and in communication.

1.3 OBJECTIVES OF THE STUDY

The purpose of this study was:

1. To identify metaphorical Gestures commonly used by motorists in Mombasa County?
2. To classify the gestures used by motorists in Mombasa county as either conventional or novel.
3. To establish whether the social variables of sex, age, and level of education affect the interpretation of the gestures used by motorists in Mombasa County.

1.4 RESEARCH QUESTIONS

1. Which metaphorical gestures are commonly used by motorists in Mombasa County?
2. What gestures used by motorists in Mombasa county are novel and which are conventional?
3. What is the interpretation of these metaphorical gestures in relation to sex, age, level of education?

1.5 ASSUMPTIONS

The following research assumptions were embraced in this study;

1. That most gestures used by motorists in Mombasa County are metaphorical.
2. That there are both novel and conventional metaphors in gestures used by motorists.
3. That there is variation in the interpretation of metaphors in gestures across the social variables of sex, age, and level of education.

1.6 SIGNIFICANCE AND JUSTIFICATION

This research aimed at making an attempt to contribute to cognitive linguistics by analyzing metaphor in gestures. The research was an attempt to make a contribution to cognitive linguistics by using gestures to analyse metaphors as figures of thought. The study aimed at making a contribution to cognitive linguistics and specifically show motorists' choice and use of metaphors. Gibbs Jr, & Colston (1995) note, "Psychologists often contend that cognitive linguistic research suffers from circular reasoning in that it starts with an analysis of language to infer something about the mind and body which in turn motivates different aspects of linguistic structure and behavior." The communicative

competence involved in figurative language is an important area of study because it is necessary to understand the factors involved in human interaction. Therefore, this research was an attempt to try and shed some light on the role of gestures as metaphors. This was to some extent remedy to the situation that we find ourselves in, based on the deep-rooted and mostly un-noticeable metaphors that shape our thinking. Communicative competence in gestures and signage is considered as a tool that serves the learner not only in the learnt language and general linguistics but also a value addition to their overall world knowledge and fostering of cultural sensitivity. If people were aware of metaphorical gestures, they would embrace careful driving ethos and endeavour to curb road carnage.

Since language is a people's tool of self-definition, a conceptual analysis of figures of thought may shed light in just how effective these tools are. Most of us would find it difficult and uncomfortable to converse for any extended period without using our hands and arms. Gestures play a role whenever we attempt to explain something. At the very least, such motions are sometimes co-verbal; they accompany our speech, conveying information in a topic that is considered taboo and therefore easier when acted. Sometimes we are in the company of people we do not want to hear us mention the words (especially body parts), other times speech cannot be heard but gesture can be seen.

Gesture, while a co-verbal behavior, involves a different modality of expression other than speech and so provides another source of evidence for conceptual metaphors.

Our world is the product of our actions which in turn are shaped by the way we think. These thoughts are given shape by the way we articulate them and what these articulations are construed to mean. In our endeavours to continue reshaping and renewing our world, we need to determine if we effectively use figures of thought to articulate our feelings.

Thus, this study, set out to investigate the use of sampled metaphorical gestures, tried to find out the contribution these metaphors have on the way we drive on our roads. It also made a contribution to cognitive linguistics by analysing gestures within the Conceptual Metaphor Theory.

1.7 SCOPE AND LIMITATIONS

The study focused on motorists in Mombasa county mainly drivers of Matatu vehicles, personal cars, heavy commercial vehicles, Tuk-Tuks among others.

The choice of metaphorical gestures as used by motorists in Mombasa County was motivated by a number of factors. Mombasa is a metropolitan City and a haven for tourists hence a mixture of linguistic challenges in communication, necessitating the use of gestures to reinforce linguistic expression.

The excessive temperatures in the coastal region make people to gesticulate more. A strong relationship exists between body temperature and performance in humans, (Tenhunen et al., 1993); (Lundstrom et al., 1995). Cognitive function is improved by increasing body temperature slightly above normal and reduced by a slight decrease. An increased temperature enhances working memory, subjective alertness, and visual attention. This could be explained by the fact that changes in brain temperature alter synaptic function. A higher temperature results in faster transmission. Temperature also affects human emotion. This is most clear in high ambient temperatures, which are known to generate more aggression. Heat waves result in elevated numbers of deaths, suicides and murders. Variations in the cerebral temperature might influence the release or blocking of emotion-linked neuro-transmitters. Due to this reason people in Mombasa County are more likely to gesticulate than those in cooler regions. Cultural diversity contributes to language barrier hence people are more likely to gesticulate on the road among other instances.

The research was carried out in selected streets and avenues within Mombasa Central Business District before rolling out to roads in other parts of the county.

The study was limited to gestures made using the head, hand, and leg since there are very many gestures made by motorists not necessarily limited to the three body limbs but stretching out to even the tongue, for example.

However, the researcher employed ethical approach to the challenges as they occurred which included and not limited to, seeking authority from the office of the Governor and traffic police department in Mombasa to allow the study to be carried out on the roads within Mombasa County. The researcher conducted a de-briefing at the end of each day so as to monitor what information was being collected by the research assistants and corrected any anomalies arising thereupon. The researcher involved more respondents in data interpretation so as to capture the “popular” interpretation.

CHAPTER TWO

2.0 LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 INTRODUCTION

This chapter covers the review of related literature and the theoretical framework. Definitions of what constitutes a metaphorical gesture, studies done on metaphors in general and the place of conceptual metaphor theory in linguistics have been focused on. A review of a number of theories of metaphor has also been discussed.

2.2 LITERATURE REVIEW

In reviewing related literature, we defined metaphors as the term was used in cognitive linguistics before looking at studies that have been done touching on metaphors. We started by defining metaphors.

2.3 DEFINING METAPHOR AND METAPHORS

Our study focused to prove this by employing a broader definition of metaphors. Mac Cormac (2010) studied varieties of meaning in a metaphor and concluded that Metaphors create new meanings of various types and without them; neither knowledge nor language can grow. Without cognitively based linguistic devices to juxtapose the old in unfamiliar ways, new ways of thinking and new expressions for those thoughts cannot emerge.

According to Gachara (2011), variations in terms of the linguistic completeness of metaphors used is expected to emerge, and whether the metaphorical items are old or new, the analysis was done to establish what gestures have which conceptual structure variations in choice of metaphors and in the sense (interpretation) made of other people's metaphors; variations resulting from gender, history or social position of the gesticulators age, level of education; and variation resulting from the purpose of gesticulating. As recently as 1981, philosopher Mark Johnson could justly write, that we are in the midst of metaphor mania. Only three decades ago the situation was just the opposite: poets created metaphors, everybody used them, and philosophers ignored them. Cognitive linguists

have proposed that metaphors are not just a matter of language but of thought, and that metaphorical thought displays a high degree of conventionalism. Today we seem possessed by metaphor. The definition of metaphor reflects on influential theories which have descended directly from Aristotle.

A Metaphor is a cognitive procedure of understanding one thing in terms of another. Philosopher Max Black clearly delineated a fresh way to appraise the operation of metaphor as a cognitive expression. In his view "The Substitution View", a metaphor (or even a more complex metaphorical expression) is used in the place of a literal statement which would have an equivalent meaning.

Metaphor has therefore been defined as a functional mechanism of mind, one that allows us to use what we know about our physical and social experience to provide understanding of countless other aspects of life Lakoff, G., & Johnson (2003). They further state that, because such metaphors structure our most basic understandings of our experience, they are 'metaphors we live by' – metaphors that can shape our perceptions and actions without our ever noticing them.

2.4 STUDIES RELATED TO METAPHOR

There are several studies related to metaphor based on real empirical researches.

According to Forceville (1980) the interaction theory of metaphor is primarily associated with the work of Black (1962); Richards (2003); Ricoeur (1977). A variant of the interaction theory underlies much current work on metaphor, including Lakoff and Johnson's influential *Metaphors we live by* (2003) and the Cognitivist Linguistics approach to metaphor. Metaphor operates at the level of the individual gesture. This gesture is transferred to something else which assumes that the gesture has a proper use in literal discourse, but a deviant use in metaphor.

The two nominal elements of the metaphor are bound together by similarity. Theoretical reflection on the nature and function of metaphor has generally followed a single line of

thought based on the conviction that metaphor is essentially a rhetorical device. Our study sought to challenge this analogy and offer to authenticate that metaphors indeed can be studied on a broader perspective, through analysis of gestures used by motorists in Mombasa County. Modern theorists, however, tend to relegate this ornamental function of metaphor to the periphery, insisting that at the heart, metaphor is a powerful cognitive device and expresses ideas that cannot be restated in plain language without a loss of meaning. Exactly what is transferred remains unclear. Nobody actually moves words, and the situation does not significantly improve even when one speaks of a transfer of "meaning."

The fact that metaphors may be realized in gestures as well as in speech adds support to the assumption that the creation of metaphors is based on a general cognitive principle rather than being a property of language only, Cienki (1998); Johnson (1998); Lakoff & Johnson (1980); Muller (2008). It cannot be over emphasized, however, that in practice man has always used metaphor to give expression to abstract concepts. This is true of authors of the books of the Old Testament Bible; it is also true of scholars throughout the ages, up to the eighteenth century. The recently (re)discovered truth that metaphor is not just a decorative device, but that metaphors express truths that cannot be expressed otherwise, has always been tacitly and even unconsciously assumed by speakers and writers who wanted to convey an abstract or metaphysical concept.

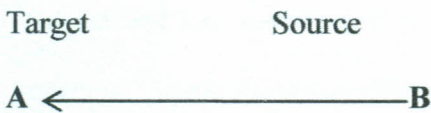
In the same tune, gestures were studied to establish whether they communicate just as words. For example, the metaphor, "Richard is a lion" means "Richard is brave." The essence of the metaphor is the similarity or analogy between the words "lion" and "brave." This is the time-honored and dominant view of metaphor which is also the theoretical base of the definition of metaphor provided by the Oxford English Dictionary.



Similarly, when one flashes the gesture, which is conveniently interpreted to mean “Fuck You”, where is the vagina, the organ known for the fucking business? The gesticulator is simply lifting the middle finger upwards!

In Conceptual Metaphor Theory, a metaphor is conceptualized as a mapping between a source domain (usually more concrete) and a target domain (usually more abstract). This involves cross domain mappings where attributes of A are mapped on to B.

Fig. 1.0



Mappings involve a raft of contextual elements thus no two people will ever map the same thing the same way.

When we use a metaphor we have two thoughts of different things active together and supported by a single word, or phrase, whose meaning is as a result of their interaction Richards (1989).

In the context of a particular metaphorical gesture, the two subjects “interact” in the following ways:

- (a) The presence of the primary gesture incites the seer to select some of the secondary subject’s properties; and
- (b) Invites him to construct a parallel implication-complex that can fit the primary gesture; and reciprocally induces parallel changes in the secondary subject.

