Comparative Linguistics, Translation and Literary Studies
Vol. 2 No. 3 August 2025 (140-148)

Visual-Spatial Grammar vs. Lexical Fixity: Classifier Strategies for Animal Packs in ASL and English

Cynthia Sanders

National Technical Institute for the Deaf at Rochester Institute of Technology, Rochester, New York, United States

*Corresponding Author's Email: casnss@rit.edu

Article History:

Submission: July 10, 2025 | Revision: August 18, 2025 | Accepted: August 20, 2025

Abstract

Aims: This study presents a comparative linguistic analysis of collective noun classifiers in English and American Sign Language (ASL), focusing specifically on references to animal packs. English relies on lexicalized, often metaphorical noun phrases such as a pack of wolves or a murder of crows, conveying group identity and cultural connotation through fixed expressions. In contrast, ASL classifier constructions are morphologically dynamic and spatially grounded, employing handshape, movement, and orientation to represent entities and their relationships in space. **Methods:** Data were collected from literary corpora, glossaries, and ASL video materials, then categorized according to classifier type, semantic function, and representational strategy. **Result:** Through side-by-side coding schemes and contrastive analysis, the study reveals how each language encodes collective identity within its unique modality—lexical and auditory in English; visual-spatial and kinetic in ASL. **Implication:** The findings contribute to understanding cross-modal linguistic structures and the cognitive frameworks that shape classifier systems across languages.

Keywords: comparative linguistic study, collective noun, noun classifiers, and cross-modal linguistic structures.

Introduction

English and American Sign Language (ASL) both utilize classification as a linguistic feature, though they manifest it through distinct mechanisms. Each language uses specific mechanisms to express and identify classifications within its structure. Among the various components of classification, this paper focuses on a specific type of collective noun classification: Animal Pack Classification. Among the many forms of classification present in each language, one particularly illustrative example is animal pack classification. This paper aims to provide an in-depth comparative analysis of the distinct features used in both English and ASL.

Classifier constructions in both English and American Sign Language (ASL) have been extensively studied, though they diverge significantly in modality, structure, and grammatical function. In English, classifiers are not grammatically obligatory as they are in classifier-rich languages like ASL or Mandarin. Instead, they appear primarily as collective nouns or pseudo-partitive constructions—such as *a flock of birds* or *a cup of sugar*—serving stylistic and syntactic purposes to convey group characteristics, emotional tone, and contextual nuance (Albrespit, 2021;

DOI: 10.70036/cltls.v2i3.140
ISSN 3030-3664 (online), https://citrus.buxdu.uz/, published by Bukhara State University

Lehrer, 1986). These constructions are typically fixed lexical phrases, often rich in metaphor and historical or occupational associations (Allan, 1986; Huddleston & Pullum, 2002). When referring specifically to animal groupings, English employs a variety of lexicalized collective noun classifiers, such as *a pack of wolves*, *a herd of cattle*, *a school of fish*, or *a swarm of bees*. These expressions enhance semantic clarity by signaling not only quantity but also behavioral or contextual attributes of the group. Some are even context-dependent—*a gaggle* of geese refers to those on land, while *a skein* describes geese in flight (Quirk, Greenbaum, Leech, & Svartvik, 1985). Though not required for grammatical correctness, these classifiers enrich English discourse with specificity and cultural depth. Unlike ASL classifiers, which follow morphological and rule-governed systems, English collective nouns function as stylistic and conventionalized forms that must be learned through exposure and memorization (Aitchison, 2003).

Whereas English classifiers are largely lexicalized and idiomatic, ASL classifier constructions are dynamic and structurally integrated into the grammar of the language. ASL classifiers are morphologically productive components that integrate with verbs to express referents' spatial relationships, plurality, and physical properties (Benedicto & Brentari, 2004; Conlin-Luippold & Hoffmeister, 2013).

