

IN BRIEF

Antonymy in Ethiopian Sign Language

Woinshet Girma Ayansa

Abstract

This is a progress report of a preliminary study that aims to describe antonyms in Ethiopian Sign Language (EthSL). EthSL antonyms were drawn from two types of data. First, data was collected from twelve participants from Addis Ababa and Hosanna. The participants did elicitation tasks, narratives, and consultant observations. Then, two EthSL dictionaries were included as supplementary sources. The overall findings reveal that movement metathesis, location, palm orientation contrasts, and derivational morphology all play a significant role in antonym formation in EthSL. However, handshape is not generally used to mark oppositeness. The antonyms found in this preliminary study can be categorized as gradable antonyms, converse antonyms (also subcategorized as directional, antipodal, and kinship opposition), and reverse antonyms. This study also makes suggestions for the creation of EthSL dictionaries that take into account morphophonological features and semantic relations between signs.

Introduction

Lyons's (1977) definition of *antonymy* is commonly used in the literature; according to Lyons, antonymy refers to the semantic relationship between words that have opposite meanings. So far, no linguistic research seems to have been done on lexical semantics in EthSL; antonymy, in particular, seems to be entirely untouched. Therefore, the present study intends to start filling this gap.

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This article includes a short history of Ethiopian Sign Language (EthSL), a survey of existing conceptual theories, the methodology pertaining to the study, its main findings, and a conclusion.

The History of the Ethiopian Sign Language

EthSL is a visual language that is used by deaf people in Ethiopia. Different varieties of EthSL are used by deaf communities in different regions of the country. Missionary schools had a strong impact on the development of EthSL. In particular, the introduction of American Sign Language (ASL) into EthSL played a significant role in its standardization process (Ethiopian National Association for the Deaf 2008).

The Ethiopian National Association of the Deaf (ENAD) has published two dictionaries. The first one was published in 1976 by Ha Metshaf in collaboration with the Ministry of Education and two schools for the deaf (Mekanisa School for the Deaf and Alpha School for the Deaf). The Ha Metshaf dictionary contains 1,009 signs. Thirty years later, in 2008, ENAD published the second dictionary, which contains 1,321 signs in collaboration with the Ethiopian Ministry of Labor and Social Affairs, the Mekanisa School for the Deaf, and the Finnish Association for the Deaf. Up until recently, most studies on EthSL mainly have focused on aspects of phonology (Teshay 2012), morphology (Kidane 2013), and sociolinguistics (Eyasu 2017). However, little research has been done on the lexical semantics of EthSL.

Conceptual Theories Related to Antonymy. Lyons (1977) defines *antonyms* as words that are opposite in meaning and *antonymy* as the oppositeness between words. Justeson and Katz (1991, 261) also refer to antonymy as a lexical relation, “specific to words rather than concepts.” According to Justeson and Katz (1991), the definition of antonymy should take into account both the lexical and the semantic aspects of a language. Antonyms not only need to display “oppositeness of meaning,” but they also need to have a strong and well-established lexical relationship with one another (Jackson 1988).

Egan (1968) defines “an antonym is a word that is opposite to the meaning of another word” and that is equal in breadth or range of application, namely, that it negates or nullifies implications of words.

Thus, according to this definition, two words that contrast in meaning might not be antonyms, due to the fact that they could be different in their breadth or range of application.

Scholars such as Cruse (1986), Yule (1996), Lyons (1977), Saeed (1997), and Katz (1972) have proposed different ways to identify and categorize antonyms based on their characteristics. However, it seems that some categorizations only differ in name and that there are more than two categories of antonyms. Cruse (1986), for instance, classifies *live/dead* as contradictory antonyms, whereas Katz (1972) considers them as nongradable antonyms.

Katz (1972) groups antonyms into different categories and sub-categories: gradable, converse, and reverse antonyms. Converse and reverse antonyms are sometimes categorized as nongradable antonyms. Katz states that directional, antipodal, and kinship opposition are sub-categories of converse antonyms. According to Katz, all of those sub-categories can be broadly considered as antonyms in that the senses of the members of a pair of antonyms are mutually exclusive in their application.