According to C. Forceville (2008), many studies focusing on language have contributed enormously to insights pertaining to metaphor theory as well as illuminated how systematic research into entrenched metaphors can help reveal ideological and culturally determined structures, Charteris-Black (2004); Kövecses (2005): But CMT's dependence on linguistic evidence also makes it vulnerable to criticism. Skeptics, Haser (2005), argue that the conceptual A *is* B metaphors are just verbal metaphors written with small capitals, and reject the distinction between the surface manifestations of metaphors and the conceptual level of which they supposedly are the expressions. Critics may agree that CMT has done much to illuminate that many metaphors can be expressed verbally in numerous different ways, but still refute the conclusion that this is a reflection of metaphorical *thinking*. This study sought to reinforce the ideology that gestures indeed communicate as words though non-verbally. Hester (2014) described imagination as "seeing as" and wrote, "Metaphorical seeing as is a seeing between the metaphorical subject and the metaphorical predicate, either one or both of which must be image-exciting." Imagination can thus operate in two domains. It can reproductively focus on the thinking of another as well as productively focus on one's self.

Gestures help the speaker encode and addressee to understand the conceptual mappings between the source and target domains in conceptual metaphors.

The source domains of metaphorical concepts are realized in gestures as well as speech and in other modes as well such as, for example, images.

Calbris (1990) who was another one of the first researchers to identify metaphoric gestures, puts it in the following way: "In a way, gesture attests to the metaphor passing from something concrete to, the physical representation of something abstract."

She gives the example of a gesture where the two palms facing each other are moved apart: in one context the gesture depicts the broadness of a concrete path. It is certainly often the case, that metaphoric gestures depict the abstract in terms of the

concrete, yet we would like to point out that metaphoricity is not reduced to conceptualizing the abstract in terms of the concrete.

Rather, metaphor is a cognitive procedure of understanding one thing in terms of another and hence may also apply to two concrete entities –such as for instance characterizing a woman's body gesturally in terms of an hour glass, or when accounting verbally for all kinds of objects in terms of body parts, as is the case in expressions such as: the foot of a mountain, the leg of a table, or the arm of chair.

Therefore, metaphoric gestures are the ones which have the potential to engage an active cross domain mapping, that is the cognitive process of understanding something in terms of something else Cienki, A., & Müller (2008).

Cienki & Müller, (2004) Gestures are an essential part of communication not only the gesticulatory body language of everyday face-to-face communication and the signing of deaf communicators, but also in the production of speech and in the production of acts of writing, typing, manual Morse code transmission, semaphoring and 'talking drums' and many other varieties of communication. We can initially delimit the meaning of 'gesture' in a narrower and tractable sense, by means of a few examples. Churchill's use of the victory sign, the Roman victory salute, an air kiss to a parting close friend, a wave, beckoning with a finger, a dismissive hand movement, cupping a hand around the ear, the f-sign or 'the finger': these gestures are, at first glance, simple to categorize: they are all hand movements with some communicative function; they are all signs.

But they are different, and the details of the communicative functions also need to be categorized, as well as the similarities, and this is perhaps not as simple as it may seem. Face-to-face communication takes place in several different modalities and sub-modalities such as facial-visual, oral-visual, oral-auditory, hand-visual, and foot-auditory. Hand-auditory and foot-visual could have been added.

Gibbons, Baker, & Murphy (2002) define Multimodal system as a system which represents and manipulates information from different human communication channels at multiple levels of abstraction.

Seal, Zammit, Scott, Flowers, & Kranner (2010) found that the use of iconic gestures by mothers, controlling for maternal labeling and volubility, reliably predicted noun acquisition and comprehension. This indicates that joint attention between parents and infants serves to facilitate language acquisition. Our research will seek to show that gestures are synchronized with speech and aids infants in deducing the meaning behind spoken words. Neuroscientist Spencer D. Kelly of Colgate University has studied gestures with the help of event-related potentials - characteristic brain waves consisting of a sequence of peaks and valleys - that occur in certain patterns when one person observes another communicating. The patterns reveal neuronal - processing steps in particular brain regions. Despite intriguing progress, scientists from various disciplines can still only guess at the origins of the close coupling between gestures and speech. Because primates possess a particularly rich repertoire of gestures - young chimpanzees, for example, typically hold out an open hand when begging from their mothers - it may be that gestures preceded speech in humans. Other researchers advance the notion that "*vocal gestures*" - simple sounds that could be used as units of meaning, much like hand movements or grimaces - arose first in humans.

Wu, & Coulson (2007) found that co-speech gestures allow for better interpretation of spoken meaning.

Wesp, Hesse, Keutmann, & Wheaton, (2001) suggested that gestures help to maintain spatial representations in working memory; they found that when participants were asked to describe a painting from memory, they tended to gesture almost twice as much compared to when describing a painting in their immediate environment.

Rose, Douglas, & Matyas (2002) conducted a study in which they had patients with aphasia participate in a naming task; when instructed to point, visualize, and gesture, those with phonological access, storage, or encoding difficulties displayed significant improvement with iconic gesture.

Our research sought to show that there are indications underlying neurological connection between speech and gesture that may be at work. The function of a waving gesture is to attract attention to the beginning or the end of a social contact, and the form of a waving gesture is a certain movement of hand and arm, perhaps accompanied by eye contact and specific head and body movements.

A well-known related approach, which is, however, restricted to semantic and expressive functions of gesture, is given by Goodwin, & McNeill, (2000) where:-

1. Iconics are identified as the gestures that resemble the referent (e.g. describing an action or shape of an object with the hands).

Metaphorics, where the vehicle (the gesture) relates in one of a number of metaphorical ways to the tenor (non-literal meaning) of the gesture, e.g. indicating a container or conduit for ideas, or a gift of an idea or suggestion, G. Lakoff & Johnson, (1980)

2. Beats, where the hand, head, eyebrows move roughly in synchrony with the rhythm of often emphatic speech, mark a sequence, or a hiatus such as a change of theme or focus.
3. Cohesives, which create a gestalt in gesture space which is coextensive with a spoken utterance or – hierarchically – with its parts.
4. Deictics which may indicate an actual physical position, size, distance or direction, but may also place concepts metaphorically in physical gesture space.
5. Emblems, which are fairly highly conventionalized, lexicalized gestures, and constitute the most well-known type of gesture.
6. Affectives, which display emotional states and events.

It is important to stress that due to its primary focus on expressive and regulatory aspects of bodily behavior, research on nonverbal communication has widely ignored the study of gestures as a companion of spoken language.

Hence it is only with the cognitive turn in the eighties and nineties of the twentieth century that co-verbal gesturing was considered a valuable phenomenon to study.

Since the publication of his monograph *Hand and Mind: What Gestures Reveal about Thought* Goodwin, C., & McNeill (2000) a few years later, the study of human gestures has turned into a vividly expanding field in psychology, artificial intelligence, engineering, among others. In an example by Cienki & Müller (2004), a German speaker describes her relationship with her first boyfriend as having been *klebrig* ("sticky"), as he was too dependent on her. The gesture she makes during the quoted example, leading up to using the word *klebrig*, consists of her slowly and repeatedly pressing the palms of her two open hands together.

Lakoff, & Johnson (2003) note, several conceptual metaphors can come into play, such as LINGUISTIC EXPRESSIONS ARE CONTAINERS, IDEAS ARE OBJECTS, and COMMUNICATION IS SENDING.

Sweetser, & Wyeth (2005) notes the common gesture of using the index finger of one hand to point to successive fingers of the other hand while listing ideas or making different points of an argument as an example of gesturally manifesting the metaphor of IDEAS AS OBJECTS. Metaphoric gestures may indeed relate to speech in a variety of ways and there is variation as well as consistency across cultures. The specific forms of the interplay between gesture and speech reveal that the issue of metaphor and gesture is not reducible to a mere 'illustration' of metaphoric lexemes through a gestural depiction of a source domain. It is also not reducible to metaphoric discursive gestures. Rather gestures appear as an articulatory independent mode of expression which is used flexibly, and not only to illustrate the semantic content expressed verbally, nor only to

treat abstract discourse objects metaphorically (Bohle, 2004). It appears noteworthy to add that gestures are not just of scholarly interest, as windows onto thought, but they appear to be relevant for language understanding in everyday communication. Beattie and colleagues have shown in multiple experimental studies that recipients take up and use the information encoded gesturally. Both modalities, gesture and speech, appear to share the burden of conveying information, yet sometimes information given gesturally has a higher impact and is better remembered than information given only verbally Beattie & Shovelton (2001).

Gestures can spatially depict elements from the source domain of a metaphor, something which is not possible for metaphoric expressions in spoken languages. Many gestures, metaphoric and otherwise, take their form from everyday embodied activities, recreating the iconically. Cienki & Müller (2004) distinguishes four gestural modes of representation, i.e. four forms of practices of gesture 'creation'. Three of them bear directly upon embodied mundane practices of the hands:

1. The hands act as if they would perform an instrumental action (opening a window, holding a steering wheel, presenting an object on the open hand).
2. Hands mould short-lived sculptures (the frame of a picture, the shape of globe, a round object as representation for a love relationship).
3. Hands draw routes on a map, the shape of a picture frame, or outline the ups and downs of a love relation as a graph. The interesting point is that the modes of representation are used not only to depict concrete activities or objects or properties of concrete object but also to represent abstract metaphoric concepts.

In metaphor as well, culturally specific metaphors will be conventionally represented in gesture.

(Sweetser, 2005) describe how speakers of Aymara (a language of the Andean highlands) gesture forward when referring to the past and backward when referring to the future, gestural structures which reflect their unusual cultural and linguistic metaphors for time. Speakers of English and the many other languages where the future is metaphorically in front of the speaker gesture in the opposite directions "Conceptual Metaphor Theory," (2010), on more general cognitive models of metaphor in language.

2.5 THEORETICAL FRAMEWORK

In this section, we turn to Metaphor models or approaches from the four main metaphor schools of thought before zeroing in on our theoretical framework.

Following the publication of Lakoff and Johnson, (1980/2003), *Metaphors We Live By*, several theories of metaphor have come of which some will come in handy in our current research. In this section we explored different approaches and metaphor models upon which we aimed at to ground our study.

The first theory is Conceptual Blending, also called Conceptual Integration or view application. It is a theory of cognition developed by (Fauconnier & Turner, (2002). According to this theory, elements and vital relations from diverse scenarios are "blended" in a subconscious process, which is assumed to be ubiquitous to everyday thought and language. Gestures on their part relate diverse scenarios which are blended subconsciously to fit into the context they are being used. (Turner, 1998) in his book "The Literary Mind" (conceptual blending theorist states that Conceptual blending is a fundamental instrument of the everyday mind, used in the basic construal of all the realities, from the social to the scientific. A metaphorical gesture like



, which is used regularly by motorists, among other groups of people is generally understood to mean that all is fine, for example. Gestures and conceptual structure from the 'source' domain of vision are used to depict a situation in the 'target'

domain of knowledge and understanding. Particular elements of the source and target domains are picked out through a combination of the source gesture



used and the relevant conceptual metaphor, a 'mapping'—presumably stored as a knowledge structure in long-term memory—which tells us how elements in the two domains line up with each other. In this metaphorical gesture, knowledge structures which concern seeing have been put into correspondence with structures concerning knowledge and awareness.

In Blending Theory, by contrast, the basic unit of cognitive organization is not the domain but the '*mental space*' Fauconnier & Turner, (2002), a partial and temporary representational structure which speakers construct when thinking or talking about a perceived, imagined, past, present, or future situation.