American Sign Language (ASL) classifiers are a richly structured and integral part of its grammatical system, offering visual-spatial representations that convey detailed information about objects, people, and their interactions. These classifiers fall into several types, each serving a distinct communicative function. *Descriptive classifiers (DCLs)* illustrate an object's shape or texture, while *semantic classifiers (SCLs)* represent general categories like people or vehicles in motion. *Locative classifiers (LCLs)* describe spatial relationships, and *instrument classifiers (ICLs)* depict how objects are manipulated. The body itself becomes a linguistic tool in *body classifiers (BCLs)* and *body part classifiers (BPCLs)***,** which map human form and motion. For broader depictions, *plural classifiers (PCLs)* express quantity, and *element classifiers (ECLs)* represent natural phenomena such as rain or fire. This nuanced system enables ASL users to convey complex scenarios succinctly and vividly, reflecting a deep integration of cognitive and linguistic processes (Emmorey, 2002; Supalla, 1986; Conlin-Luippold & Hoffmeister, 2013; Benedicto & Brentari, 2004).

Unlike English, where classifier expressions are lexicalized and stylistic, ASL classifier constructions are grammaticalized, spatially grounded, and morphologically encoded, offering a uniquely dynamic lens into cognitive and linguistic structure (Wilbur et al., 1985; Napoli & Wu, 2003). To examine how classifier features related to the collective noun *animal pack* differ between English and ASL, this study poses the following research questions:

1. What features does English use to indicate collective noun classifiers specifically for animal packs?
2. What features does ASL incorporate when referring to animal packs?
3. How do the features used in English and ASL compare in expressing collective noun classifiers for animal packs?

These fundamental differences frame the current study's comparative inquiry into how each language handles collective animal pack references.

DOI: 10.70036/cltls.v2i3.140
ISSN 3030-3664 (online), https://citrus.buxdu.uz/, published by Bukhara State University

Method

This study employs a qualitative comparative linguistic analysis to examine how English and American Sign Language (ASL) represent classifier features associated with collective animal nouns. Specifically, it investigates how both languages encode the concept of the collective noun *animal pack* through distinct linguistic structures. The methodology is organized into three phases: data collection, categorization, and contrastive analysis**,** ensuring a comprehensive and structured approach.

Data Collection

To establish a robust dataset for analysis, this study curates linguistic samples from English and ASL, focusing on naturally occurring and documented language use. The English dataset (Albrespit, 2021; Lehrer, 1986) draws from glossaries, literary texts, and journalistic corpora that feature collective animal nouns (e.g., a murder of crows, a pack of wolves). These expressions, deeply lexicalized and often metaphorical, are coded based on semantic function, stylistic tone, and lexical category.

For ASL, data are sourced from native signer corpora, annotated video materials, and peer-reviewed research in sign linguistics. These samples provide insights into classifier constructions (Supalla, 1986; Emmorey, 2002; Conlin-Luippold & Hoffmeister, 2013; Benedicto & Brentari, 2004) used to represent collective animal groups. The classification framework applies established typologies (e.g., Supalla, 1986; Emmorey, 2002) to categorize classifier type, spatial and kinetic features, and grammatical integration.

Categorization and Coding

Each dataset undergoes systematic coding based on linguistic structures and representational functions. English collective nouns are categorized by lexicalization patterns, semantic roles, and stylistic nuances, distinguishing between metaphorical and literal group descriptors. ASL classifiers are classified by morphological type, spatial representation, and modality-specific encoding**,** offering a contrastive view of linguistic strategies.

The coding scheme organizes English nouns by common, archaic, and creative lexicalization patterns**,** assessing whether they serve literal, metaphorical, or descriptive purposes. ASL classifiers are coded by their referential scope**,** including Whole Entity Classifiers, Handling Classifiers, Plural Classifiers, and Locative Classifiers**,** capturing how group dynamics are visually depicted (e.g., Supalla, 1986; Emmorey, 2002).

Contrastive Analysis

A detailed contrastive analysis examines functional parallels and modality-specific divergences between the two languages. Special attention is given to how each language encodes pack-related plurality, interaction, and spatial arrangement (Williford, 2008). English relies on lexical metaphors to convey collective groupings, whereas ASL integrates spatial and kinetic classifiers to visually represent pack formations. This comparative approach highlights the cognitive and structural contrasts that distinguish spoken and signed languages.