GRADABLE ANTONYMS. This sort of antonym is characterized by gradability. The items are gradable in the sense that the degree of the relation between them can vary. Indeed, “the assertion of one is the negation of the other but not vice versa” (Murphy 2006, 14). Concretely, gradable antonyms are at the opposite ends of a range with some gradation between the two opposites. For example: *young-old* (gradation: teenagers) and *cold-hot* (gradation: warm). Palmer (1976, 76) states that in gradable antonyms, the relationship between items typically displays two characteristics: There are usually intermediate terms between gradable antonym members, and the terms are typically relative in character.

CONVERSE ANTONYMS. Saeed (1997, 67) describes converse oppositions as encompassing the relation between two entities from the alternative point of view. For example, *day-night*, *above-below*, and *husband-wife*. Katz (1972) further subcategorizes converse antonyms into directional, antipodal, and kinship opposition antonyms.

1. **Directional opposition:** Directional antonyms exhibit reversal relationships between items, signs, or arguments (Palmer, 1976, 79). Relations between these items are often characterized as symmetry, transitivity, and reversibility. Directional antonyms are words that denote actions and features that differ in direction. *To rise-to fall, to arrive-to depart, and to advance-to retreat* are instances of directional antonyms (Cruse 1986). They are related to opposite directions on a common axis, and their relationships are contrary.
2. **Antipodal opposition:** Lyons (1977, 273) states that lexemes are diametrically opposed (i.e., in antipodal opposition) to their converses in the two-dimensional space (e.g., *north-south*). In some spoken languages, antipodal opposition can be found in color terms and direction terms. *Red-green, blue-orange, inferior-superior, and left-right* are instances of antipodal opposition.
3. **Kinship opposition:** Kinship terms exist in languages that express family relationships in a variety of ways. All languages contain kinship terms, but the relations between family members are not always represented in the same way (Yule 1996). The pair members (e.g., *father-mother*) contradict each other based on gender in family taxonomy.

Reverse antonyms: Reverse antonyms are two words that exhibit a reverse relationship and that are mutually exclusive. In a pair of reverse antonyms, one term describes an action while the other one denotes the opposite action. For instance, in a *sell-buy* relationship, one person sells an item, while the other person buys that item. The terms are mutually exclusive because, within that single transaction, one person cannot be both the seller *and* the buyer. According to Palmer (1976, 77), the opposing pairs differ in the action they describe, as in *dress-undress, enter-exit, and to push-to pull*.

Converse antonyms and reverse antonyms could perhaps be considered as nongradable antonyms, since there are no intermediate terms between the two opposing terms. For example, *dead-alive, boy-girl, and true-false* are examples of nongradable antonyms. The members of those pairs are to be considered as “absolutes”: What is denoted by one term is incompatible with what is denoted by the second term, and there are no possible options between those two denotations.

The distinction between converse and reverse antonyms lies in the fact that, in converse antonyms, the terms are strongly interdependent—one term cannot exist if the other does not. In reverse antonyms, however, the members of the pair can exist independently of one another. Reverse antonyms are therefore characterized by an either-or relationship. An example of a converse antonym is *husband-wife*; there is a strong interdependency between the members of the pair since the term *husband* takes its meaning in relation to *wife*. Reverse antonyms, such as *rise-fall*, are mutually exclusive: If something rises (e.g., the temperature), it does not follow that something else falls.

Antonymy in sign languages has been discussed both in ASL (Lucas 1989) and Auslan (Johnston and Schembri 2007), for instance. Johnston and Schembri (2007) describe various types of antonyms in Auslan. After identifying some Auslan antonyms such as *BIG-SMALL-TALL*, they observed that some antonyms in Auslan may overlap in form, except for one (or a few) phonological feature(s). For instance, *WANT* and *NOT-WANT* (which I shall rewrite as *want.NEG*) differ only in the direction of the movement. *Have* is initially signed with an open hand that closes into a fist while moving downwards. Conversely, *NOT-HAVE* (or *have.NEG*) begins with a closed handshape that then opens up while moving upward. Negation in *WANT* and *HAVE* is analyzed as a derivational antonym. Johnston and Schembri (2007) propose that phonology and morphology may play a significant role in expressing the lexical-semantic relationship of oppositeness in Auslan.