Mental spaces (or, 'spaces', for short) are not equivalent to domains, but, rather, they depend on them: spaces represent particular scenarios which are structured by given domains. For instance, a Blending Theory account of the cited example would involve a space in which the gesticulator is lifting the thumb finger. While this representation appeals to our knowledge of visual experience, the recruited structure is only a small subset of knowledge of that domain. Thus a mental space is a short-term construct informed by the more general and more stable knowledge structures associated with a particular domain.

Conceptual Metaphor Theory analysis involve mappings between precisely two conceptual structures, Blending Theory typically makes use of a four-space model. These spaces include two 'input' spaces (which, in a metaphorical case, are associated with the source and target of Conceptual Metaphor Theory), plus a 'generic' space, representing conceptual structure that is shared by both inputs, and the 'blend' space, where material from the inputs combines and interacts. A Blending Theory account of the cited example would include the following spaces: an input space drawing on the domain of vision, in which a person (A) is lifting the thumb finger; another input space, drawing on the domain of intellectual activity, in which the seer of the gesture interprets it to mean exactly what the gesticulator intends, (A'); a mapping between these spaces, specifying that A and A' are to be taken as one and the same person, that the person's inability to see corresponds to unawareness, and so forth; a generic space containing the shared material the two inputs have in common (roughly, 'a person who has no access to a particular stimulus'); and the blended space, in which a gesture is causing an interpreter to interpret the gesture as meaning that "all is fine". In the 4-space model, material is projected from both the source and target spaces but meaning is arrived at, at the blended space or the interface. This arrangement contrasts with the simple, unidirectional projection posited by Conceptual Metaphor Theory, in which mappings are from source to target. Insights obtained from conceptual blends constitute the products of creative thinking, however Conceptual Blending Theory is not itself a complete theory of creativity, in as much as it does not illuminate the issue of where the inputs to a blend originate.

In response to the objection that Conceptual Blending Theory has yet to be specified with sufficient precision that it can be empirically tested, Fauconnier & Turner (2002) and their various colleagues for example Coulson & Matlock (2001) have produced empirical evidence that is consistent with Conceptual Blending Theory. However, the evidence to date still fails either to justify the complexities of Conceptual Blending Theory or to

differentiate between Conceptual Blending and other theories with which it is also consistent. The more detailed exposition of Conceptual Blending Theory in Fauconnier and Mark Turner (2002) goes a long way toward specifying a unified theory, but it does not satisfactorily address the issues of falsification and of eliminating rival hypotheses.

The second theory is known as Context-Limited Simulation Theory of Metaphor by Ritchie (2006).

Context-Limited Simulation Theory is based on a perceptual simulation model of language use and interpretation Barsalou (1999). In the perceptual neural system, perceptions, including perceptions of gestures and other communicative acts, are filtered, combined, and aggregated at a series of levels, beginning with raw perceptions, all the way up to the coherent multi-sensory objects we experience. Only these, the most highly aggregated and unitary perceptions are ordinarily accessible to conscious attention. Barsalou (1999) argues that a *conceptual* neural system parallels and is capable of partially simulating – and interacting with – the functions of the perceptual neural system at every level. The perceptual neural system includes states and experiences internal to the body as well as cognitive states such as abstract reasoning and emotions; the conceptual neural system includes simulators that generate simulations of the same full range of experience, including thoughts, internal body states, muscular action, and emotions. This in part explains why people on seeing a particular gesture become emotional to an extent that they fight physically. Language (words and syntax) is densely inter-connected with the conceptual neural system; perceptions and simulations can activate language as well as other simulators, and in turn language activates complex sets of simulators. These include simulators associated with the conventional meaning, the *definition*, as well as simulators of subtle nuances of thought and emotion associated with a word or phrase. Simulators that are activated by a word or phrase but are not relevant in the current context (the nature of the conversation plus recent utterances) are

suppressed; those that are relevant become even more highly activated, and are connected with the current contents of working memory, constituting the *meaning* of the utterance Wilson & Sperber (1993).

For example, when I see a cat walk across room, the raw perception of shape and pattern, color, movement, sound, and location are aggregated and combined into a single coherent object – I am not able to see just the pattern of the cat’s fur; nor (with a nod to Lewis Carroll) am I able to see just its grin. As soon as I see the cat, the word *cat* will immediately become activated, along with relevant parts of my *cat* schema. Conversely, upon hearing or reading the word *cat*, a large array of perceptual simulators becomes momentarily activated, but only those relevant in the current context are likely to remain activated. If I read “the cat is on the mat” in a philosophical discussion of language Searle & Wójcik (1998). Very few of these momentarily activated simulators will remain activated.

Metaphor alters the way its topic is experienced by suppressing the context-irrelevant simulators associated with the “*vehicle*” (the metaphorical gesture), including most or all of those associated with its customary or “literal” meaning, and increasing the activation of context-relevant (usually secondary) simulators. These are then connected with the topic of the metaphor to form the “meaning” of the gesture. The expressive power of gesture derives from the fact that the “defining” attributes of the vehicle are suppressed as contextually irrelevant, leaving the context-relevant “secondary” attributes, those that express the nuances of thought and feeling experienced by the originator of a message, activated in the seer’s working memory where they may receive more cognitive processing and become more strongly associated with the topic.

A metaphor is *created* when the gesture activates perceptual simulators, which in turn activate various schemas from which the originator may choose in formulating an expressive gesture. A metaphor is *interpreted* by suppressing context-irrelevant

perceptual simulators, enhancing the activation of context-relevant perceptual simulators, and linking these to the gesture. Because only the context-relevant simulators are processed, Context-Limited Simulation Theory of Metaphor is consistent with limitations of human cognitive processing capacity to a degree that few other theories of metaphor are. More important, because Context-Limited Simulation Theory of Metaphor emphasizes the context-relevant secondary simulators that become and remain activated in a particular context, it stimulates and guides the analyst to identify the subtle nuances of thought, perception, and feeling expressed by a metaphorical gesture in each *particular* context in which it is used.

Goeldner & Ritchie (2006), while accepting the fundamental claims of Conceptual Metaphor Theory about the embodiment of everyday metaphors, has rejected the implications that encountering a metaphorical gesture necessarily activates the full conceptual metaphor and that we necessarily always experience the metaphorical gesture *as* the metaphor vehicle Lakoff & Johnson, (2003). Drawing on Barsalou's work, Ritchie suggests that, along with associated words and phrases, an array of perceptual simulators may be activated by metaphorical gestures. Especially in the case of frequently encountered gestures, both the associated gestures and the activated simulators vary in the degree to which they are associated with and considered to be part of the common place or definitional meanings.

Unable to assign simulations to clearly labeled categories, as in a conventional content analysis, the analyst is left with two complementary tactics: Point toward the *potential* for activation of simulators and producing context-relevant simulations, and, in a text such as this, in which metaphor is piled upon metaphor, point toward the association of very different metaphors with very similar simulations.

Finally this study will focus on the Conceptual Metaphor Theory by Lakoff and Johnson (2003);- Imagine a love relationship described as follows: Our relationship has hit a dead-end street.

Here love is being conceptualized as a journey, with the implication that the relationship is stalled, that the lovers cannot keep going the way they've been going, that they must turn back, or abandon the relationship altogether. There are ontological correspondences, according to which entities in the domain of love (e.g., the lovers, their common goals, their difficulties, the love relationship, etc.) correspond systematically to entities in the domain of a journey (the travelers, the vehicle, destinations, etc.). In the conceptual system, Lakoff and Johnson, (1980) adopted a strategy for naming such mappings, using mnemonics which suggest the mapping. Mnemonic names typically (though not always) have the form: TARGET DOMAIN IS SOURCE DOMAIN, or alternatively, TARGET DOMAIN AS SOURCEDOMAIN. In this case, the name of the mapping is LOVE IS A JOURNEY. When we speak of the LOVE IS A JOURNEY metaphor, we are using a mnemonic for a set of ontological correspondences that characterize a mapping.

It is this central idea that underlies Conceptual Metaphor Theory catch-phrases such as "experientialism," "embodied cognition," and "embodiment," as well as the "super-metaphor" MIND IS BODY, Lakoff and Johnson (2003).

Skeptics such as Haser (2005b) argue that the conceptual A is B metaphors are just verbal metaphors written with small capitals, and reject the distinction between the surface manifestations of metaphors and the conceptual level of which they supposedly are the expressions. Critics may agree that has done much to illuminate that many metaphors can be expressed verbally. Conceptual Metaphor Theory in numerous different ways, but still refutes the conclusion that this is a reflection of metaphorical thinking.

One important field within Conceptual Metaphor Theory studies that concerns itself with such research is the young discipline of gesture studies. This contributed immensely to our study by proving that, not only can gestures in combination with spoken language convey metaphors; they often do so systematically. A very interesting aspect of gesturing, moreover, is that people are usually unaware that they are doing it. Any demonstration that gestures partake in metaphors therefore further supports the claim that metaphor need not be restricted to the verbal realm- an important claim by this study- but is tied to the non-verbal or even preverbal, and thus to the conceptual realm.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 INTRODUCTION

This section highlights on the research design, data presentation and analysis, collection, and the sampling procedures.

3.2 RESEARCH DESIGN

This study used both quantitative and qualitative data. This study used Qualitative design to provide a framework for detailed introspection of metaphorical gestures. Quantitative and qualitative research techniques have enhanced one's ability to collect timely, valid, and reliable data, and analyze these data with great insights. This design focuses on and describes alternative research approaches of a particular quality of a metaphorical gesture being investigated. Metaphors serve well to give some orientation for the researchers in their endeavor and in its presentation on accurate interpretation of the gestures. This study selected qualitative data design because it provided a framework for detailed analysis of transcribed meaning of a gesture in order to determine the metaphorically used linguistic items, focusing on the particular quality of the metaphorical gesture being investigated. This is because qualitative research has been found to be fair in its precision of describing the uniqueness of a phenomenon. In cognitive linguistics, the evidence of much of the symbolically oriented analysis comes from qualitative research.

Qualitative research demonstrates the wide range of tension that exists in the relationship between subjectivity, self-reflection, and adherence to methodical procedures. This is not for the purposes of testing or formulating a theory but to identify and analyse gestures within the framework of career of metaphor. Qualitative research needs an approach that allows a systematic reflection of the metaphors in which, and through which, we perceive, speak, think, and act.

Quantitative data was used in calculating what linguistic form and conceptual structure of a metaphor is available in a gesture dependent on the number of frequencies and in recording frequencies in the interpretation of selected gestures

3.3 SITE OF THE STUDY

Mombasa was one of the former Districts of Kenya but in 2013 it was reconstituted as a county, on the same boundaries. It is the smallest county in Kenya, covering an area of 229.7 km² excluding 65 km² of water mass (Appendix A4)

The county is situated in the South Eastern part of the former Coast Province. It borders Kilifi County to the North, Kwale County to the South West and the Indian Ocean to the East. Administratively, the county is divided into seven divisions, eighteen locations and thirty sub-locations. The study was conducted in this County mainly in the Central Business Districts. The area of the study is urban. The area was targeted especially because of the diversity of respondents and the rich cultural diversity within the coastal region.

The researcher was aware that this area of study would allow data homogeneity (the quality of being of the same or a similar nature).

