

Semantic Extensions of Hausa Visual and Auditory Perception Verbs *gani* and *ji* in Romance Fiction

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ABSTRACT

This study focuses on the metaphorical semantic extension of Hausa visual and auditory perception verbs as portrayed in romance fiction. Hausa language, just like any other language, provides a window into how speakers use language to make sense of the world around them. The study examines how language users attribute abstract concepts, such as thinking and understanding, to sensory experiences of seeing and hearing, drawing on the conceptual metaphor theory. The study analysed a corpus of Hausa romance fiction, focusing on the use of perception verbs and the metaphorical extensions they evoke. A qualitative research approach was employed, and literary texts were selected as the primary data source. The text data were extracted using the AntConc programme, and such data were then analysed using a cognitive semantics analytical framework. The study's findings indicated that verbs of higher intellect, such as "understand" and "think", are derived from hearing and vision, respectively. These metaphorical extensions are closely related

to cultural beliefs and norms, emphasising the importance of visual and auditory cues in human relationships. This article provides insights into how language and culture intersect in using perception verbs in Hausa romance fiction texts and demonstrates the importance of understanding metaphorical extensions in studying language and culture.

Keywords: Metaphor, perception verbs, prototypical meaning, semantic extension, trans-field

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INTRODUCTION

Perception verbs such as *see*, *hear*, *touch*, *taste*, and *smell* are used significantly in fiction writing to create the effect of immediate sensory experience. They create an internal viewpoint that reflects various levels of the reader's psyche, creating various layers of meaning to achieve a specific objective. Many recent studies in semantic change have suggested that perception verbs have a polysemous structure. It implies that in addition to their prototypical meanings, perception verbs have extended meanings, otherwise known as semantic extensions, which could be either physical or abstract, with the latter being primarily metaphorical.

According to Roque et al. (2018), perceptual language is a rich source of polysemous meanings and semantic extensions. Only verbs referring to non-contact perception, such as "vision" and "hearing", were found to exhibit any extension to the cognitive domain (e.g., Evans & Wilkins, 2000; Ya'u et al., 2021). These verbs of perception are primarily mapped onto domains of cognitive experience. In accordance with the semantic roles of their subjects, perception verbs are also divided into three categories: copulative verbs, experience verbs, and activity verbs (Viberg, 1983). Experience verbs such as "see" and "hear" are more polysemous than active or copulative verbs (Manasia, 2016). Moreover, lexical items that are deemed polysemous have more than one meaning. Examination of perception verbs has revealed that they have non-prototypical

meanings, which are all extended meanings, in addition to prototypical meanings, which are the original meanings from which all other meanings can be derived (Manasia, 2016; Neagu, 2013), as illustrated by Example 1:

Example 1. I *see* many books on the shelf.

The meaning of the vision verb *see* in the preceding example is prototypical since it conveys the meaning related to a common bodily experience of seeing. However, it has other meanings, known as extended ones, in addition to the literal or prototypical meaning.

The semantic extensions of perception, or meaning extensions, can be trans-field or intra-field. Trans-field extensions occur when one domain of experience is transferred to another, as opposed to intra-field extensions, which take place within the perception verbs (sensory modalities) themselves. The focus of the current study is on the former. Such extensions can be either physical or abstract (Ibarretxe-Antuñano, 1999, 2002; Li, 2013), as shown in Examples 2 and 3:

Example 2. I want to *see* you at home today.

Example 2 illustrates a non-prototypical meaning with a physical meaning extension. In this context, the word *see* refers to "meet", which is a physical activity. Example 3, on the other hand, illustrates a non-prototypical but abstract meaning extension in which the literal meaning of the verb *see*, as illustrated previously, has been extended to the meaning "understand".

Example 3. I do not see why you cannot do it.

As in Example 3, the abstract extension is usually metaphorical since it is systematically conceived in terms of another (physical) experience. It suggests that semantic extension may be physical or metaphorical. This paper, however, is limited to examining metaphorical extensions of Hausa visual and auditory perception verbs of experience (*gani* and *ji*).

Similar to other natural languages of the world, Hausa, a tonal language belonging to West Chadic and the lingua franca of not only Nigeria but also the entire West Africa (Almajir, 2010), has five perception verbs, with one for each sensory modality. However, Hausa has the verb *gani* (see) and only one verb *ji* to designate 'hear,' 'touch,' 'taste,' and 'smell' because each of these five human senses is perceived in relation to the respective five senses organs, such as the eyes, ears, tongue, nose and skin. In addition, the verb *ji* also denotes 'feeling' things in an intuitive or emotional sense (Ritchie, 1991). For this reason, some linguists have described Hausa as having two perception verbs: vision and non-vision. In other words, Hausa has a monomodal sense (sight) and a multimodal sense (*ji*-complex). In this regard, Ritchie (1991) asserts that because the same verb, *ji*, denotes *thinking and feeling*, there is a fusion of the faculties in Hausa that is thought to operate together. However, it is imperative to note that the claim that Hausa recognises only two senses remains unjustifiable, which this article will not address. Nonetheless, it must be stated that the fact that a language has a particular verb to designate many senses does not

mean such senses are not recognised. Only the context of use determines which type is in operation.

Problem Statement

Sense perception has become an increasingly important topic in cognitive semantics. Since the wake of Sweetser's (1990) groundbreaking research, sense perception has sparked the attention of many researchers not merely in the field of linguistics but also other academic disciplines, namely, psychology (e.g., Goldstein, 2010), physiology (e.g., Matthen, 2015; Rouby et al., 2002) and anthropology (Howes, 1991; Majid & Levinson, 2011). Since the conceptual domain of sensory perception and its conceptual structure are reasonably productive and motivate a variety of conceptual metaphors, they have gained growing attention in the field of cognitive semantics.