Methodology

This preliminary study adopts a descriptive and qualitative approach to investigating antonymy in EthSL. Twelve participants were recruited for this study: six from Addis Ababa (located at the center of the country, where most of the deaf population lives) and six from Hossana (located in the southern part of Ethiopia, where the Deaf Residential School can be found). All participants are first-language (L1) EthSL signers from hearing families. The age range of the participants goes from fifteen to thirty-five years old. The participants' level of education ranges from the eighth grade to a bachelor's degree.

The data collection was organized into four parts. The first part involved interviews with the six participants, three from Addis Ababa and three from Hossana, and consisted of an elicitation task. The re-

maining six participants (also three from Addis Ababa and three from Hossana) were recruited for a task that involved signing a story. The elicitation task consisted of asking participants to brainstorm and discuss sign pairs with opposite meanings. On occasions, the researcher would show some signs to prompt participants to yield signs with opposite meanings. The second part of the data collection involved signed narratives. In that task, the six participants signed stories in such a way that the researcher could identify how antonyms could be produced naturally in signed discourse. The third part of the data collection was consultant observations of antonyms produced in participants' free conversations at the research site in Addis Ababa and Hossana. As for the fourth part, EthSL dictionaries (Ha meshaf 1976; Enad 2008) were used as supplementary sources for the study.

All interviews and narratives were digitally recorded and imported to ELAN (Crasborn and Sloetjes 2008) for data annotation and coding. Identification and categorization of EthSL antonyms were done based on descriptions provided by Lyons (1977), Jackson (1988), Egan (1968), and Cruse (1986).

Research Findings

This pilot study analysed thirty-one antonyms that were collected from EthSL dictionaries, direct elicitation, and free conversations (see appendix 1). I explore different ways of forming antonyms in EthSL. First, I look into the phonological and morphological patterns in various EthSL antonyms and discuss what linguistic patterns are found to be productive in forming EthSL antonyms. Then, I provide a description of EthSL antonyms based on semantic contrasts. This is based on consultant observation, an ethnographic research method used in qualitative research, which allows the researcher to gather and examine data in naturalistic settings (Schilling 2013). Finally, I discuss which phonological and morphological features are used to mark those contrasts.

Phonological and Morphological Strategies for Forming Antonyms and Their Semantic Patterns in EthSL

EthSL Antonyms: Movement Metathesis Is Productive. Movement metathesis takes place when the direction of the movement parameter of one sign is switched to the opposite direction. In this morphological

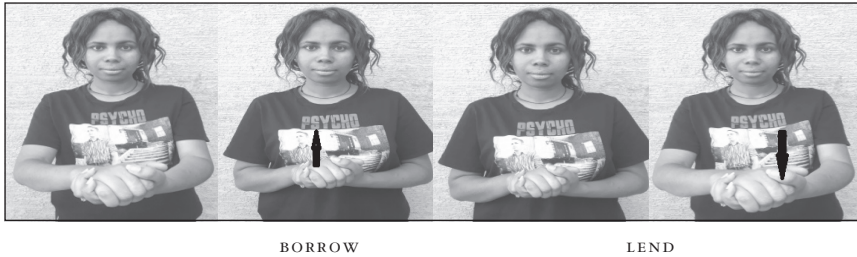


FIGURE 1. Illustration of EthSL antonyms *BORROW* and *LEND*.

category of EthSL antonyms, those pairs are similar in all parameters (e.g., handshape, location, and palm orientation) except for movement. The data collected through the study reveals that movement metathesis is productive in forming EthSL antonyms.

As the sign for *BORROW* shows, the movement goes towards the signer, whereas the sign for *LEND* is signed away from the signer to form the opposite (see figure 1). The initial position of *LEND* denotes the thematic role of a giver, whereas the final position of *BORROW* denotes the thematic role of the recipient.

The motivation behind the mechanisms for forming antonyms such as *BORROW* and *LEND* might be linked to several factors such as iconicity and conceptualization. For example, when the sign *BORROW* moves away from the signer, it denotes the iconic act of giving something to someone. Conversely, when the sign *LEND* moves towards the signer, it shows the iconic action of receiving/taking something from someone.