3.4 TARGET POPULATION

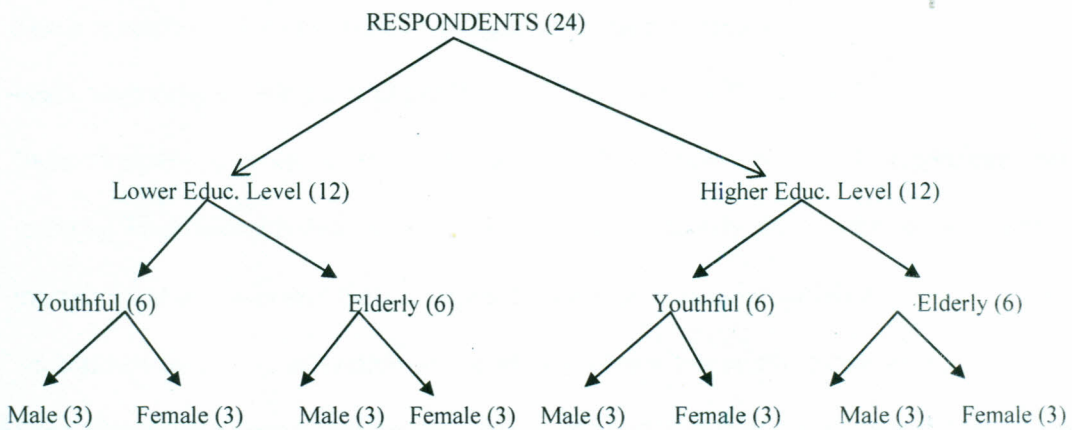
The study targeted motorists who operated private cars, public service vehicles, boda-boda and Tuk-tuks which were a common mode of transport within the town Centre. This study focused on drivers operating within the town and at least 2km out of the Central Business district (CBD). The targeted respondents were 24 drivers as a sample representing the population. Sampling for gesticulating drivers involved making physical appearances on the targeted roads in Mombasa County and video recorded the gestures performed by them. This allowed for collection of a variety of metaphorical gestures.

3.5 SAMPLING TECHNIQUES AND SAMPLE SIZE

(Miles, Huberman, & Saldaña, 2007), observe that no study can include everything and a researcher cannot study “everyone everywhere doing everything.” Thus this study sought to come up with a representative sample from target population, taking into consideration all the social variables to be studied. The selection method used in this study was the ‘networking procedure’ Horvath (1994); Milroy (1987); Mugenda (2007) .

Fig. 3.1

A. Diagrammatic representation of Respondents



The social network approach was also used in this study. The concept of social networking has been used successfully in sociolinguistic research and it refers to the formal and informal social relationships that individuals maintain with each other (Mesthrie, Swann, Deumert, & Leap, 2000).

The social network approach looks at an individual driver in a target group as having specified networks of relationships with other individuals whom he or she depends on and in turn also depend on him or her.

3.6 RESEARCH INSTRUMENTS

The study used video recording and interview schedule (Appendix IV) as the tools of data collection. (Borg, W. R., & Gall, 1989) advance the view that interviews are more flexible because they are capable of producing data of great depth.

3.7 DATA COLLECTION PROCEDURES

Data was collected in two phases. Phase I engaged in video-recording gestures used by motorists on the stated roads and then transcribing them.

From the transcribed data, those gestures which passed as metaphorical were extracted. These metaphorical items were investigated for their conceptual structure. After that, 8 items were sampled for use in phase II.

Phase II involved presentation of data sampled from phase I to the 24 respondents, and using an interview schedule, collected more data to identify the conceptual structure of metaphorical gestures and their interpretation across the social variables of age, sex and educational level. Consideration of the elderly versus the youth, those with a moderate level of education versus those with a high level of education and male versus female was made.

From the 24 respondents data was collected using an Interview Schedule (see Appendix A3). From this data, computation was done to establish to what extent metaphors were understood uniformly or otherwise across the sampled social variables. The distinction between the novel and the conventional metaphors and by implication, whether metaphors are processed as comparisons or categorizations, started to emerge here.

This research borrowed from Ethnographic research, (Akeroyd, & Ellen, 1984) which focuses on the behaviors of the members of a particular community by studying them in naturally occurring, ongoing settings, typically while they participate in mundane day-to-day events. The aim of borrowing from this type of research was to provide a descriptive,

explanatory, interpretive account of a community or some aspect of life within it, incorporating culturally specific framework used by the members of the community under study for interpreting and assigning meaning to the gestures.

3.8 DATA ANALYSIS PROCEDURES

Analysis of data started with collection of various gestures from motorists in Mombasa County.

To achieve objective 1, video recording of the gestures being used by the motorists on the roads of Mombasa was done with an aim of identifying them as metaphorical. Drivers were requested to identify a particular gesture that they used regularly towards other drivers or motorists. Other drivers were also interviewed so as to identify gestures used towards them by other motorists.

To achieve objective 2, classification of the gestures into either novel or conventional was done. Motorists were requested to identify the gestures that are conventionally used in their day to day undertakings.

To achieve objective 3, tabulation of the data collected was carried out and using percentages, the information was outlined using graphs and pie charts.

According to Tina Krennmayr (2011), metaphor analysis can be approached top-down, i.e. the researcher starts out from (a) conceptual metaphor(s) and then searches for linguistic expressions that are compatible with that mapping OR the search for metaphorically used words can be tackled from the bottom up Pragglejaz Group (2007) without presuming a specific conceptual metaphor. This research used the bottom up approach.

3.9 DATA MANAGEMENT AND ETHICAL CONSIDERATIONS

The research was conducted through observing the principles governing conduct on Mombasa city. Being in the coast of Kenya, most residents are influenced by rules of behaviour, rituals, art, styles of dress, ways of speaking and address to each other in daily discourse, type of food etc., from the tourists who frequent the city from different parts of the world. In order to obtain the expected data, the researcher cooperated with drivers, residents, traffic police officers, among other road users, in everything by trying to adapt himself to their way of life. The researcher also got official permission from the authorities of the County Government of Mombasa, specifically from the transport department within the Governor's office. During the interviews, questions that may have caused misunderstanding were avoided.

CHAPTER FOUR

4.0 DATA ANALYSIS AND PRESENTATION

4.1 INTRODUCTION

This chapter presents metaphors found in gestures used in Mombasa County. The gestures are analysed sequentially according to the order in which they follow in the appendix section.

This section presents a beginning; it opens a conversation; it triggers thought-provoking ideas and many interesting examples of the *parallel* use of gestural metaphors to illustrate verbal metaphors. Research into language must include gesticulation in its repertoire; as one studies the role of gesticulation in speech it becomes more and more apparent of just how important it really is: gesture serves to help the development of language in children, aid communication of information, facilitate lexical access and possibly much more. In this, gesture acts in a subtle, yet complex manner to reinforce human communication and bring us closer together.

Perhaps one of the most useful aspects of this section is to show how gestural metaphors appear in actual discourse, and thus help move the theoretical discussion of metaphor away from made-up examples and purely verbal expressions of metaphor.

This collection and the research reported in this study provide an important step forward in our understanding of the complex phenomena of metaphor and gesture.

It provides rich examples of some of the most interesting and important contemporary research on the ties between embodiment and the distinctively human infrastructure for cognition provided by metaphor, providing a state of the art snapshot of much contemporary work on gesture.

An analysis of both secondary and primary data transcribed from the video recorded clips on gestures and the answers contained in the questionnaires has been on foci. The secondary data is analysed by relating it to the message item the gesticulators intended to communicate. The primary data involves the respondents' interpretation of the message items against what the original gesticulators intended to communicate.

Chi-square test was used to compute the respondents' interpretation of the gestures.

Chi-square

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

$$\chi^2 = \text{the test statistic} \quad \sum = \text{the sum of}$$

O = Observed frequencies E = Expected frequencies

Degree of freedom = (fl) (c-1)

$$\text{Thus, } \chi^2 = N \frac{(AD - BC)^2}{(A+B)(C+D)(A+C)(B+D)}$$

$$(A+B)(C+D)(A+C)(B+D)$$

$$= N \frac{(10 \times 4) - (2 \times 8)^2}{(12)(12)(18)(6)} = 24$$

$$(12)(12)(18)(6)$$

N = Total number of respondents = 24

(Number of Column = 1) (Number of rows = 1)

$$(2-1) = 1$$

$$(2-1) = 1$$

The degree of freedom was found to be 1

4.2 IDENTIFICATION OF METAPHORICAL GESTURES

All the items sampled as secondary data used for primary data elicitation were found to have one common intention.

They all intended to identify which metaphorical gestures are commonly used in Mombasa County. All too aware of the recklessness of especially Matatu drivers on Kenyan roads, use of gestures was found to be used towards other drivers and motorists.

4.3 GESTURES

A

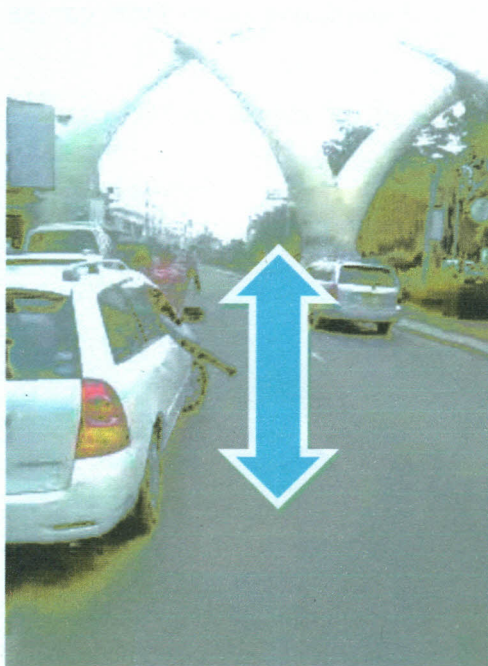


Fig.4.1

Gesture "A"/ fig. 4.1 had an extended right arm with the fingers folded except the index finger which pointed downwards. The index finger was moved up and down in a repeated sequence when the arm was stretched outside the driver's window.

The gesture was preceded by flashing of the headlights by the oncoming vehicle prompting the driver of the oncoming car to flash the gesture.

In Kenya, drivers “keep left” on the road while driving. This implies that, as motorists drive along the roads, the drivers of two oncoming vehicles are on the same side and therefore literally next to each other. Any intended gesture by an approaching driver is clearly visible to the oncoming driver.

The gesture presupposed that by seeing the gesture being flashed by the other driver, the latter would know what it implies. The gesticulators intended to alert other drivers and motorists of the presence of Traffic Police officers, who would subject their vehicles to an inspection to establish their road worthiness, whether they and their passengers have fastened seatbelts, validity of driving license, insurance cover, speeding, drunkenness among other issues pertaining to careful driving.

Gesture “B” as shown in fig 4.2 had an extended right arm with all the five fingers stretched straight.



Fig 4.2

The arm was moved up and down in a repeated sequence when stretched outside the driver's window. This gesture was preceded by flashing of the headlights of the oncoming vehicle prompting the driver to flash the gesture. According to the gesticulator, the gesture was supposed to alert the driver to slow down since there were Traffic Police officers checking on drivers who were driving their vehicles at a speed higher than the recommended limits.