Besides the matter above, the issue of the universality or cultural specificity of perception metaphors has also been a concern in many cognitive linguistic studies (e.g., Evans & Wilkins, 2000; Ibarretxe-Antuñano, 2008; Neagu, 2013; Roque et al., 2018). The concern is to determine whether the metaphorical extensions of perception verbs are universal, i.e., shared across all languages and cultures, or if they vary significantly across different linguistic and cultural contexts. While some metaphors may appear universally understood due to their prevalence and similarity across languages, other may be deeply rooted in specific cultural experiences, making

them challenging to comprehend outside those contexts. Related to this, some cognitive linguistic researchers asserted that verbs expressing higher intellect, such as understand, know, and think, are closely related to verbs of visual perception in terms of semantic extensions and are common to all cultures (e.g., Lakoff & Johnson, 1980; Sweetser, 1990). In contrast, others have challenged this theory by contending that, depending on the individuals' cultural affiliations, verbs of higher intellect can be developed from verbs of auditory perception (e.g., Aikhenvald & Storch, 2013; Evans & Wilkins, 2000). The current study aims to examine Hausa verbs for both visual and auditory perception, *gani* and *ji*, respectively, in Hausa romance fiction to support or refute the claim that verbs of visual perception are connected to intellect and shared across cultural boundaries.

The majority of the evidence supporting the claim above comes from Indo-European languages, and to date, there is very little published research on the subject in Afro-Asiatic languages, especially Hausa, which is the most widely spoken in Africa today, and exceeded only by Arabic and perhaps Swahili (Almajir, 2010; Jaggar & Buba, 2009). Thus, both the visual and auditory perception verbs merit a systematic investigation in Hausa, as recommended by Ibarretxe-Antuñano (2008, 2019), to determine which claim—universality or culture-specificity of metaphor—is likely to be supported by languages other than Indo-European and Australian, as well as the status of vision verbs in relation to higher intellection. Specifically, the present study

examined the perception verbs *gani* (to see) and *ji* (to hear) in Hausa romance fiction to address this aim.

The literature on semantic extensions of perception verbs often focuses on major world languages such as English, Spanish, or Indo-European languages (e.g., Ibarretxe-Antuñano, 1999; Neagu, 2013; Sweetser, 1990), leaving a dearth of research on the Hausa language. This study explored the unique semantic extensions and cultural nuances associated with *gani* and *ji* in the context of romance fiction, focusing on the Hausa language spoken in West Africa. Examining the semantic extensions of these verbs in romance fiction, researchers can better understand how sensory perception verbs contribute to emotional and romantic narratives. Additionally, this study enables us to understand how cultural factors shape the metaphorical use of perception verbs related to romantic experiences in fiction. By bridging the gap between linguistics and literary studies, this study gives us insights into how language and literature interact in metaphorical expressions.

Regarding data sources, corpus-linguistic inquiries into semantic change have obtained data from various sources and employed a wide range of data collection procedures. For instance, previous studies have mainly sourced their linguistic data from survey questionnaires through responses provided by the respondents (e.g., Vanhove, 2008), dictionaries and thesaurus (e.g., Neagu, 2013; Sweetser, 1990), unstructured interviews with native informants and writer's intuition (e.g., Aliero, 2016), and natural face-to-face

conversations (Roque et al., 2015, 2018). This study, however, differs from those of past related studies in that its data were solely extracted from texts of Hausa romance fiction. Based on the aim of the study, the study was guided by the following research questions:

1. What are the metaphorical meanings of Hausa perception verbs *gani* and *ji* in romance fiction?
2. What are the theoretical implications of the Mind-as-Body theory on the meaning extension of the Hausa perception verbs *gani* and *ji*?

Theoretical Framework

The theoretical framework of the present study is situated within the cognitive linguistics tradition. Specifically, the study adopts Sweetser's (1990) Mind-as-Body theory, a cognitive semantics framework, to explain metaphoric polysemous perception verbs. This theory, generated from the Conceptual Metaphor Theory (CMT), is the foundation for data analysis. In this regard, Lakoff and Johnson (1980) have posited that metaphorical expressions reflect underlying cognitive associations between the source and the target domains. They further purported that the mapping between two conceptual structures is an integral part of metaphor. Such mapping is, therefore, a set of correspondences across different domains of experience in conceptual structures (Semino et al., 2018). It refers to the cross-domain mapping of

a comparative source domain to a target domain.

By using terms and concepts from the physical and social world that are more accessible to denote the realms of reasoning, emotion, and conversational structure that are less accessible, Sweetser (1990) suggests a semantic link-up to explain the widespread trend in metaphorical use in the Indo-European languages. In the same vein, Gunnarsdóttir (2013) opined that the human body serves as a basic means of understanding and absorbing the information found in immediate environments, but it also makes use of a variety of senses which enable us to view the world in a variety of ways. As such, Sweetser (1990) was particularly interested in describing the semantic extensions of passive perception verbs (Manasia, 2016). She stressed that perception verbs manifest a series of extended metaphorical meanings related to cognition, internal feeling, and emotion. After examining perception verbs in numerous Indo-European languages, Sweetser (1990) made the generalisations that visual verbs are extended to denote "knowledge", auditory verbs are extended to denote "internal receptivity or obedience", and tactile verbs are connected to "feelings". Moreover, she argued that while verbs of *taste* are linked with people's internal selves, representing human's "personal likes and dislikes", verbs of *smell* represent "dislikeable feelings". Sweetser's metaphorical mappings for English perception verbs can be represented in Figure 1.