Antonyms by metathesis are also found in the category of directional signs in EthSL. EthSL signs for *UP-DOWN*, *GO-COME*, *IN-OUT*, and *OPEN-CLOSE* are good cases in point as all their parameters are similar, except for the movement. The movement in those antonyms appears to be iconically motivated. For instance, the movement for the sign *UP* moves up, whereas the movement for *DOWN* moves down (see figure 2).

The sign for *GO* moves away from the signer, denoting the path of moving forward, whereas the sign for *COME* moves toward the signer. Furthermore, in the two-handed signs for *IN/ENTER* and *OUT*, the dominant hand either moves inward or outward relative to the nondominant hand (see figure 4). Another example of these types

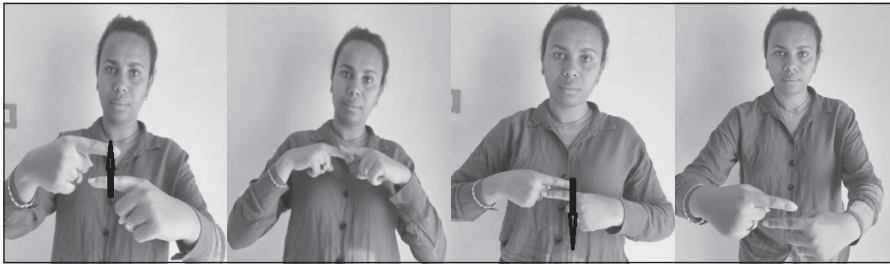


UP



DOWN

FIGURE 2. Illustration of EthSL antonyms *UP* and *DOWN*.



GO

COME

FIGURE 3. Illustration of EthSL antonyms *GO* and *COME*.



IN/ENTER

OUT/EXIT

FIGURE 4. Illustration of EthSL antonyms *IN/ENTER* and *OUT/EXIT*.



FIGURE 5. Illustration of EthSL antonyms *OPEN* and *CLOSED*.

of antonyms are the signs for *OPEN* and *CLOSE*, which overlap in all parameters except for the direction of movement. The sign for *OPEN* moves inward (toward the signer), whereas the sign for *CLOSE* moves outward (away from the signer), illustrating movement metathesis. Those antonyms reveal a pattern of producing opposite directions.

While movement metathesis in sign pairs is productive for forming antonyms in EthSL, converse path movements in sign pairs do not necessarily mean they are antonyms. Instead, initial and final positions in directional verbs serve to mark the subject and object, as in the signs for *ACCUSE*, *CRITICIZE*, *PAY*, and so forth. If the movement is converse in directional signs, then the subject and object of directional signs will be reversed. Directional signs that use direction to mark the subject and object do not fall under the category of antonyms.

Directional antonyms are words that denote actions and features that differ in direction. Directional antonyms exhibit reversal relationships between items, signs, or arguments (Palmer 1976; Cruse 2000). EthSL signs such as *LEND-BORROW* is one example of directional opposition, typical of converse antonyms.

EthSL Antonyms: Movement Is Metaphorical. The EthSL signs for *MORNING* and *EVENING* are also antonyms—their phonological forms are clearly related. While both signs overlap in handshape and palm orientation, the cohort of location and movement differ according to Hold-Movement-Hold structures. A *hold* is defined as any period of time during which handshape, orientation, location, and



FIGURE 6. Illustration of EthSL antonyms *MORNING* and *EVENING*.

nonmanuals are held constant (Liddell and Johnson 1989). For *MORNING*, both hands initially begin in contralateral positions in neutral/signing space, then move outward to ipsilateral locations. On the other hand, while forming the sign for *EVENING*, the signer's both hands are laterally situated in neutral/signing space then cross down and inward to contralateral locations. The movement directionality for the signs *MORNING* and *EVENING* maps onto the abstract domain of the time of the day. Figure 6 illustrates how movement metathesis is observed in those two signs.

The signs for *YESTERDAY* and *TOMORROW* can also be taken as examples of antonyms in EthSL. Except for movement, both signs share the same handshape, location, and palm orientation, as one can see in figure 7. However, the cohort of location and movement differs between *YESTERDAY* and *TOMORROW* according to Hold-Movement-Hold structures (Liddell and Johnson 1989). Movement



FIGURE 7. Illustration of EthSL antonyms *YESTERDAY* and *TOMORROW*.