In Kenya, the speed limit for heavy commercial vehicles is Eighty kilometers per hour (80 KPH), and one hundred and ten kilometers per hour (110KPH) for small cars, on highways. On some roads, the speed limit is indicated by different sign boards depending on the nature of a particular section of the road. Drivers are supposed to strictly adhere to these limits. Speed has been identified as number one cause for road carnage globally. Globally, it is estimated that 1.2 million human lives are lost annually and that about 50 million persons are injured in the world as a result of road traffic accidents (WHO, 2004).

BYE-BYE GESTURE

This gesture was common among motorists as they bid farewell to their friends. The gesture is flashed with all the five fingers stretched out as shown in Fig 4.3.



Fig 4.3

TWO FINGER SALUTE GESTURE

Two finger salute gesture as shown in Fig 4.4 and Fig 4.5, was a common gesture that was flashed by motorists to indicate that they were cool and peaceful. Matatu touts were noticeably found to be fond of this gesture.



Fig 4.4

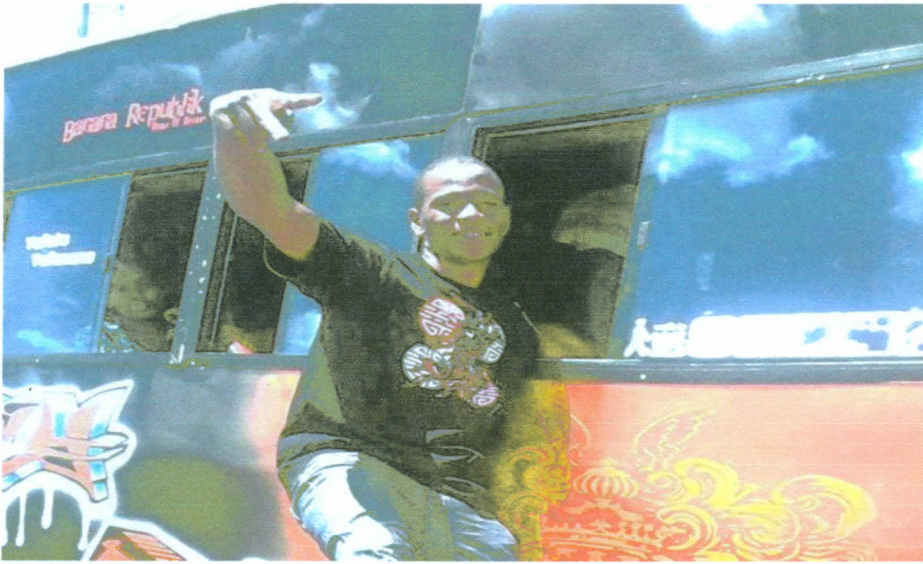


Fig 4.5

“FUCK YOU” GESTURE

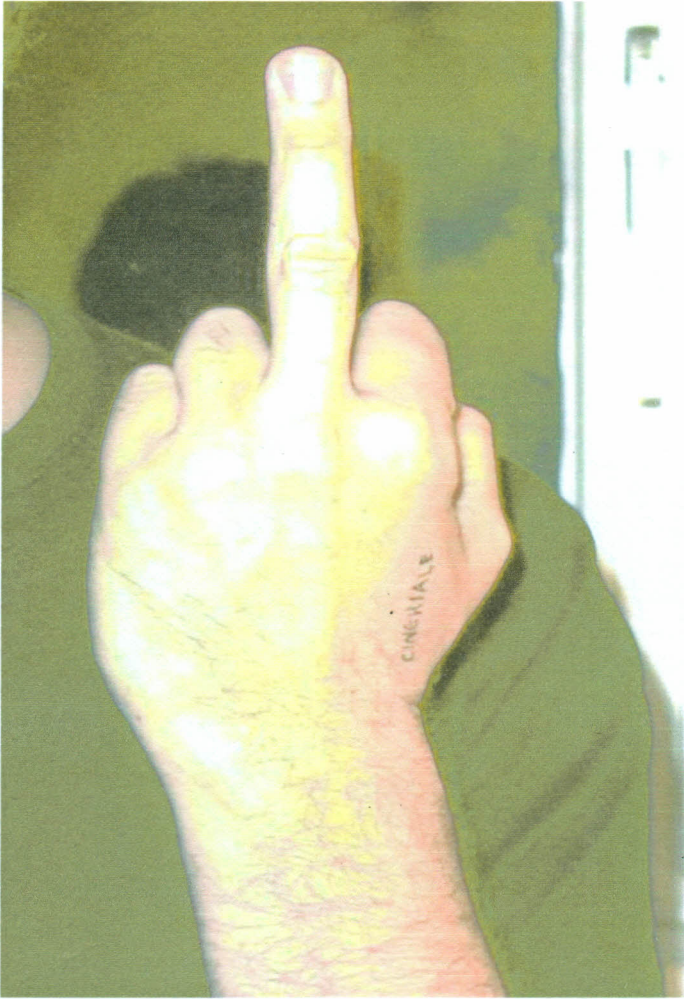


Fig 4.6

This gesture was performed by showing the back of a closed fist that had only the middle finger extended upwards as shown in Fig 4.6. The driver stretched the right hand out and flashed the gesture once. Extending the finger is considered a symbol of contempt in several cultures. Most drivers used this gesture to display their displeasure to other motorists who in the cause of their driving behaved in a manner likely to result to an accident. The drivers who flashed this gesture were fully aware that the gesture is rude and most of them regretted that they were seen by others doing the same.

Another gesture that was found to be common among most motorists was the use of the hand to indicate direction as shown in fig 4.7 and fig 4.8. Drivers who used this gesture were reinforcing the indicator signals on their vehicles alerting other motorists of their intentions to make a turn, especially to the right. This involved the stretching of the driver's right arm and pointing with the index finger. Riders used either the hand or the leg. With the leg, it was stretched out towards the direction to which they intended to turn.



Fig 4.7



Fig 4.8

4.4 CLASSIFICATION OF THE GESTURES

Based on the CTM, conceptual metaphors are important because they reflect how abstract concepts may be structured, and how abstract and concrete concepts are organized and inter-related in our minds.

Conventional gestures are those movements we make, such as waving hello and shaking hands that are part of a learned, shared, symbolic system while Novel metaphors are understood as comparisons.

Novel gestures are viewed as imaginative and poetic in nature while conventional gestures are considered/ seen as dead or frozen.

The Metaphor suggests that conventional and novel metaphors are processed differently. As metaphors become more and more conventionalized, there is a shift in type of processing from comparison to categorization.

Most of the gestures observed were classified as conventional since there was use of a body limb, either the hand, leg or the head. They were symbolic and did not involve comparison. Most of the respondents indicated that they learnt the meaning of the gestures through learning from others in a notably very "informal" way.

It is imperative at this juncture to observe that gesture and speech share the communicative burden to express one and the same metaphor, which means that metaphor is not limited to the verbal medium of expression. Gestures are seen here as creating a deep feature of cognition that cannot be dissociated from the intellectual feat accomplished by individuals. Research across cultures not only shows that gestures are pervasive Adam Kendon (2004) but also, that they are deeply integrated with other intellectual abilities such as navigation and orientation competencies, sense of direction, language, and narrative structures (Havilland, 1993). According to Lakoff, & Johnson

(2003) Conceptual Metaphor Theory, mental concepts structure what human mind perceives and how the concepts relate to other people.

The human conceptual system plays a central role in defining everyday realities. This then suggests that our conceptual system is largely metaphorical, and what we do every day is very much a matter of metaphor.

The great merit of Lakoff and Johnson's *Metaphors We Live By* (1980), was its demonstration that metaphors are typically not creative one offs, but pervade language and thought. They claim that our language use reveals that one of the ways in which human beings make sense of their lives is by systematically coupling abstract and complex concepts with concrete ones in a metaphorical **ABSTRACT A IS CONCRETE B** format. Abstract and complex phenomena are not immediately accessible to the senses, whereas concrete phenomena are.

"Concrete" here thus means "pertaining to typical actions the human body performs": perceiving and moving. We know things primarily by what we see, hear, touch, smell, taste – and by moving.

We exploit our physical affordances to structure and conceptualize the abstract. Since we cannot see, hear, touch, smell, or taste concepts such as time, democracy, ideals, and emotions, we have developed systems of metaphors to come to grips with them. It is this central idea that underlies Conceptual Metaphor Theory catch-phrases such as "experientialism," "embodied cognition," and "embodiment," as well as the "super-metaphor" **MIND IS BODY** (Lakoff and Johnson 1999: 248).

Skeptics such as Haser (2005), argue that the conceptual A is B metaphors are just verbal metaphors written with small capitals, and reject the distinction between the surface manifestations of metaphors and the conceptual level of which they supposedly are the expressions. Critics may agree that has done much to illuminate that many metaphors can

be expressed verbally Conceptual Metaphor Theory in numerous different ways, but still refute the conclusion that this is a reflection of metaphorical thinking.

One important field within Conceptual Metaphor Theory studies that concerns itself with such research is the young discipline of gesture studies. Not only can gestures in combination with spoken language convey metaphors; they often do so systematically. A very interesting aspect of gesturing that we discovered is that people are usually unaware that they are doing it. Any demonstration that gestures partake in metaphors therefore further supports the claim that metaphor need not be restricted to the verbal realm, but is tied to the non-verbal or even preverbal, and thus to the conceptual realm.

4.5 PRESENTATION OF THE INTERPRETATION OF THE GESTURES BY

MOTORISTS

$$X^2 = N \frac{(AD - BC)^2}{(A+B)(C+D)(A+C)(B+D)}$$

$$(A+B)(C+D)(A+C)(B+D)$$

There were a total of 32 correct interpretations against 40 responses for the four gestures.