VISION	→→	KNOWLEDGE	
HEARING	→→	HEED	→→ OBEY
TOUCH	→→	FEELINGS	
TASTE	→→	LIKES/DISLIKES	
SMELL	→→	DISLIKEABLE FEELINGS	

Figure 1. Semantic extension perception

In view of the above discussion, it must be stated that the metaphorical semantic extensions of perception verbs could be examined in the light of the Conceptual Metaphor Theory (CMT) proposed by Lakoff and Johnson (1980). Accordingly, the metaphorical semantic extensions of perception verbs in Hausa fiction writings can be approached using the CMT, which posits that understanding abstract concepts is based on people's embodied experiences

in the physical world. As shown in Figure 2, metaphor is driven by correspondences between the people's external experience, the source domain, and their internal emotional and cognitive states, the target domain. The theory provides insights into how the meanings of visual and auditory perception verbs are extended via mapping them onto other domains of experience. In this way, the metaphorical use of these verbs can reveal cultural, social, and historical factors that motivate language use and perception in Hausa romance fiction. In other words, the CMT could account for how language communicates meanings in Hausa fiction writings. In line with this, it is noteworthy that metaphor involves conceptualising a particular experience, the mind, in terms of another, the body (Neagu, 2013).

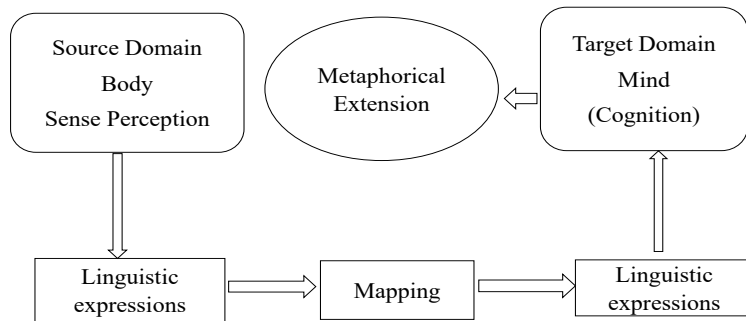


Figure 2. Theoretical framework

RELATED LITERATURE

Polysemy and Verbs of Sensory Perception

It is essential first to define polysemy because the perception verb is a typical

example of polysemy. In light of this, the linguistic environment in which a word contains two or more related meanings is, thus, referred to as polysemy in semantic analysis (Ibarretxe-Antuñano, 1999).

Research on polysemy, a common linguistic behaviour used by all people daily, spans both the meaning structure and language processing domains (e.g., Collins & Loftus, 1975; Sweetser, 1990). These features have elevated polysemy to a central topic of study and drawn interest from the fields of computational, cognitive, and psycholinguistic linguistics (Steen & Gibbs, 1999). The lexical meaning ambiguity in polysemous words triggers the focus on polysemy. In the same vein, a number of recent studies in the field of cognitive semantics (e.g., Ibarretxe-Antuñano, 2019; Leon, 2021; Manasia, 2016; Neagu, 2013) have revealed various semantic extensions of perception verbs due to their structurally polysemous nature.

The semantic extensions of perception verbs refer to a shift in meaning from a literal and concrete to a more logical and abstract meaning, which is mostly metaphorical (Sweetser, 1990; Vanhove, 2008; Yu, 2008). Related to this, Raffaelli and Kerovec (2017) emphasised using conceptual metaphors to account for how meaning extends from the source to the target domain in cognitive linguistic studies. Accordingly, conceptual metaphor helps us see how the senses of words with multiple meanings are related, for everyday cognition is metaphorically constructed (Lakoff & Johnson, 2003). Since conceptual metaphor is among the cognitive tools that frame this spectrum of meanings, it is ubiquitous in everyday language (Lakoff & Johnson, 1980; Manasia, 2016), influencing how people use language, think, and act.

The association between the domain of ‘perception’ and other domains of experience, such as ‘cognition’ was first introduced in the seminal work of Lakoff and Johnson (1980), where the notion of conceptual metaphor was derived. They argued that abstract concepts, such as understanding, are often conceptualised in terms of concrete perceptual experiences. Approximately a decade later, using Lakoff and Johnson’s conceptual metaphor as a point of departure for studying English perception verbs, Sweetser (1990) discovered the metaphorical mappings amongst the vocabulary of internal self and sensation, which serve as the target domain and the vocabulary of physical experiences as the source domain. In other words, she found a logical network of metaphorical connections between the physical realms of the five senses and other comparable abstract domains of experience. Theoretically, mental existence’s objective, intellectual side appears frequently related to the sense of “vision”. According to Sweetser (1990), it would be unusual for a verb whose literal meaning is “hear” to change to imply “know” instead of “understand”. Other Indo-European studies, such as those by Ibarretxe-Antuñano (1999, 2002) and Neagu (2013), provided evidence to support Sweetser’s theory.

However, the findings of some comparable studies on non-Indo-European languages tend to be inconsistent (i.e., not in line with Sweetser’s hypothesis). Evans and Wilkins (2000) carried out the most noteworthy study, which examined

60 Australian Aboriginal languages. They found that most languages supported auditory rather than visual perception verbs, Sweetser (1990) asserted, indicating culture-specificity. The study further revealed that visual perception verbs are connected to 'lust', 'desire', 'offence', and 'supervision' instead. The body of research has shown that only non-contact sensory verbs like "seeing" and "hearing" have been demonstrated by cognitive semantics to extend to cognitive readings; therefore, these contradictory findings are not unexpected (e.g., Evans & Wilkins, 2000; Ya'u et al., 2021). Hence, this study examines the polysemy occurring in the semantic field of visual and auditory perception verbs in Hausa.

Metaphorical Motivation of the Semantic Extensions of Perception Verbs

In cognitive semantics, the concept of motivated language involves embodiment, which is a concept that encompasses both physical sensorimotor and socio-cultural grounded experiences (Ibarretxe-Antuñano, 2013b). Dirven and Pörings (2003) highlight that in cognitive linguistics, the theory of metaphor is revolutionary, for it is closely connected to two broad assertions: (i) the experientialist, bodily basis of metaphor, and (ii) the universalist basis for conceptual metaphors. Metaphorical analysis should consider bodily-based and cultural elements, as the body and culture interact when constructing the experiential basis of metaphors. The human body plays a vital role in creating meaning and understanding;

the embodiment and physical and cultural worlds must delineate what is meaningful to people.