FIGURE 8. Illustration of EthSL antonyms *TRUE* and *FALSE*.

metathesis is observed in both signs: *YESTERDAY* moves backward into the past, while *TOMORROW* moves forward into the future. The movement and its directionality both map onto a culture-bounded conceptualized timeline. Studies demonstrate how conceptual metaphors of timelines are pervasive in spoken and signed languages, producing timelines either horizontally (e.g., to mark the duration of time) or vertically (e.g., to mark growth) (Schermer and Koolhof 1990; Massone 1994; Sinte 2013).

In EthSL, the signs for *EVENING-MORNING*, *CLOSE-OPEN*, AND *YESTERDAY-TOMORROW*, demonstrate movement metathesis (with explicit opposition in movement). In contrast, although the EthSL signs for *TRUE* and *FALSE* only differ in movement, they do not display movement metathesis (see figure 8).

From a metaphorical point of view, it is assumed that the sign for *TRUE* is up because up is metaphorically associated with positive concepts, whereas down is metaphorically associated with negative concepts. Furthermore, contrary to the previous examples, the movements observed in *TRUE* and *FALSE* are not in total opposition in terms of direction. The sign for *TRUE* moves forward (away from the signer), whereas the sign for *FALSE* moves horizontally (in front of the signer). Palm orientation in *TRUE* and *FALSE* are also different (unlike in the previous examples).

Another type of converse antonym that demonstrates this semantic and phonological pattern is that of antipodal antonyms, such as direc-



FIGURE 9. Illustration of EthSL antonyms *EAST* and *WEST*.

tion terms such as *NORTH-SOUTH* and *EAST-WEST*, which demonstrate converse movements in EthSL. Though the signs for *EAST* and *WEST* do not differ in handshape, the signs for *NORTH* and *SOUTH* use two different handshapes (see figures 9 and 10). The handshapes of these signs mainly are initialized by representation of Amharic orthography.

EthSL Antonyms: Location Is Contrastive. Some antonyms can be differentiated by location. For instance, in EthSL, the signs that stand for *MALE* and *FEMALE* are identical in all parameters except for location. The sign for *MALE* is situated on the forehead, whereas the sign for *FEMALE* is produced on the lower part of the face, illustrating how



FIGURE 10. Illustration of EthSL antonyms *NORTH* and *SOUTH*.



MALE



FEMALE

FIGURE 11. Illustration of EthSL antonyms *MALE* and *FEMALE*.

location marks contrast between genders (see figure 11). The location contrast for person terms also extends to kin terms in EthSL, revealing that male kin terms are located in the upper part of the face, whereas female kin terms are produced in the lower part of the face.

This is also called *kinship opposition*, which is one type of converse antonym. In EthSL, kinship opposites are mainly contrastive in location. Figure 12 is one example of kinship opposition in EthSL. The antonyms for *FATHER* and *MOTHER* only differ in the location parameter.



FATHER



MOTHER

FIGURE 12. Illustration of EthSL antonyms *FATHER* and *MOTHER*.



FIGURE 13. Illustration of EthSL antonyms *HUSBAND* and *WIFE*.

Converse antonyms in EthSL demonstrate variable phonological strategies, unlike what was observed in reverse antonyms. To illustrate converse relations, EthSL sign pairs do not necessarily reverse the path movement. Figure 13 shows the converse antonyms *HUSBAND-WIFE*, which is an example of kinship opposition. Both signs are phonologically identical except for the initial location.

Some converse antonyms, unlike the *HUSBAND-WIFE* pair, do not necessarily contrast in path. For instance, the signs for *BUY* and *SELL* display similar paths since both signs move downward (see figure 14). Except for an overlap in downward movement, those signs differ in all other phonological parameters.

EthSL Antonyms: Orientation Is Contrastive. According to the data collected for this study, palm orientations are contrastive in forming EthSL antonyms. A change in palm orientation can affect the meaning of the sign and create an antonym. Some of those orientation



FIGURE 14. Illustration of EthSL antonyms *BUY* and *SELL*.