4.6 SEX VARIABLE IN THE INTERPRETATION OF THE GESTURES BY

MOTORISTS

Computations for the social variable of sex in the interpretation of the gestures by the motorists

Social variable	C.I	W.I	TOTAL
MALE	10	2	12
FEMALE	10	2	12
TOTAL	20	4	24

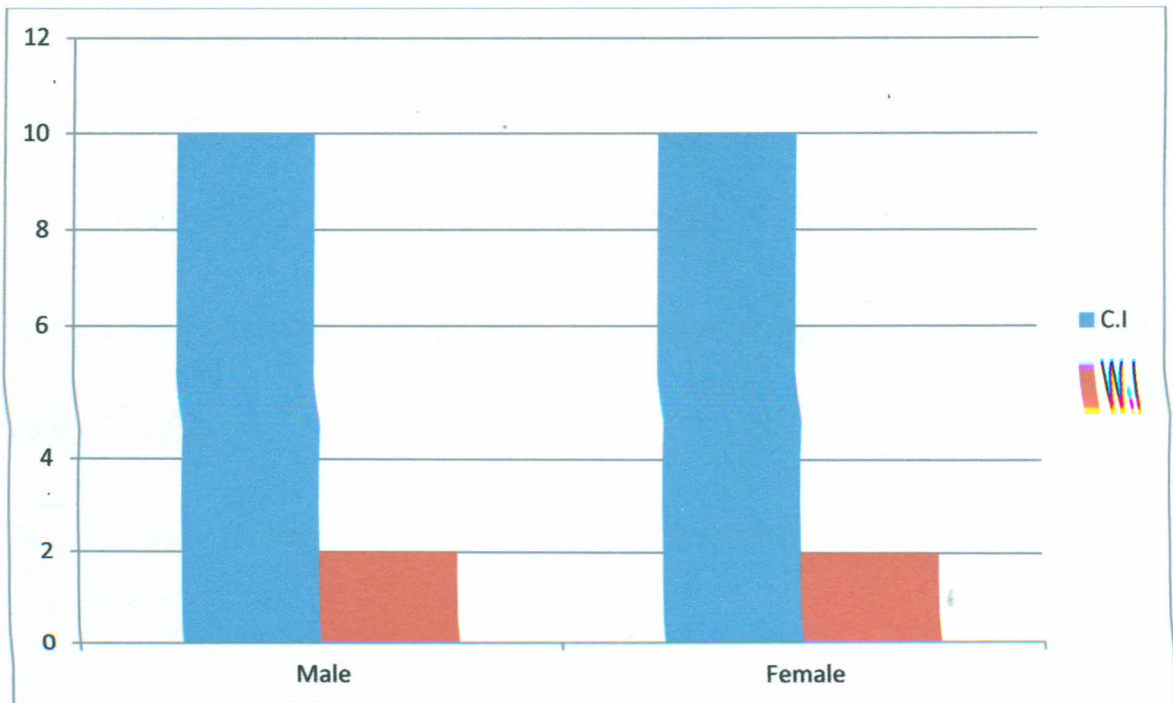
Table 1.1 sex variable in the interpretation of the gestures by motorists

$$X^2 = \frac{24(20-20)^2}{12 \times 12 \times 18 \times 16} = \frac{24 \times 2 \times 16}{12 \times 12 \times 18 \times 16} = 0$$

$$12 \times 12 \times 18 \times 16 \quad 12 \times 12 \times 18 \times 16$$

The Chi-square statistic is 0. The N value is 1. This result is not significant at $n < 0.05$.

At 5% level of significance, sex is not significant in the interpretation of the gestures used by the motorists.



Graphical presentation on interpretation of the gestures by motorists based on

sex

4.7 AGE VARIABLE IN THE INTERPRETATION OF THE GESTURES BY THE MOTORISTS

Computations for the social variable of sex in the interpretation of the gestures by the motorists

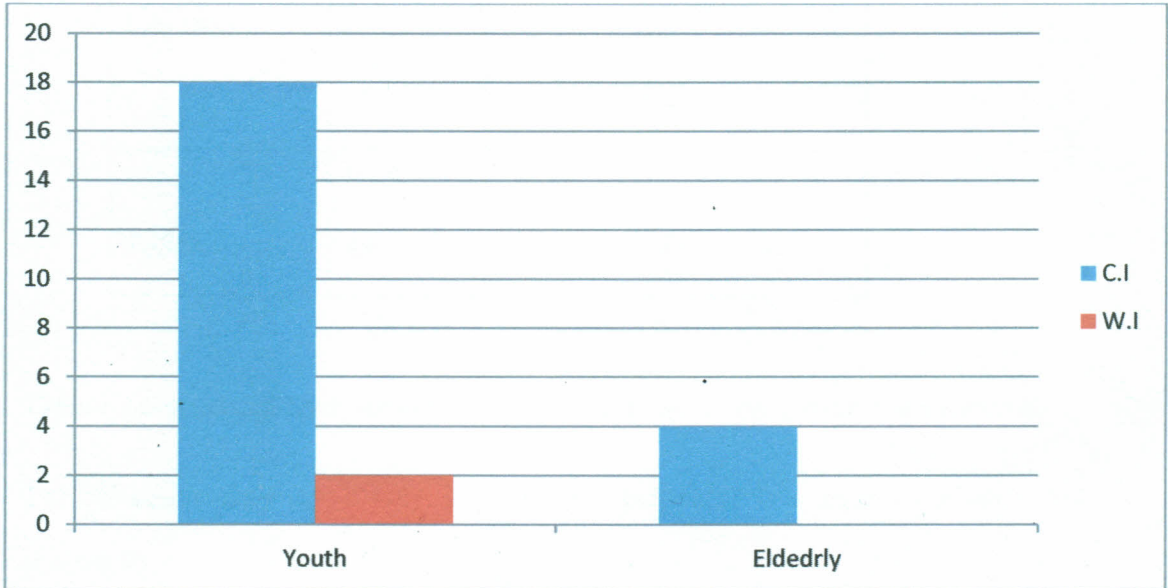
Social variable	C.I	W.I	TOTAL
YOUTH	18	2	20
ELDERLY	4	0	4
TOTAL	22	2	24

Table 1.2 age variable in the interpretation of the gestures by motorists

$$X^2 = \frac{24(0-40)^2}{12 \times 12 \times 18 \times 16} = \frac{24 \times 2 \times 40}{12 \times 12 \times 18 \times 16} = 0.0463$$

At 5% level of significance, sex is not significant in the interpretation of the gestures used by the motorists.

The Chi-square statistic is 0.4364. The N value is 0.508883. This result is *not* significant at $n < 0.05$.



Graphical presentation on interpretation of the gestures by motorists based on

age

4.8 EDUCATIONAL LEVEL VARIABLE IN THE INTERPRETATION OF THE GESTURES BY MOTORISTS

Computations for the social variable of educational level in the interpretation of the gestures by the motorists

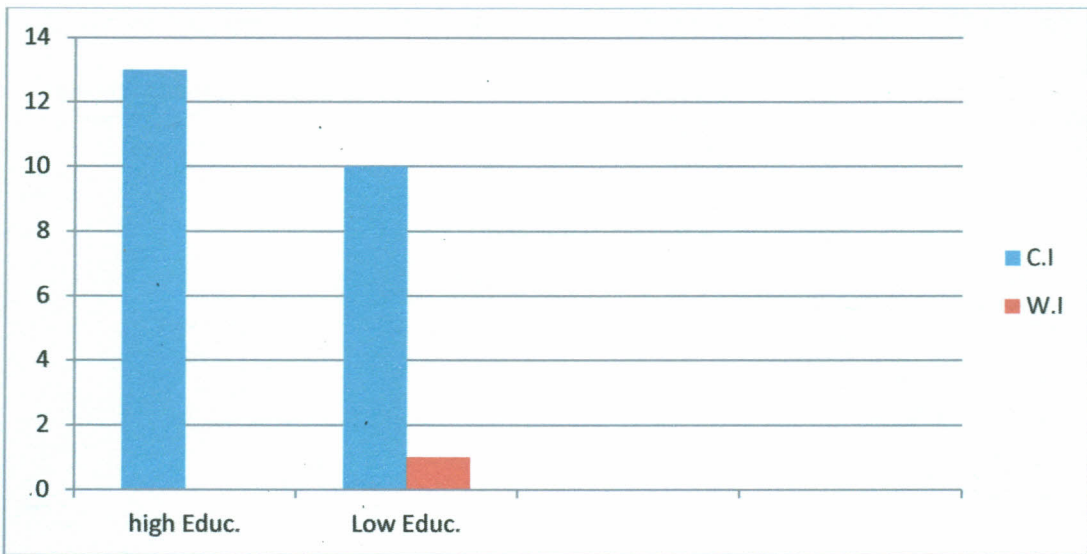
Social variable	C.I	W.I	TOTAL
High Educ.	13	0	13
Low Educ.	10	1	11
TOTAL	23	1	24

Table 1.1 educational level variable in the interpretation of the gestures by motorists

The Chi-square statistic is 0.4364. The n value is 0.508883. This result is *not* significant at $n < 0.05$.

$$X^2 = \frac{24(40-40)^2}{12 \times 12 \times 18 \times 16} = \frac{24 \times 0}{12 \times 12 \times 18 \times 16} = 0$$

At 5% level of significance, educational level is not significant in the interpretation of the gestures used by the motorists.



Graphical presentation on interpretation of the gestures by motorists based on level of education

Overall, all the gestures were correctly interpreted at accuracy rate of 83.33%, 91.67% and 95.833% respectively. The contribution made by the gestures was therefore massive and informative as required.

The failure by the overall respondents at the rates of 16.67%, 8.23% and 4.17% respectively, may have done so owing to reasons covered in the discussion on social variables

4.9 CONCLUSION

The analysis and presented data in this chapter was merged for ease of computation.

For every gesture item considered, explicit explanation is offered, highlighting how it is generated using specific body limbs, the hand, the leg and the head. Next the analysis of how the gestures were interpreted across the social variables of sex, age and level of education has been captured.

In the next chapter findings and recommendations are covered. Suggestions for further related research are given.

CHAPTER FIVE

5.0 FINDINGS AND RECOMMENDATIONS

5.1 INTRODUCTION

This section presents a summary of the findings, recommendations and gives suggestions for further research.

The study is a pragmatic analysis of metaphorical gestures used by motorists in Mombasa County.

The main objective of the study was to identify metaphorical gestures commonly used by motorists in Mombasa County, establish whether the gestures were novel or conventional. We have established that the social variables of sex, age and level of education affect the interpretation of the gestures used by motorists in Mombasa County. However, they were largely inconsequential.

From the study it emerges that most of the gestures observed were conventional rather than novel. Infact, none of the gestures displayed a distinct aspect of novelty. They were symbolic and did not involve comparison. As noted earlier in another section of this study, most of the respondents indicated that they learnt the meaning of the gestures through learning from others and not through formal teaching.

This study therefore established that gesture and speech share the communicative burden to express one and the same metaphor, which means that metaphor is not limited to the verbal medium of expression.

5.1 RECOMMENDATIONS

Gestures were seen to be creating a deep feature of cognition that cannot be dissociated from the intellectual feat accomplished by individuals. Gestures considered to be offensive or abusive appeared to be well mastered across the social variables of sex, age and level of education. Motorists displayed rather swift enthusiasm in interpreting the

gestures and conveniently adjusting to their requirements. This was noted to be above the barriers of language, yet communication took place.

I therefore would recommend that gestures be integrated in teaching and learning language skills and be accommodated as a co-communicator in language.

5.2 SUGGESTIONS FOR FURTHER RESEARCH

This research dwelt on the pragmatic aspect of the use of gestures used by motorists in Mombasa County. There are other spheres of gestures used by other groups of people for example, school children as they intend to exclude their peers, labeling of their teachers, requesting, threats just to mention a few. As people strive to stay relevant with the fast changing world, gestures will be found to be of paramount assistance in communication where people wish to cater for language barriers and euphemism.

5.3 CONCLUSION

This presentation of a pragmatic analysis of gestures used by motorists in Mombasa County has attempted to establish that gestures, on their own carry meaning and do not require speech or written linguistic features to communicate.

The study has established that the social variables of sex, age and level of education are the most important in the interpretation of gestures.