Some researchers argue that humans share common embodied experiences, and different languages should have similar conceptual metaphors (Yu, 2004, 2008). In her comparative study of body-part terminologies of Chinese and English, Yu (2008) discovered that the terms for 'face' in both languages have processed figurative meanings in similar ways. However, some researchers have argued that the role of socio-cultural traits should not be overlooked when it comes to metaphor grounding, as the way people use bodily experience may differ tolerably. Metaphorical correspondence between source and target domains occurs due to the interplay between body and culture. Thus, cultural models play an interpretive function in observing the human body and its role in metaphor grounding. In this manner, some cultures or languages can select different organs of the body or embodied experiences to map onto the same abstract concepts (Blake & Sekuler, 2005; Ibarretxe-Antuñano, 2013a, 2019). Therefore, the interaction between universal embodied experiences and different cultural experiences reveals the magnitude to which conceptual metaphors are universal, widespread, or culture-specific.

Verbs of Sensory Perception in Fiction Writing

The semantic field of perception verbs has become an increasingly important topic of study in fiction writing. Various books

on the literary genre have indicated that perception verbs are mainly employed in fiction to portray a realistic atmosphere in literary works. According to Semino (2008), fiction is a fertile ground for exploring and discovering new things about the metaphorical nature of perception verbs. It means that such verbs are not merely utilised to create a new world but also to make readers perceive a storyline from a character's perspective. Related to this is the reference to the Western folk model of the 'five senses'— vision, audition, smell, taste, and touch which has been commonly utilised in the study of perception verbs (Geurts, 2002). This model of sensory perception conceptualises the sense organs, namely, eyes, ears, nose, mouth, and hands, as an internal viewpoint to reflect various levels of a character's psyche. Moreover, as stated earlier, sensory verbs such as see, hear and feel have been used by narrators in literary works to portray certain characters as perceived objects (Farner, 2014).

Sensation plays a vital role in making the reader experience and live the events so that he or she can see, hear, smell, feel, and taste the external world as a story unfolds, one of the modes of fiction writing (Klaassen, 2015). Sensation establishes vivid descriptions of a character in a way that brings action to life. It can also stimulate recollection, which may help in depicting the experiences of a character or the circumstances of an event that occurred prior to the action in a literary work. Utilisation of sensory perception in literary works of art can be an effective mechanism

for developing a character, especially in relation to emotional responses to certain stimuli. For instance, in Patrick Süskind's *Perfume*, the main character's extraordinary sense of smell is depicted through visual metaphors (Popova, 2003).

METHODOLOGY

This study is qualitative, specifically employing a descriptive and interpretive qualitative approach. The study utilised data comprising Hausa linguistic expressions pertaining to perception verbs, particularly visual and auditory verbs used in romance fiction writings. The data were extracted from four Hausa novels selected as the data sources, for they provide rich sources of the required data. The abundant occurrences of the perception verbs in the novels enabled the researcher to examine how the Hausa perception verbs *gani* and *ji* occur and behave in various linguistic situations metaphorically or via different semantic extensions (Deignan, 2005; Weisser, 2016).

Criteria for the Selection of Novels

The study used inclusion-exclusion criteria in selecting the novels to be included. Firstly, the novels selected should belong to the romance genre, as it is known for its emphasis on emotional relationships, sensory descriptions, and themes of love and desire. Secondly, Hausa authors should write the novels to represent the cultural context in which Hausa language and perception verbs *gani* and *ji* capture the nuances and cultural-specific expressions. Thirdly, only

novels that showcase a variety of linguistic expressions and usage of *gani* and *ji* were selected to ensure that the data represents the full range of metaphorical extensions and usage of the perception verbs, which, in turn, provide a richer dataset for analysis. Finally, the period for the selection of novels is another criterion. Specifically, the selected novels were written between 2010 and 2020 to avoid any potential changes or evolution in romance fiction's metaphorical extensions of *gani* and *ji* within a short decade. Based on these criteria, the researchers could ascertain that the selected novels provide a representative and diverse dataset that captures the metaphorical extensions of *gani* and *ji* within the context of romance fiction.

As for sample size, four novels were considered a reasonable sample size, taking into account the scope and depth of the study and its required analysis to answer the research questions. In this regard, several studies on metaphor have addressed

linguistic analysis in the context of literary texts with comparable or smaller sample sizes. Such studies have achieved meaningful insights and valuable conclusions, thereby supporting the feasibility of a sample size of four novels (Dagnev & Chervenkova, 2020; Msuya, 2016). Such studies have demonstrated that valid conclusions could still be drawn from a small sample for those within the qualitative paradigm. Utilising a small yet meaningful sample of texts has enabled researchers to reveal notable patterns related to underlying metaphorical linguistic expressions in the writing style of selected authors.

Table 1 provides an overview of the novels used in the corpus of the study, their respective authors, word counts, and the percentage they contribute to the overall dataset. Each novel was carefully chosen to comprehensively depict the metaphorical usage of *gani* and *ji* in romance fiction.