By maintaining a balance between contextual richness and structural rigor, this methodology ensures that the study remains grounded in authentic language use while uncovering key cognitive and linguistic differences in collective animal noun encoding**.**

DOI: 10.70036/cltls.v2i3.140
ISSN 3030-3664 (online), https://citrus.buxdu.uz/, published by Bukhara State University

Results and Discussion

A. Results and Analysis

English

The chart below presents the six collective noun coding schemes: Collective Noun, Animal, Lexical Category, Semantic Function, Stylistic Tone, and Source Type. A collective noun refers to a specific group label for a particular animal pack, while the Animal column identifies the specific animal associated with each label. The Lexical Category scheme classifies collective nouns into three types: common, which are regularly used in modern English; archaic/lexicalized, which consist of fixed phrases with historical roots; and creative/poetic, which include invented or less conventional usages. Semantic Function is divided into literal, denoting real groupings; metaphorical, evoking emotion or cultural symbolism; and descriptive, referring to behavior or physical traits. Stylistic Tone encompasses neutral expressions that are factual or formal, metaphorical/poetic phrases that are expressive or symbolic, and humorous/ironic usages that involve wordplay or exaggeration. Lastly, Source Type identifies the origins of collective nouns, categorizing them as literary (poems, novels, historical texts), journalistic (newspapers, magazines), informal (blogs, memes, glossaries), or historical (hunting traditions or medieval references)."

Table 1. Collective Noun Coding Table for English – Animal Packs

Collective Noun	Animal	Lexical Category	Semantic Function	Stylistic Tone	Source Type
Pack	Wolves	Common/Current	Denotes tight group formation	Neutral/Literal	Journalistic, Literary
Murder	Crows	Archaic/ Lexicalized	Evokes danger/ominous image	Metaphorical/ Poetic	Literary, Folk Usage
Parliament	Owls	Archaic/Creative	Suggests wisdom/ formality	Humorous/ Ironic	Literary
Crash	Rhinos	Modern Lexicalized	Emphasizes size/power	Concrete/Visual	Glossary, Informal
Skulk	Foxes	Archaic/Obscure	Implies stealth/slyness	Evocative/ Poetic	Historical, Literary
Cackle	Hyenas	Rare/Descriptive	Reflects vocal behavior	Onomatopoetic	Informal, Media
Herd	Cattle/Deer	Conventional/ Common	Denotes loosely gathered group	Neutral/Literal	Journalistic, General
Flock	Birds/Sheep	Common	Indicates cohesive motion	Neutral/Literal	Journalistic, General

American Sign Language

The chart below presents the five ASL coding schemes: classifier types, example use, linguistic function, depicting strategy, classifier role, and source type. The definitions for each ASL coding scheme are as follows:

- Classifier Type: Standard categories (e.g., WECL, HCL, DCL, etc.).
- Example Use: Common contextualized animal pack scenarios.
- Linguistic Function: Role the classifier plays in the grammatical structure.

DOI: 10.70036/cltls.v2i3.140
ISSN 3030-3664 (online), https://citrus.buxdu.uz/, published by Bukhara State University

- Depiction Strategy: How meaning is visually/spatially encoded.
- Classifier Role: Semantic or syntactic contribution in the sentence/utterance.
- Source Type: Origin of usage (e.g., native signer corpora, video data, academic examples).