FIGURE 15. Illustration of EthSL antonyms *GOOD* and *BAD*.

changes are seen in EthSL adjectives and verbs. In verb signs, a change in orientation marks negation.

For instance, some EthSL antonyms, such as *GOOD-BAD*, are produced with a change in orientation. The sign for *GOOD* is formed by moving the dominant hand away from the signer's mouth with palm orientation upward. As can be seen in the sign for *BAD*, the orientation of the dominant hand changes from upward to downward while moving down to the nondominant hand (see figure 15). In short, palm orientation differentiates between adjectives such as *GOOD-BAD* to form a pair of opposites.

A change in orientation in some verb signs functions as a negation marker, revealing a morphosyntactic pattern of a negation clitic in EthSL.

Figure 16 shows how the signs for *LIKE* and *LIKE.NEG* differ in orientation. Also, the direction of the movement is reversed in this



FIGURE 16. Illustration of EthSL antonyms *LIKE* and *LIKE.NEG*.



FIGURE 17. Illustration of EthSL antonyms *EQUAL* and *EQUAL.NOT*.

pair: *LIKE* is signed with a movement toward the signer, whereas *LIKE.NEG* is signed moving away from the signer and changing the orientation of the handshape.

EthSL Antonyms: Manual Negation Sign for NOT To convey opposite meanings in EthSL, one can include the manual negation *NOT*. In EthSL, *NOT* follows the sign to express oppositeness. The overt sign *NOT* is mainly used when there is no other sign to express oppositeness. In figure 17, the sign *NOT* is added to the sign *equal*, thus forming the opposite sign to the initial one.

EthSL Antonyms: There Is No Overlap in Phonology and Morphology. Semantic antonym pairs in the data that are not marked by phonological or morphological contrast are categorized as root antonyms (see figure 18).



FIGURE 18. Illustration of EthSL antonyms *BLACK* and *WHITE*.



FIGURE 19. Illustration of EthSL antonyms *ALIVE* and *DEAD*.

Another example of antonyms that are not morphologically related is the pair *ALIVE* and *DEAD*.

Gradable Antonyms. Some EthSL antonyms, such as *CHEAP-EXPENSIVE*, *SMALL-BIG*, and *AWAKE-ASLEEP*, are degree-modifying signs. For signs such as *BIG-BIGGER-BIGGEST*, the signer can move both hands further away to illustrate the relative augmentation in size of the referent in question.

Conversely, a two-handed sign, such as the one for *SMALL-SMALLER-SMALLEST*, may bring the two open closed indexes closer to qualify reduction in size. The distance between hands (and fingers) conveys the degree of size, be it bigger or smaller. In the *AWAKE-ASLEEP* pair, the aperture of fingers slows down, illustrating a pro-



FIGURE 20. Illustration of EthSL antonyms *AWAKE* and *ASLEEP*.



FIGURE 21. Illustration of EthSL antonyms *SMALL* and *BIG*.

cess of going to sleep and/or becoming (more) awake. To convey the degree of gradation in signs, phonological features are generally modified. Most adjectives in EthSL are gradable. EthSL has a mechanism to express gradation for gradable antonyms through the signer’s modification of the original sign.

Additionally, degree-modifying gradable antonyms such as *CHEAP-EXPENSIVE* are also found in EthSL (see figure 22). The movement of the dominant hand toward the nondominant hand in the sign *CHEAP*, where moderate movement indicates medium prices, and the upward movement of the dominant hand away from the nondominant hand for the sign *EXPENSIVE* can also be modified to indicate the degree of cost.

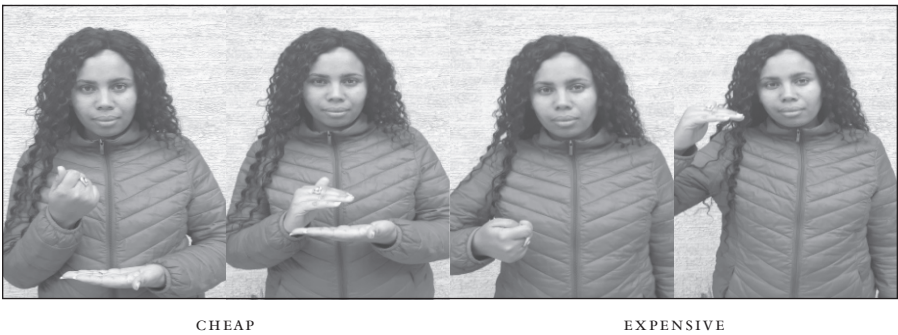


FIGURE 22. Illustration of EthSL antonyms *CHEAP* and *EXPENSIVE*.