Table 1
Novels used in the corpus

No.	Novel	Author	Word counts	Percentage (%)
1	<i>Yakin So</i>	Jamila Isa Fagge	50323	23.2
2	<i>Rabon Kwado</i>	Hajiya Hafsat Sodangi	46962	21.6
3	<i>So daya tak</i>	Amina Yusuf Magashi	54764	25.2
4	<i>Abun Sirrine</i>	Sadiya Abdullah Shehu	65102	30.0
Total	4	4	217156	100

Data Collection

To gather the necessary data, PDF texts of the novels were converted into plain text format using an online PDF-to-text converter. The resulting plain text files were

cleaned to remove irrelevant characters, such as page numbers, headings, and other extraneous information that may interfere with the analysis process. Such plain text files were then imported into the AntConc

3.5.7 programme. In order to identify their metaphoricity while taking into account their co-text and track their frequency of occurrences, different morphological forms of each of the two verbs, *gani*, *ganin*, *ga* (for *gani*), and *ji*, *jin* (for *ji*), were keyed in separately into the software. The text data were then retrieved using a concordancing tool in the AntConc 3.5.7 programme. The data are presented as Key Word in Context (KWC), where the verb *gani* or *ji* is displayed in the centre of a page and is bordered by co-text. By examining the concordance results, the study analysed the contextual usage of *ji* and *gani*, paying close attention to any metaphorical extensions or usages within the romance fiction texts. This analysis involved the identification of patterns, collocations, and recurring themes associated with the metaphorical extensions of the visual and auditory verbs. The concordance results provide relevant examples illustrating the metaphorical extensions manifest in *gani* and *ji* in the texts. The extracted examples were later subjected to further evaluation to identify and interpret the specific semantic extensions of *gani* and *ji*. They also considered patterns, metaphoric mappings, and cultural influences contributing to their metaphorical use in the novels.

Data Analysis

As highlighted earlier, the concordance lines and surrounding context were analysed to identify the semantic extensions of *ji* and *gani* within the romance novels. Instances where these verbs are metaphorically used to express abstract concepts, emotions, or

cognitive processes to reflect the associated meanings conveyed by these semantic extensions, were identified and analysed. The Pragglejaz Group's (2007) Metaphor Identification Procedure (MIP) was used to assess the metaphoricity of the Hausa sentences containing the verbs and decode the metaphorical overtones that the Hausa verbs *gani* and *ji* exhibit in their semantic extensions. The Hausa expressions were first translated into English before the identification of the metaphors in the novels. Numerous monolingual and bilingual dictionaries were used to decode the literal meanings of the metaphorical expressions involving Hausa verbs for visual and auditory perceptions to ensure their accuracy for the identification process.

Using the MIP involved four successive steps as follows:

- i. Reading the entire text (in this case, the sentence/phrase that contains the investigated perception verbs) to create a general understanding of the topic,
- ii. Determining the contextual meaning of visual or auditory verbs while taking into consideration their co-text,
- iii. Verifying whether the verb has a more literal meaning in another context than in a given context; and if yes, decide whether the meaning in context differs from the literal meaning but is comprehensible in comparison with it, and

- iv. Deciding on whether the verb manifests a metaphorical semantic extension; if the contextual meaning of the verb can be understood compared to its literal meaning, such verb is, therefore, metaphorical.

The frequency of their occurrences was presented, having identified metaphorical uses of these perception verbs. Illustrative examples of linguistic expressions were also given, extracted from the corpus to illustrate the different extension types. The Mind-as-Body analytical framework proposed by Sweetser (1990), which depicts a systematic connection between bodily perception and the mind's abstract realm, was used for data analysis.

RESULTS

Analyses of Metaphorical Extension of Hausa Verb *Gani* and *Ji*

The transference of two entities, qualities, or processes through a correlation, in addition to assigning one's attributes to the other, is known as metaphorical semantic extension. This process allows us to understand one thing in terms of another. A word, phrase, or sentence's metaphorical extension depicts what a speaker might use it to mean in contrast to what it actually signifies (Searle, 1978). Hence, the relation between the sentence meaning and the metaphorical meaning of utterances is not arbitrary but systematic. The knowledge allows people to understand and use metaphorical utterances that surpass the knowledge of the literal meaning of words and sentences (Almajir, 2010). For the analysis presentation, each

example of Hausa linguistic expressions manifesting the different metaphorical extensions is accompanied by a literal back translation into English, its literal meaning and the actual meaning of the expression.

The Vision Verb *Gani* (See)

The Hausa perception verb *gani* encodes 'activity of seeing' animate and inanimate objects with physical eyes. The metaphorical expressions underlying Hausa visual verbs manifest different metaphorical semantic extensions. For example, the results of visual perception verbs revealed three main groups of metaphorical extensions, such as the extension to intellect and a mental activity, extension to reliability and assurance, and extension to a miscellany of human experiences, in which each group has a number of specific metaphorical extensions as shown in Table 2.

Table 2
Metaphorical extensions of Hausa vision verb gani (see)

Metaphorical extension	Frequency
Extension to intellect and mental activity	76
- to consider/think	65
- to visualise/imagine	7
- to foresee	4
Extension to reliability and assurance	66
- to make sure/ensure	43
- to find out	18
- to take care	5
Extensions to miscellany of human experiences	17
- to witness/experience	14
- to support	3
Total	159

As shown in Table 1, the data analysis revealed 159 instances of non-prototypical or extended metaphorical meanings. Specifically, eight metaphorical semantic extensions of the verb *gani* were identified. The most frequent of them is the semantic extension “to think about/consider” with 65 tokens, followed by “to make sure/ensure” with 43 tokens, and the least frequent is “to support” with only 3 tokens.

Metaphorical Extension of The Verb *Gani* to “Consider/Think”

This meaning extension deals with the ability to judge a particular thing in a particular way or form an opinion about something (Ibarretxe-Antuñano, 2002). In Hausa, the metaphorical extension of the verb *gani* is mainly used to share personal opinion, as can be instantiated in Example 4:

Example 4 *Kina ganin Dr Bilal ba zai tona mana asiri ba?*
 2SG-IMPFV. see Dr Bilal 3MSG.FUT. dig our secret NEG.
 [Do you *see* Dr Bilal will reveal our secret?] (literal meaning)
 Do you *think* Dr Bilal will not reveal our secret?