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APPENDICES

APPENDIX A2 (BUDGET)

Item	Cost (Kshs.)
A. Proposal writing	
(i) Stationery	6,000
(ii) Typesetting and printing	10,000
(iii) Internet access	8,000
(iv) Flash disk, modem, laptop	38,000
(Vii) Photocopy	2,000
Subtotal	64,000
B. Library research	
(i) Books and journals	6,000
(ii) Transport expenses	10,000
(iii) Internet access	5,000
Subtotal	21,000
A. Production of the project	
(i) Report writing and data analysis assistants	5,000
(ii) Typesetting and printing	5,000
(iii) Photocopying and binding	5,000
(iv) Miscellaneous	5,000
Subtotal	20,000
<u>Grand total</u>	105,000

RESEARCH INSTRUMENTS**APPENDIX A3: Interview Schedule (drivers)**

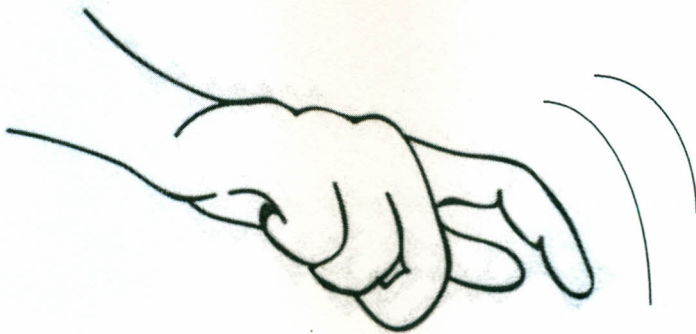
(i) Type of vehicle :- Matatu Tuk-tuk Heavy commercial

(ii) Sex :- F M (Tick appropriately)

(i) Age _____

(ii) Level of education :- None Primary Secondary University

(iii) When drivers gesticulate using the gesture shown in the diagram, what do they mean?



(iv) In the course of driving, when does a driver use this gesture and what does it mean?



.....

.....

.....

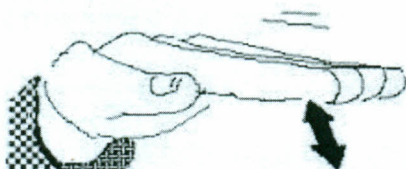
.....

.....

(v) When a driver flashes this gesture to another driver what is possibly the intended meaning?

.....

.....



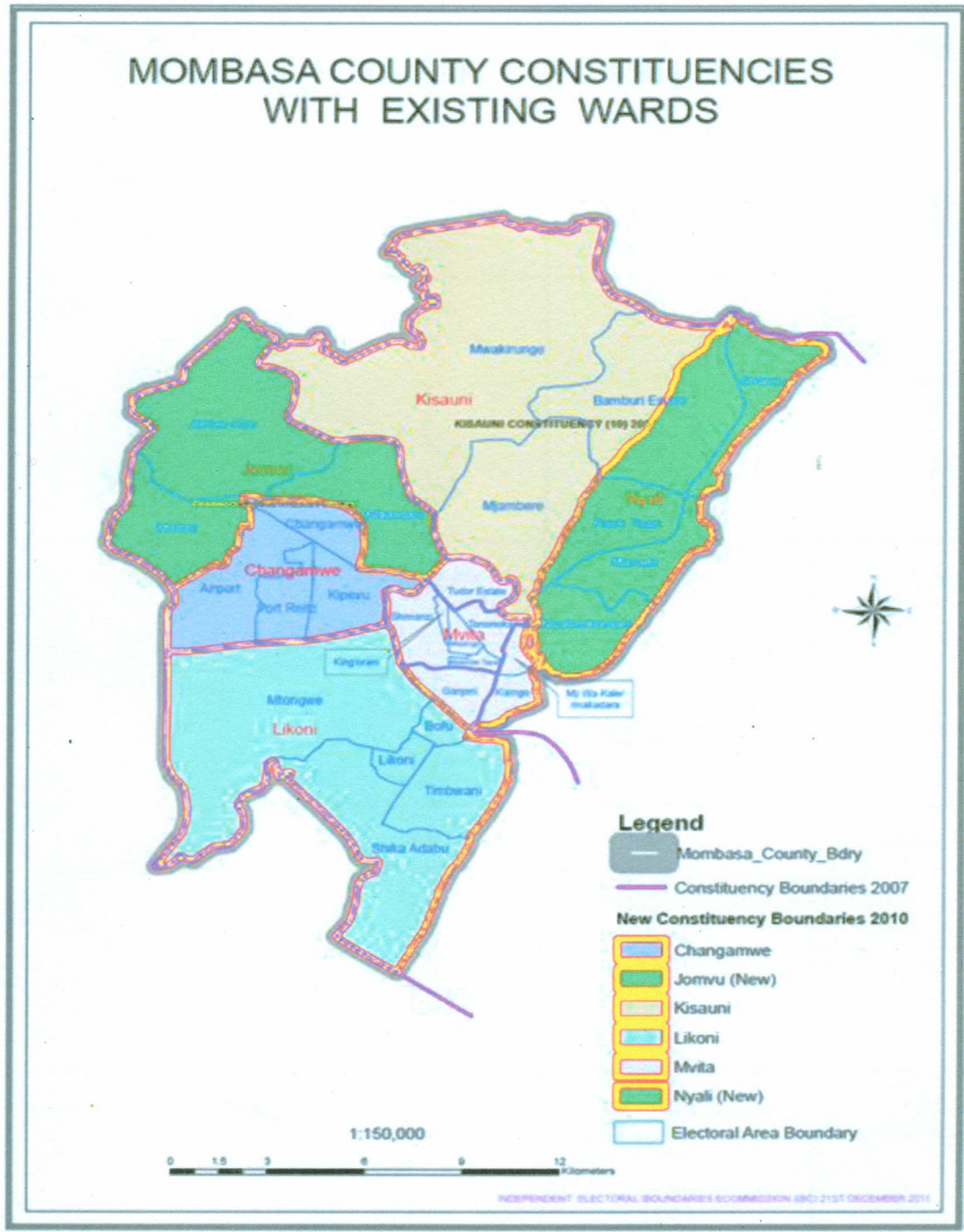
Is the meaning the same when used in any other context apart from driving?

.....

.....

.....

APPENDIX A4: Map of Mombasa County

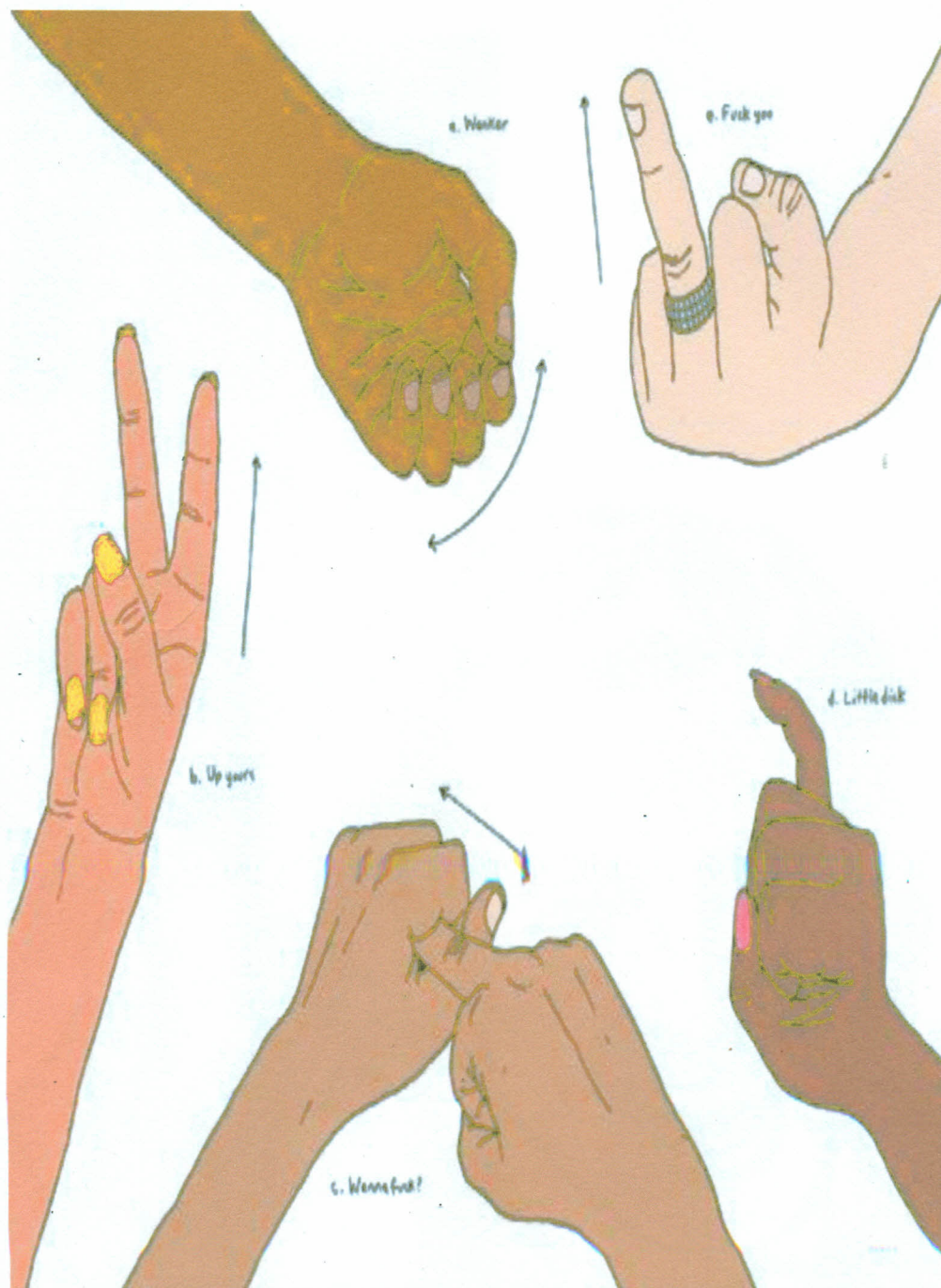


Appendix I: Hand Gestures. (List of gestures - Wikipedia, the free encyclopedia files)

<p>hang loose <i>creator: unknown</i></p> 	<p>call me <i>creator: unknown</i></p> 	<p>loser <i>creator: unknown</i></p> 	<p>high-five <i>creator: unknown</i></p> 
<p>talk to the hand <i>creator: unknown</i></p> 	<p>good job <i>creator: unknown</i></p> 	<p>hitchin' a ride <i>creator: unknown</i></p> 	<p>dislike <i>creator: unknown</i></p> 
<p>world's smallest violin <i>creator: unknown</i></p> 	<p>peace, man <i>creator: unknown</i></p> 	<p>shocker <i>creator: unknown</i></p> 	<p>you <i>creator: unknown</i></p> 
<p>bang bang <i>creator: unknown</i></p> 	<p>a-ok <i>creator: unknown</i></p> 	<p>a-hole <i>creator: unknown</i></p> 	<p>check, please <i>creator: unknown</i></p> 
<p>power to (fill in the blank) <i>creator: unknown</i></p> 	<p>F-YOU <i>creator: unknown</i></p> 	<p>good luck <i>creator: unknown</i></p> 	<p>ROCK <i>creator: Ronnie James Dio</i></p> 

Appendix II: Different gestures used to symbolize "Fuck You" (Metaphors/List of gestures -

Wikipedia, the free encyclopedia files)



APPENDIX III: "Fuck You" gesture. (Arsenal.com)



APPENDIX IV: Interview Schedule

This questionnaire is intended for research only, read it and answer the questions therein as truthfully as you possibly can. (Do not write your name).

1. Sex
2. Age
3. Educational level attained.....

Carefully study the photographs below and answer the questions that follow



1. What does the gesture in the first photograph imply?.....

2. What does the gesture in the second photograph imply?.....

.....