TABLE 1. An Overview of Phonological Patterns Observed in Two Morphological Types of EthSL Antonyms

Morphological Type	Handshape	Location (No Path)	Movement	Orientation	Examples
Root					ALIVE-DEAD BLACK-WHITE NEW-OLD
Derivational		X	X	X	HUSBAND-WIFE LIKE-LIKE.NEG WANT-WANT.NEG GOOD-BAD

Table 1 shows two major types of EthSL antonyms based on morphophonological patterns, and table 2 identifies gradable and nongradable antonyms based on semantic contrasts. In table 1, root antonyms are distinct signs that do not overlap in phonological structure; contrasting phonological parameters generally mark derivational antonyms.

Table 2 lists gradable and nongradable antonyms of EthSL categorized on the basis of semantic contrasts. It provides an overview

TABLE 2. Types of EthSL Antonyms and Their Phonological Patterns

Antonym types	Handshape	Location (No Path)	Movement	Orientation	Examples
Gradable			X		CHEAP-EXPENSIVE BIG-SMALL SHORT-TALL
Nongradable					
Converse					
Directional			X		BORROW-LEND
Antipodal	X		X		NORTH-SOUTH EAST-WEST
Kinship		X			MAL -FEMALE FATHER-MOTHER
Reverse			X		COME-GO IN/ENTER-OUT/EXIT

of the types of antonyms. The table also shows which phonological parameters are generally used to form antonym types, along with EthSL examples.

Summary of Main Findings

In this section, I review the main findings of my study on EthSL antonyms. The data shows that phonology, especially movement metathesis, plays a significant role in forming EthSL antonyms. Contrasts in location and palm orientation are also observed. However, the data did not yield EthSL antonyms that were contrasted by handshape only. EthSL antonyms are generally formed via one of the following ways:

- Movement, in particular the direction of the movement, appears to be pervasive compared to other phonological parameters. Metaphorical mappings that convey oppositeness are also productive in EthSL antonyms. Movement is used to express degree modification in EthSL gradable antonyms such as *CHEAP-EXPENSIVE*. Handshape and location, on the other hand, are not found to show gradeability in this set of antonyms. The movement parameter appears to be the most prevalent phonological structure to mark oppositeness in EthSL, but this does not hold true in all categories of antonyms discussed in the analysis section above.
- Location is contrastive. Location contrast (with no path movement) appears to be restricted to kin terms.
- Orientation is also contrastive. EthSL antonyms expressed with a negation clitic are produced with a change in orientation.
- Handshape is not used to mark oppositeness in the sign pairs in this corpus, except in antipodal antonyms in which initialization, like in *NORTH-SOUTH*, does not mark oppositeness but instead represents Amharic orthography.

Future Considerations for Making Sign Language Dictionaries

Lexical entries in the 1976 and 2008 EthSL dictionaries do not incorporate information about antonyms. If lexical entries included signs with opposite meanings, it would show how signs (and those with opposite meanings) are formed and related. Users of EthSL dictionaries (and other sign language dictionaries), would benefit from getting

that kind of information, since they would gain a better understanding of how individual signs express semantic relations of oppositeness. This would provide them with a better understanding of systematic linguistic properties that show semantic relations in sign pairs (e.g., antonyms). In short, incorporating antonyms in lexical entries would strengthen and optimize the use of EthSL (and other sign language) dictionaries.

Conclusion

Antonymy is defined as the relationship between words or signs that express opposite meanings. In this study, I examined the linguistic and semantic properties demonstrated in a corpus of thirty-one EthSL antonym pairs. The findings of the study reveal that antonyms in EthSL are organized according to phonological, morphosyntactic, iconic, and metaphorical properties. Examples of EthSL gradable antonyms, nongradable (converse, directional, antipodal, and kinship opposition) antonyms, and reverse antonyms that can be observed in spoken languages are also found in the data collected for this study.