Metaphorical Extension of the Verb *Gani* to “Visualise/Imagine”

Besides the meaning “to consider/think”, the verb *gani* undergoes a change in meaning from denoting physical activity of seeing to abstract mental experiences such as imagining. When someone visualises something, he or she imagines something

unreal or non-existent, which was only created in his or her mind. In this regard, Ibarretxe-Antuñano (2002) highlights that people visualise counterfactual situations that have already taken place or may occur at some point. This extended meaning is manifested in the following metaphorical expression in Example 5:

Example 5 *Yana tuna fuskoki-n mutanen da ya gani a cikin mafarkin-sa*
 3MSG.IMPFV remember faces.of. people 3MSG.PFV. see in dream.of. 3MSG
 [He thinks about faces of people he saw inside his dream] (literal meaning)
 He remembers the images of people’s faces he *imagined* in his dreams.

Metaphorical Extension of the Verb *Gani* to “Foresee”

The verb *gani* may also metaphorically be realised as ‘foresee’. Example 6 demonstrates that the source domain *gani* has its corresponding target domain,

‘foresee’, as the metaphorical element. In this example, the verb *gani* is not used literally as an act of physical seeing with eyes but metaphorically to mean ‘foresee’. Thus, the speaker in the novel (novel 3) considers *Mardiyya*, a little girl who cannot

foresee or predict future events. In such a case, the metaphorical extension denotes the meaning of predicting and imagining future

happenings, which has to do with the mind's eyes (Ibarretxe-Antuñano, 1999).

Example 6 *Mardiyya, ke yarinya ce baza ki ga muhimmanci-n magana ta ba*
 Mardiyya 2SG girl STAB. FUT.3FSG see importance.of talk.of.1SG NEG.
 [Mardiyya, you are a girl you cannot see the importance of my talk] (literal meaning)
 Mardiyya, you're still young, and you cannot *foresee* the importance of my words.

Metaphorical Extension of the Verb *Gani* to “Make Sure/Ensure”

Another metaphorical extension of *gani* is to “make sure/ensure”. The verb *gani* is not used in its literal sense but metaphorically,

as it carries the meaning ‘to make sure’ (Example 7). As such, a task is usually given to someone asked to observe the process and ensure it is done correctly (Jumaah et al., 2020).

Example 7 *Suna, kokari-n ganin sun ceto ran-ta*
 3PL.IMPV try.of see 3PL.PFV 3PL.PFV life.of. 3FSG
 [They are trying to see they rescue her life] (literal meaning)
 They are trying to *make sure* that her life is saved.

Metaphorical Extension of the Verb *Gani* to “Find Out”

Another metaphorical usage of the verb *ga* (another form of *gani*) involves its extension to indicate a process of becoming aware of something or happening. The semantic change of the verb *gani* from concrete to

abstract indicates metaphorical uses. Thus, the vision verb *gani* in Example 8 is used metaphorically to mean to ‘find out’, as the speaker in the novel (novel 4) decided to send his daughter to Gwaggwo to find out if she could stay with her, as instantiated in the following example:

Example 8 *Bari na kai ta wurin Gwaggwo na ga ko za ta yarda ta zauna*
 Allow 1SG send 3FSG place.of. Gwaggwo to see if she can agree to sit
 [Let me to take her to see if she can agree to sit] (literal meaning)
 Let me take her to Gwaggwo to *find out* if she will stay with her.

Metaphorical Extension of the Verb *Gani* to “Take Care”

The Hausa verb *gani* can also undergo a metaphorical extension to mean ‘take care’

whereby the agent (animate subject) is given the command to look after an object, as exemplified in the linguistic expression (Example 9):

- Example 9 *Don Allah* *gane min* *jakar nan* *inaso* *zan zagaya*
 For-the-sake.of. Allah see 1SG-POSS bag this 1SG.want 1SG.FUT round
 Because of Allah, see for me this briefcase I want to go round (literal meaning)
 For the sake of Allah, keep an eye on this briefcase for me. I want to ease myself.

Metaphorical Extension of the Verb *Gani* to “Witness/Experience”

In addition, the verb *gani* undergoes a semantic shift from its original meaning of the physical activity of seeing to the abstract activity of witnessing, which is metaphorically extended to mean ‘witness

or experience’. It is similar to the verb *ga* in Example 10, which is used metaphorically to denote ‘to witness’, since the novel speaker asks a rhetorical question: “If he or she witnessed that day, how happier would he be?”

- Example 10 *In na ga* *wannan rana-r* *wane irin* *farin-ciki zan yi?*
 If 1SG.PFV see this day-DET which colour.of happiness 1SG.FUT. do
 [If I saw that day, which happiness I would do?] (literal meaning)
 For the sake of Allah, keep an eye on this briefcase for me. I want to ease myself.

Metaphorical Extension of *Gani* to “Support”

In Example 11, the vision verb *ganin* (another related form of *gani*) in this context is used metaphorically to mean ‘to support.’ In novel 1, the speaker used the

word to indicate his/her support of one of the characters, Garba’s suggestions. After some consideration, the speaker was convinced by his argument and decided to support it, as manifested in the following expression.

- Example 11 *Ni kam* *har yanzu* *na fi ganin* *shawara-r Garba*
 1SG. PART. CONJ. now 1SG. COMP. see suggestion.of. Garba
 For me, still I see more suggestions of Garba (literal meaning)
 I am still in support of Garba’s suggestions.

The Auditory Verb *Ji* (Hear)

The Hausa’s auditory verb *ji* is the sense of linguistic communication involving sound perception. In communicative interaction, two players are involved: the speaker and the hearer, which, in turn, create mental or cognitive perceptions among the

interlocutors. In this light, the verb *ji* has a literal sense of ‘to hear’ sound. The verb manifests a metaphorical mapping between the physical, experiential domain, the source, and that of the abstract experiential domain, the target, which results in a gamut of metaphoric meanings (Table 3).

Table 3
Metaphorical extensions of Hausa auditory verb ji (hear)

Metaphorical extensions	Frequency
to understand/know	24
to pay attention	18
to be told/informed	38
to obey	15
to find out	7
Total	102

The data analysis revealed five different kinds of metaphorical semantic extensions underlying the Hausa verb *ji* (Table 2). These extensions constitute 102 occurrences. The analysed data indicated that the metaphorical extension of the verb *ji*, which means “to be told”, was the most common, with a frequency of 38 times, followed by the extension “to understand”, occurring 24 times. The less common extension is “to find out”, with a frequency of seven times.