Table 2. Classifier Coding Table for ASL – Animal Packs

Classifier Type	Example Use	Linguistic Function	Depiction Strategy	Classifier Role	Source Type
Whole Entity (WECL)	Representing a group of wolves	Represents full referent shape	Iconic handshape	Referential/ Base Classifier	Corpora, Linguistic Data
Handling (HCL)	Holding/taming a group of dogs	Illustrates human interaction	Hand configuration and motion	Actional/Agentive	Video, Native Signer
Semantic (SCL)	Showing wolves moving together	Classifies by category (animal)	Classifier movement paths	Motion/Plural Mapping	ASL research articles
Locative (LCL)	Wolves positioned around a hill	Describes spatial relationships	Placement and orientation	Environmental/ Topographic	Annotated corpora
Plural (PCL)	Several foxes scattering	Indicates multiple entities	Repetition/ distribution	Quantitative Reference	Classifier documentation
Element (ECL)	Dust or fur clouds surrounding pack	Depicts non-solid entities	Movement and dispersion	Environmental/ Atmospheric	Narrative ASL examples
Descriptive (DCL)	Pointed ears or bushy tails	Provides shape/feature details	Static handshape contrast	Visual Detail Enhancement	Linguistic illustrations
Body (BCL)	Person mimicking sneaking movement	Maps signer's body to entity	Role shift & enactment	Embodied Perspective	Visual-gestural analysis

To represent a collective noun in ASL, signers must first produce the GROUP sign before specifying the animal noun, or vice versa. There are two distinct variations of GROUP (Fig A.1–A.2 and Fig B), either of which can be used interchangeably before signing a specific collective noun. For GROUP (Fig A.1 and A.2), two steps are required to form the sign, whereas GROUP (Fig B) consists of a single handshape that remains stationary.

Handshape for GROUP A.1	Handshape for Group A.2	Handshape for Group B
GROUP (Fig A.1)	GROUP (Fig A.2)	Group (Fig B)

The distinctive feature of using the collective noun GROUP in ASL is that it can represent an animal pack (Whole Entity Classifier) or depict the movement of a group of animals using GROUP (Fig B) or GROUP (Fig C and FIG D) depending on the context of a narrative.

Herd of cows	Pack of dogs
GROUP (Fig C) – "a herd of cows is moving slowly on the hill"	Group (Fig D) – "a pack of dogs is running quickly on the hill"

For example, a herd of cows (GROUP Fig C) is moving slowly on the hill, compared to a

DOI: 10.70036/cltls.v2i3.140
ISSN 3030-3664 (online), https://citrus.buxdu.uz/, published by Bukhara State University

pack of dogs (GROUP Fig D) running quickly on the hill. Both sentences include the sign GROUP (Fig B); however, two distinctions are made: movement and facial expression. This ASL linguistic feature, known as either a non-manual marker (NMM) or a non-manual signal (NMS), is incorporated to indicate speed through signing tempo that follows the motion along the hill. Additionally, NMS is used to further reflect the speed of movement. For instance, for the herd of cows, puffed cheeks indicate slow movement, whereas for the pack of dogs, the mouth marker - 'oo' - signals fast movement.

Another example, a school of fishes is swimming in the ocean, compared to a flock of birds is flying in the sky. The handshape for GROUP remains the same but the handshape moves upwards as if you visualize a ball in the space (Group Fig E).

Handshape Up	School of fish	Flock of birds
GROUP (Fig E) – The handshape is distinct for GROUP	GROUP (Fig F) – "school of fish is swimming in the ocean"	Group (Fig G) – "The flock of birds is flying in the sky"

Once again, the movement and NMS features differ for groups of fish and birds. For a school of fish, the movement reflects how they swim in the ocean with a gentle, wave-like motion, gracefully. The mouth marker for this action is 'oo,' indicating the lightness of the movement. For a flock of birds, the movement follows how they fly in a group with a more erratic motion. The mouth marker for this action includes pursed lips, signaling density—almost as if the birds are struggling against Earth's gravity. This linguistic feature is considered a depicting verb, visually representing the action in space. This applies to both a herd of cows and a pack of dogs.

Handshape for GROUP H (verb action)	Handshape for GROUP I – "Stampeding"	Handshape for GROUP J "flocking"
GROUP in ACTION (Fig H)	GROUP (Fig I) - "A group of horses is stampeding"	Group (Fig J) – "A herd of sheep is flocking"

The last example demonstrates a different handshape (the use of a wiggling 5 with both hands) to indicate that a group of animals (see GROUP Fig H) is in action. The movement distinction between a group of horses running wild and fast in a stampede versus a herd of sheep flocking at a gentle pace is reflected in two key features: signing tempo and mouth markers as part of NMS. In the first example, the signing tempo is fast, and the mouth marker 'cha' is used to indicate that the horses are running in a wild, rapid motion. In contrast, for the herd of sheep moving gently, the signing tempo is soft, and pursed lips are used to convey a slower, more leisurely pace.