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References

- Crasborn, O., and H. Sloetjes, H. 2008. Enhanced ELAN Functionality for Sign Language Corpora. In *Proceedings of LREC 2008 3rd Workshop on the Representation and Processing of Sign Languages: Construction and Exploitation of Sign Language Corpora*, ed. O. Crasborn, E. Efthimiou, T. Hanke, E. D. Thoutenhoofd, and I. Zwitterlood, 39–43. European Language Resources Association. <https://www.sign-lang.uni-hamburg.de/lrec/pub/08022.pdf>.
- Cruse, D. A. 1986. *Lexical Semantics*. Cambridge: Cambridge University Press.
- Cruse, A. 2000. *Meaning in Language*. Oxford: Oxford University Press.
- Egan, R. F. 1968. *Survey of the History of English Synonymy*. Springfield, MA: Merriam-Webster.
- Ethiopian National Association for the Deaf. 2008. *Birtat*. Addis Ababa, Ethiopia: Artistic Printing Press.

- Ethiopian National Association for the Deaf (ENAD). 1976. *Ethiopian Sign Language Dictionary*. Ha meshafe. Addis Ababa: ENAD.
- Ethiopian National Association for the Deaf (ENAD). 2008. *Ethiopian Sign Language Dictionary*. Addis Ababa: ENAD.
- Eyasu, H. 2017. *The Sociolinguistics of Ethiopian Sign Language: A Study of Use and Language Attitudes*. Washington, DC: Gallaudet University Press.
- Jackson, H. 1988. *Words and Their Meaning*. London: Longman.
- Johnston, T., and A. Schembri. 2007. *Australian Sign Language: An Introduction to Sign Linguistics*. Cambridge: Cambridge University Press.
- Justeson, J. S., and S. M. Katz. 1999. Co-occurrences of Antonymous Adjectives and Their Contexts. *Computational Linguistics* 17: 261.
- Katz, J. J. 1972. *Semantic Theory: A Linguistic Perspective*. New York: Harper & Row.
- Kidane, A. 2013. Compound Signs in Ethiopian Sign Language. MA thesis, Addis Ababa University, Ethiopia.
- Liddell, S., and R. Johnson. 1989. American Sign Language: A Phonological Base. *Sign Language Studies* 64:195–278.
- Lucas, C., ed. 1989. *The Sociolinguistics of the Deaf Community*. San Diego: Academic.
- Lyons, J. 1977. *Semantics*. Cambridge, UK: Cambridge University Press.
- Masson, C. 1994. Metaphors of Sign Language: Towards a Realism of Metaphor. *Sign Language Studies* 69:83–94.
- Murphy, M. L. 2006. Meronymy. In *Encyclopedia of Language and Linguistics*, ed. K. Brown, 13–15. Elsevier, pp. 13–15.
- Palmer, F. R. 1976. *Semantics: A New Outline*. Cambridge: Cambridge University Press.
- Saeed, J. I. 1997. *Semantics*. Cambridge, MA: Blackwell.
- Schilling, N. (2013). *Sociolinguistic fieldwork*, Cambridge University Press.
- Schermer, T., and C. Koolhof. 1990. The Reality of Time-Lines: Aspects of Tense in Sign Language of the Netherlands (SLN). In *Proceedings of the Fourth International Symposium on Sign Language Research*, ed. S. Prillwitz and T. Völlhaber, 295–305. Hamburg: Signum.
- Sinte, A. 2013. Expression of Time in French Belgian Sign Language. In *Sign Language Research, Uses and Practices: Crowding Views on Theoretical and Applied Sign Language Linguistics*, ed. L. Meurant, A. Sinte, M. Van Herreweghe, and M. Vermeerbergen, 205–36. Boston/Berlin/Nijmegen, The Netherlands: De Gruyter and Ishara Press.
- Tsehay, M. (2012). *Phonetics of Ethiopian Sign Language*. Unpublished BA essay: Addis Ababa University.
- Yule, G. 1996. *Pragmatics*. Hong Kong: Oxford University Press.