Metaphorical Extension of the Verb *Ji* To “Understand/Know”

Although the Hausa perception verb *ji*

has a basic sense of the physical activity of hearing with one’s ears, it is associated with mental activity or cognition. It has a metaphorical sense denoting ‘understanding’ or ‘knowledge,’ as can be illustrated in the metaphorical connotations in Example 12. This finding aligns with the previous study on Hausa’s sensory perception. As Ritchie’s finding (1991) highlighted, the Hausa verb *ji* ‘hear’ can mean ‘to understand’. In contrast, the word *gani*, ‘to see’, is never used to understand what a person means.

Example 12	<i>Bai yi</i>	<i>kama da</i>	<i>mai jin</i>	<i>Hausa ba</i>
	3MSG.NEG.	similar with	MOD. hear	Hausa NEG.
	[He does not look like someone who hears Hausa] (literal meaning)			
	He does not look like someone who <i>understands</i> Hausa.			

Metaphorical Extension of the Verb *Ji* to “Pay Attention”

The verb *ji* may also be realised metaphorically, denoting ‘to pay attention’. Example 13 below illustrates the source domain of the vision verb *ji*, i.e., physical activity of hearing, which

has its corresponding target domain, the abstract activity of paying attention, as the metaphorical elements. In this case, when a speaker utters such words in a sentence, he or she is not simply asking the hearer to hear him or her. By implication, he or she requests the listener to pay attention

to understand the speaker. This meaning extension is also related to knowledge, for the hearer has to pay attention if he/she has to understand the speaker's message.

Example 13 *Duk magana-r nan da suke yi bata jin-su sai lazimi take yi*
 DET (all) talk.of. that REL 3PL.IMPV. do 3FSG hear NEG 3PL prayer IMPV.do
 [Every talk they were doing she didn't hear them] (literal meaning)
 She didn't *pay attention* to whatever they were discussing as she was busy praying.

Metaphorical Extension of the Verb *Ji* to “Be Told/Informed”

Besides the aforementioned metaphorical extensions, the auditory verb *ji* may have a metaphorical extended meaning that denotes ‘to be told or informed when used in a context’. When the verb *ji* is used in such a situation, it can be inferentially perceived

as ‘to know’, as speakers do not simply say that they heard someone say something but rather infer that they know something, albeit second-hand information. This extension type is instantiated in the metaphorical connotation in the linguistic expression (Example 14).

Example 14 *Mun ji labari mutane da yawa sun mutu A wannan hadari-n*
 1PL.PFV. hear story people many 3PL.PFV.die in that accident-DET
 [We heard a story many people died in that accident] (literal meaning)
 We were told that many people died in such accident.

Metaphorical Extension of the Verb *Ji* to “Obey”

Another metaphorical extension usage of the verb *ji* is ‘to obey’. In this case, it must be pointed out that the verb *ji* does

not mean ‘to obey,’ but the context of use makes the hearer realise its semantic shift. This metaphorical extension is manifested in Example 15:

Example 15 *Yaro ne mai rashin ji*
 Boy STAB. MOD.COMP. NEG. hear
 [The boy with no hearing] (literal meaning)
 He is a disobedient boy.

Metaphorical Extension of the Verb *Ji* to “Find Out”

This metaphorical semantic extension is uniquely peculiar to Hausa, whereby both verbs *ji* and *gani* can extend their meaning

to ‘to find out’ depending on the context of the situation. In Example 16, the speaker is determined to visit her parents to find out if they intend to end their love relationship.

Example 16 *Zan je gidan na ji ko dai iyaye-n ta ke son raba mu*
1SG. FUT. go house-DET. 1SG hear if parents.of. 3FSG want separate 3PL
[I will go house and hear if her parents want to separate us] (literal meaning)
I'll visit her house to *find out* if her parents want to separate us.

DISCUSSION

Expanding upon the metaphorical extensions of the Hausa perception verbs *gani* and *ji*, which were previously identified and discussed in this paper, delving into the theoretical ramifications of the Mind-as-Body theory can offer valuable insights into how cognitive processes and cultural experiences shape the utilisation of these perception verbs. This exploration can be framed within embodied cognition, conceptual metaphors, and cultural influence.

In terms of embodied cognition, the Mind-as-Body theory suggests that people's understanding of abstract concepts is grounded in bodily experiences. By applying this theory to the meaning extension of *gani* and *ji*, it becomes evident that these perception verbs have metaphorically extended to represent mental states and cognitive processes. For example, the verb *gani*, which means "to see" in its literal sense, could be metaphorically used to express considering, foreseeing or visualising. Similarly, the verb *ji*, meaning "to hear" literally, might metaphorically convey the meaning of understanding or knowing something.

Moving on to the conceptual metaphor aspect, the Mind-as-Body theory emphasises the role of conceptual metaphors in understanding abstract concepts. In the case

of *gani* and *ji*, the metaphorical extensions rely on conceptual mappings between sensory perception and mental processes. The metaphorical uses of *gani* and *ji* could involve conceptual metaphors, such as "considering is seeing" or "understanding/knowing is hearing". By employing these conceptual mappings, individuals are able to express complex cognitive experiences by relating them to more concrete sensory experiences.

Lastly, the Mind-as-Body theory recognises the influence of cultural experiences and practices on metaphorical mappings. In the specific context of the Hausa perception verbs *gani* and *ji*, the cultural context and practices of the Hausa community play a significant role in shaping the metaphorical extensions of these verbs. Cultural beliefs, values, and practices related to seeing, hearing, and understanding contribute to the metaphorical use of *gani* and *ji*. Exploring these cultural influences provides insights into how specific cultural contexts shape metaphorical extensions.