.....

3. Who uses the gesture oftenly? (Tick one)

Young

Aged

Educated

Un-educated

All of the above

4. To whom is the gesture aimed ?

Young

Aged

Educated

Un-educated

All of the above

5. In your own understanding, what do you consider the gesture to imply? (Tick one)

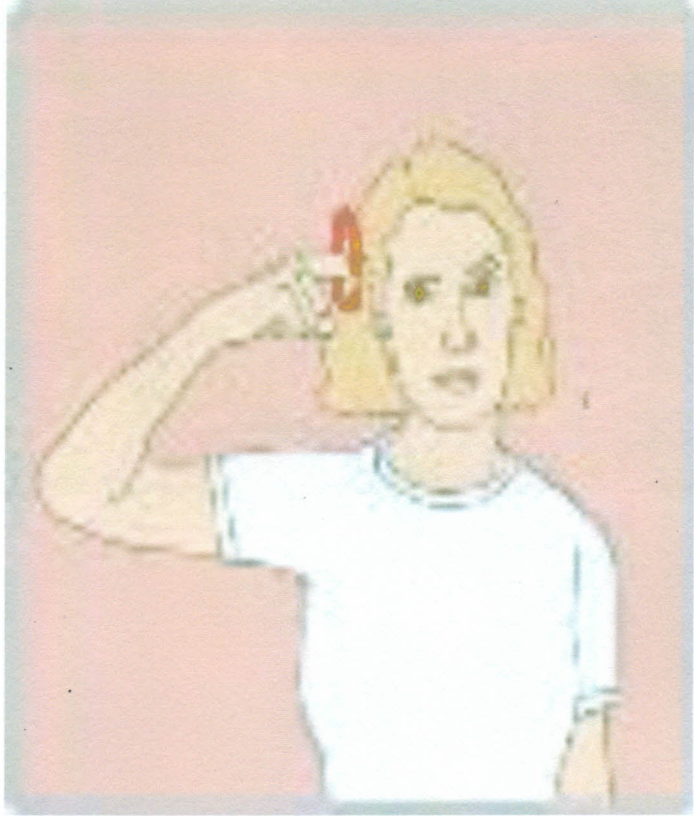
Polite

Rude

Don't know

Appendix V

You got to think gesture



“Its Cool” gesture



www.shutterstock.com · 101983977

APPENDIX VI

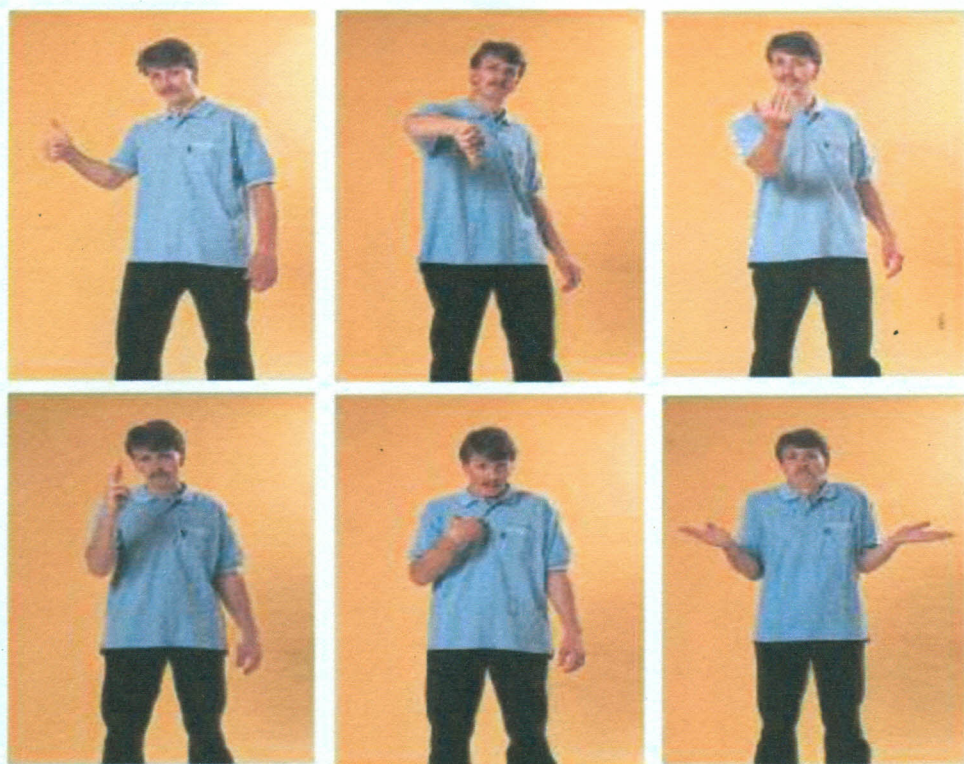
ASSORTED GESTURES USED IN MATATU INDUSTRY

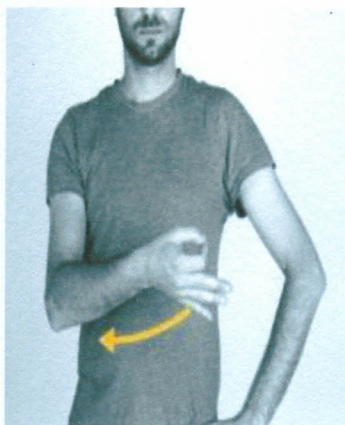




APPENDIX VII

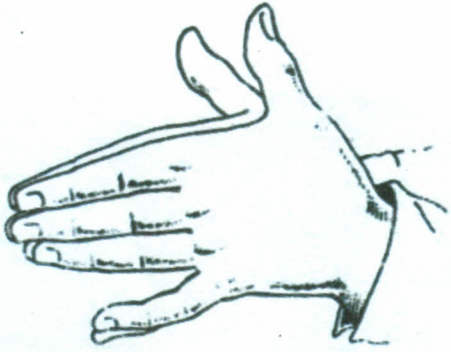
Different Hand gestures





“Merge/Join” together..... Team work gesture





Thumbs up gesture



An argument reinforced with gestures

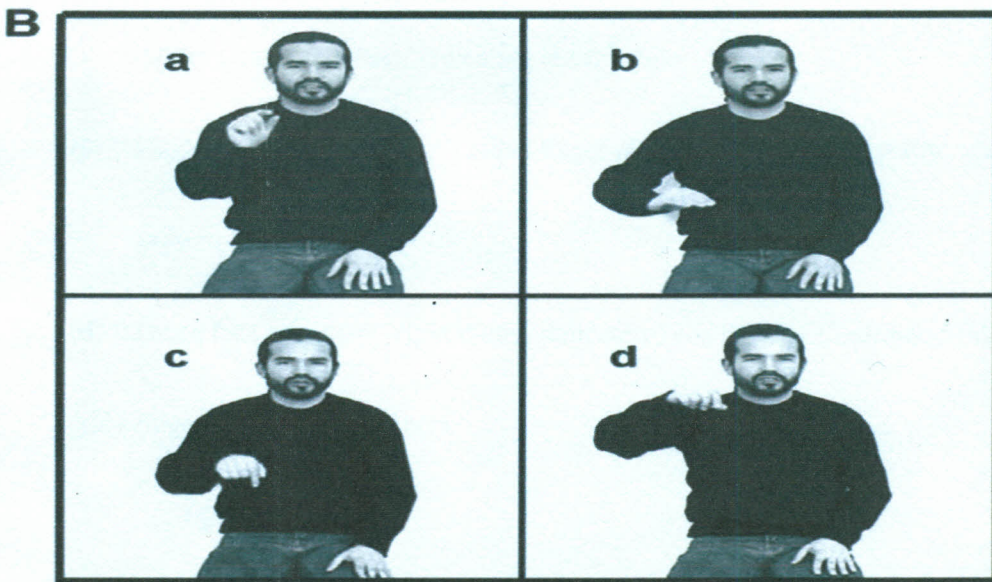
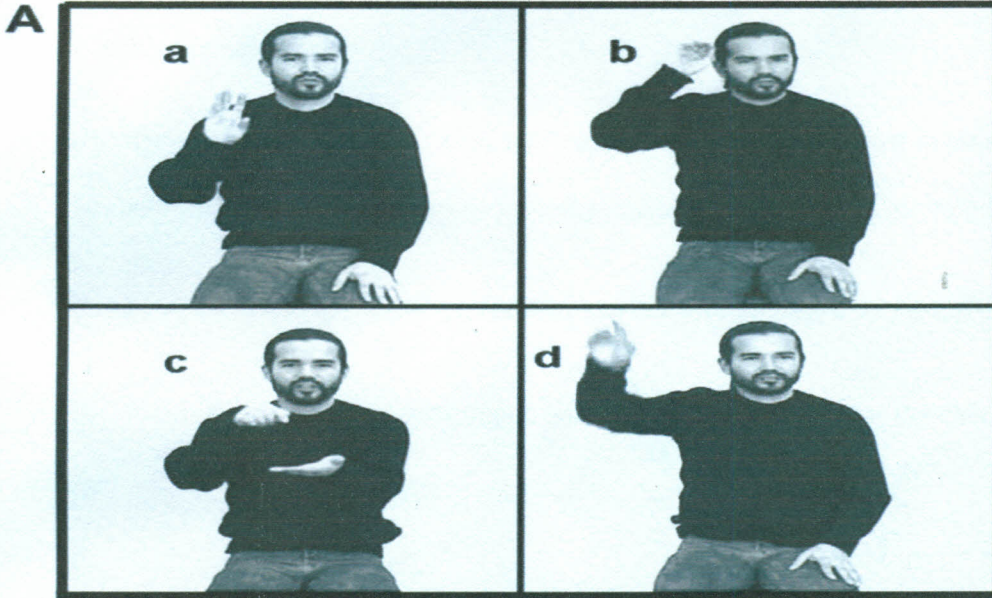


Bye-bye gesture



APPENDIX VIII

Different gestures used across the world

A- Examples of metaphorical expressions uttered with congruent gestures.

(a) “Those salesmen are parrots” - the right hand moves upwards to the level of the shoulder (palm facing out) while repeatedly closing and opening fingers and opposed thumb, evoking the idea of a mouth speaking too much;

(b) “Those men are lights”, the right hand moves upwards, touches the right temple and projects a diagonal upward and outward movement. At the same time the hand opens to indicate open-mindedness;

(c) “Those secretaries are clocks” with both arms relatively extended the right index finger moves straight down until it touches the upward-facing open palm of the left hand, indicating punctuality;

(d) “Those young women are airplanes”, with the hand in a standard pointing position, the right index finger moves rapidly from the center up toward the right, indicating speed.

B- *Examples of metaphorical expressions uttered with incongruent gestures.*

(a) “Those feet are motorboats”- thumb and index finger come closer together, indicating something tiny.

(b) “Those young people are giraffes”- right hand open palm facing down is placed slightly above the waist, indicating short height.

(c) “Those projects are history”- index finger moving straight downwards, indicating present time;

(d) “Those fists are steel”- right thumb delicately rubs the tip of index and middle fingers, indicating softness.

APPENDIX IX

Tuk-tuk (Rickshaw)



Rickshaws at Fort Jesus in Mombasa



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