In sum, the data collection phase has established a comprehensive foundation for analyzing how English and ASL linguistically encode collective animal nouns. Through curated English corpora and ASL classifier frameworks, the study systematically categorizes structural, semantic, and modality-specific features. Now, with the datasets fully coded and categorized, the next step

DOI: 10.70036/cltls.v2i3.140
ISSN 3030-3664 (online), https://citrus.buxdu.uz/, published by Bukhara State University

is to interpret these findings to uncover functional parallels and modality-driven divergences between the two languages. This analysis will provide deeper insight into the cognitive and linguistic mechanisms that shape collective noun representation across spoken and signed modalities.

B. Discussion

The results and data interpretation phase builds upon the structured coding schemes established during data collection, revealing intricate linguistic distinctions between English and ASL in representing collective animal nouns. In English, collective nouns function as lexical group markers, categorized into common, archaic, and creative classifications, with semantic roles ranging from literal to metaphorical or descriptive representations. These collective expressions emerge from diverse source types, including literary texts, journalistic writings, and historical traditions, often carrying symbolic weight that influences interpretation. Stylistic tone plays a crucial role, with terms oscillating between neutral descriptors, poetic imagery, and ironic expressions.

Conversely, ASL employs classifier constructions that provide a direct, spatial, and kinetic depiction of collective animal groups. The classifier system—comprising Whole Entity, Handling, Locative, Plural, and other classifier types—relies on visual representation rather than lexical abstraction, encoding movement, spatial relationships, and environmental context through distinct handshapes and signing sequences (Brozdowski, Secora, & Emmorey, 2019). Unlike English, which conceptualizes animal groups metaphorically, ASL incorporates non-manual markers (NMM) and signing tempo to visually demonstrate group behavior, such as a herd of cows moving slowly or a pack of dogs running at a fast pace. This contrast reflects modality-driven linguistic encoding, where English relies on semantic abstraction and ASL integrates embodied representation. The comparison highlights fundamental cognitive differences: English constructs animal collectives as static lexical units, while ASL conveys them dynamically through motion-based classifiers. Additionally, ASL's use of depicting verbs reinforces the role of physical space and temporal flow in sign language structure, distinguishing signed modality from spoken language conventions.

The findings suggest that collective noun representation is deeply influenced by linguistic modality, shaping how speakers and signers conceptualize, categorize, and communicate group dynamics. Moving forward, a deeper analysis of these contrasts will offer insights into the cognitive mechanisms underlying collective noun usage, further bridging structural and semantic distinctions between the two languages.

Conclusion

In summary, this study provides a comprehensive comparative analysis of how English and ASL linguistically encode collective animal nouns, highlighting key structural and cognitive differences between the two modalities. English relies on lexical abstraction, utilizing collective nouns embedded in historical, literary, and journalistic traditions. These nouns often convey metaphorical or descriptive meanings that shape interpretation through stylistic tone and semantic function. In contrast, ASL employs a classifier system that visually and kinetically represents collective groups, integrating spatial organization, movement patterns, and non-manual markers

DOI: 10.70036/cltls.v2i3.140
ISSN 3030-3664 (online), https://citrus.buxdu.uz/, published by Bukhara State University

(NMM) to construct meaning. The contrast between the two languages reveals fundamental distinctions in modality-driven encoding: English conceptualizes collective entities through fixed lexical expressions, whereas ASL presents dynamic, spatially grounded depictions that reflect real-world movement and interaction.