This study revealed that using visual and auditory perception verbs in Hausa romance fiction is associated with intricate metaphorical extensions, reflecting a strong cultural and emotional resonance. The metaphorical extensions mirror Hausa's culture and traditions, conveying complex emotional, cultural, and social issues. The

study's findings suggest the importance of attending to the metaphorical meanings of perception verbs when analysing language use in a specific context. Properly considering metaphorical meanings, particularly those associated with perception verbs like "gani" and "ji" in Hausa, will significantly enhance the comprehension of language, culture, and cognitive processes. In particular, these findings revealed how the physical domains of the Hausa mentioned above perception verbs are mapped onto the mental domain, resulting in several metaphorical extensions. The findings also suggest that the Hausa verb *gani* can have meaning extensions that are associated with abstract experience, such as "to think", "to consider", and "to foresee". These extended meanings are connected to intellect and mental activity, which are cognitive domains. The fact that both the verbs *gani* and *ji* develop metaphorical extensions that mean "to find out" is an interesting finding of this study.

In addition, conceptual metaphors are essential in comprehending linguistic metaphors and semantic extensions. Such metaphors map concepts from one domain to another, enabling us to more concretely understand abstract or complex ideas. In this case, while linguistic metaphors use a source domain to evoke a target domain, semantic extensions broaden a word's meaning beyond its original scope. In this regard, conceptual metaphors contribute to semantic extensions by facilitating the extension of meanings of words *gani* and *ji* based on their association with related concepts. This process unfolds via metaphorical mappings,

wherein an underlying conceptual metaphor establishes a cognitive connection or conceptual link that expands a word's meaning into novel contexts of domains.

Another striking finding which emerged from this study is that it is the verb of hearing that extends its meaning to knowledge and understanding, which corroborates the findings of some studies on African languages, such as those by Aliero (2016), Ritchie (1991), Gachūgī (2018), Van Putten (2020) and Ahmad (2020). These findings may be related to Wober's (1966) 'sensotype' hypothesis, which argued for the pervasiveness and hegemony of the sense of hearing in African culture. According to this finding, however, knowledge and intellect are not always associated with the sense of vision, contrary to Sweetser's hypothesis, which states otherwise.

In contrast to literate Indo-European communities, which prioritise "seeing", this discovery may be explained by the fact that the Hausa community is mostly oral (Ritchie, 1991), with people relying on "hearing" for the acquisition of knowledge and intellect. This finding is consistent with the findings of studies on non-Indo-European languages (Evans & Wilkins, 2000; Vanhove, 2008), which indicated that regularly hearing verbs develop meaning extensions of "know" and "think", thus suggesting culture-specificity of metaphorical extensions of these perception verbs. The current study has provided supporting evidence for the culture-specific nature of cross-domain semantic extensions in perception verbs. The study has unveiled a connection between

auditory perception verbs and cognitive processes, or intellection, as evidenced by the additional meanings associated with the experiential verbs “gani” and “ji”, primarily pertaining to cognition.

It suggests that verbs of auditory perception are also associated with objective knowledge and intellection. Specifically, it is found that Hausa derives verbs of higher intellect, such as “understand” from hearing and “think” from vision. These findings suggest that the cultures in which people are embedded influence the semantic extensions of perceptual verbs significantly. The existing evidence strongly suggests the presence of cultural diversity in the trans-field semantic extensions of perceptual verbs. Gaining insight into the metaphorical usage of perception verbs in Hausa romance fiction offers a valuable perspective on the cultural, social and historical forces shaping language within the Hausa community. As a result, this study significantly contributes to a broader comprehension of how metaphorical extensions can unveil cultural perspectives, values and emotions within romance fiction.

CONCLUSION

This study aims to investigate the metaphorical meanings of Hausa perception verbs *gani* and *ji* in romance fiction and examine the Mind-as-Body theory's theoretical implications on the meaning extensions of these verbs. The results shed light on how these verbs undergo metaphorical extensions to convey abstract concepts beyond their literal meanings.

The study found that the verb *gani*, which literally means “to see”, is metaphorically extended to represent cognitive processes and experiences. Metaphorical extensions of *gani* encompass meanings associated with intellect and cognitive processes, reliability and assurance, as well as a range of human experiences. Among these extensions, the most frequently observed metaphorical usage was “to think/consider”, followed by “to make sure/ensure”, with “to support” being the least commonly encountered.

Similarly, the verb *ji*, which literally means “to hear”, also exhibited metaphorical extensions which convey abstract meanings. The metaphorical extensions of *ji* encompassed meanings such as “to understand/know”, “to pay attention”, “to be told/informed”, “to obey”, and “to find out”.

In this study, we also delved into the theoretical implications of the Mind-as-Body theory. The findings revealed that the Mind-as-Body theory offers valuable insights into how cognitive processes and cultural experiences shape the metaphorical extensions of the Hausa verbs *gani* and *ji*. The theory of embodied cognition posits that abstract concepts are rooted in bodily experiences, which may elucidate why these perception verbs are metaphorically extended to represent mental states and processes.

Furthermore, the study suggests that conceptual metaphors, such as “considering is seeing” or “understanding/knowing is hearing”, could underlie the metaphorical use of *gani* and *ji*, enabling speakers to convey intricate cognitive experiences

by linking them to tangible sensory experiences. Additionally, the specific metaphorical extensions of these verbs may be influenced by the cultural context and practices of the Hausa community, highlighting the significant role of culture in shaping metaphorical meanings.

The study contributes to cognitive linguistics, metaphor studies, and Hausa language research. Future research could be valuable to gain a more comprehensive understanding of cultural variation in utilising perception verbs. Notably, this study is confined to examining the experiential category of verbs associated with vision and hearing. Thus, there remains potential for further investigations to explore the scope of cultural variation in the usage of perception verbs across different languages, contexts and categories.

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