This contrastive analysis underscores the cognitive mechanisms that influence how signed and spoken languages represent collective grouping. English speakers rely on linguistic convention and metaphorical abstraction, whereas ASL users engage embodied representation through signing tempo and classifier constructions. Notably, ASL's depiction of collective motion through classifiers and depicting verbs demonstrates the importance of visual grammar in signed communication. The integration of spatial and kinetic elements ensures that collective noun representation in ASL is not merely symbolic but physically enacted, bridging linguistic form and conceptual meaning.

By examining both languages within a structured coding framework, this study provides new insights into how language modality shapes conceptualization and expression. The findings reinforce the broader implications of signed language research, particularly in understanding how visual-gestural systems encode meaning differently from auditory-vocal communication. This analysis contributes to ongoing discussions in linguistics, sign language studies, and cognitive science, emphasizing the need for further exploration of modality-specific features that govern language structure and usage.

Ultimately, the contrast between English and ASL in representing collective animal nouns reveals not only linguistic distinctions but also cognitive and communicative strategies unique to each modality. As research continues to expand on classifier constructions and collective noun categorization, future investigations may explore how bilingual individuals navigate these linguistic differences, potentially offering new perspectives on language acquisition and cross-modal processing. With these insights in mind, this study provides a foundation for further interdisciplinary inquiries that deepen our understanding of how language—whether spoken or signed—shapes conceptual organization, communication, and meaning-making processes.

Originality Statement

The author declares that this article is their own work and to the best of their knowledge it contains no materials previously published or written by another person, or substantial proportions of material which have been accepted for publication in any other published materials, except where due acknowledgement is made in the article. Any contribution made to the research by others, with whom the author has worked, is explicitly acknowledged in the article.

Conflict of Interest Statement

The author declares that this article was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright Statement

DOI: 10.70036/cltls.v2i3.140
ISSN 3030-3664 (online), https://citrus.buxdu.uz/, published by Bukhara State University

References

Aitchison, J. (2003). *Words in the mind: An introduction to the mental lexicon* (3rd ed.). Blackwell Publishing.

Albrespit, J. (2021). *Lexical and semantic functions of collective nouns in English: A corpus-based analysis.* Linguistic Studies Journal, 45(2), 134–156.

Allan, K. (1986). *Linguistic meaning: Volume 1*. Routledge.

Benedicto, E., & Brentari, D. (2004). Where did all the arguments go? Argument-changing properties of classifiers in ASL. *Natural Language & Linguistic Theory, 22*(4), 743–810.

Brozdowski, C., Secora, K., & Emmorey, K. (2019). *Assessing the comprehension of spatial perspectives in ASL classifier constructions.* The Journal of Deaf Studies and Deaf Education, 24(3), 214–222.

Conlin-Luippold, E., & Hoffmeister, R. (2013). Classifier constructions in ASL: Linguistic and cognitive perspectives. *Sign Language Studies, 13*(4), 451–479.

Emmorey, K. (2002). *Language, cognition, and the brain: Insights from sign language research*. Lawrence Erlbaum Associates.

Huddleston, R., & Pullum, G. K. (2002). *The Cambridge grammar of the English language*. Cambridge University Press.

Lehrer, A. (1986). *English collective nouns: Semantic and stylistic variation.* Language and Cognition, 12(3), 201–218.

Napoli, D. J., & Wu, J. (2003). *Morpheme structure constraints on two-handed signs in American Sign Language: Notions of symmetry.* Sign Language & Linguistics, 6(1), 25–44.

Quirk, R., Greenbaum, S., Leech, G., & Svartvik, J. (1985). *A comprehensive grammar of the English language*. Longman.

Supalla, T. (1986). The classifier system in American Sign Language. In C. Craig (Ed.), *Noun classes and categorization* (pp. 181–214). John Benjamins.

Wilbur, R. B., Bernstein, M. E., & Kantor, R. (1985). *The semantic domain of classifiers in American Sign Language.* Sign Language Studies, 46**,** 1–38.

Williford, L. L. (2008). *Frequency of classifier constructions in American Sign Language* (Master's thesis, University of Pittsburgh). CORE Repository.

DOI: 10.70036/cltls.v2i3.140
ISSN 3030-3664 (online), https://citrus.buxdu.uz/, published by Bukhara State University