Frame Analysis of The Space Category in The English Language

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ABSTRACT

This article explores the concept of frames in cognitive linguistics, focusing on their role in structuring human understanding and interpretation of the world. Frames are mental structures that organize knowledge into familiar contexts, enabling efficient processing and interpretation of language. The article examines key 0000-0003-1312-1656definitions and theories of frames as proposed by scholars such as Charles J. Fillmore, George Lakoff, Marvin Minsky, Ronald W. Langacker, Erving Goffman, Gilles Fauconnier, and Eleanor Rosch, highlighting their contributions to understanding linguistic meaning and contextualization. The study demonstrates how frames and their slots (variable elements) provide structure to conceptual domains such as space, categorization, and cultural differences, using examples like "house," "restaurant," and "office" frames. Through detailed frame analysis, the article explores the overlap and interconnection of slots across different frames, revealing their flexibility in accommodating linguistic and cultural variations. For instance, the slot "table" can transcend multiple frames, appearing in contexts related to homes, workplaces, and public spaces like restaurants.

Keywords: Frame, frame analysis, slots, sub-slots, concept, mental representation, framing, scenario, conceptual frame, frame semantics.

INTRODUCTION

In cognitive linguistics, a frame is a mental structure that organizes our knowledge and understanding of the world. Frames help us interpret words and concepts by placing them in a familiar context or scenario. For example, when we hear the word restaurant, we think of customers, menus, waiters, and meals. This mental structure allows us to understand the material quickly and process language. [10]

METHODS

The term "frame" in linguistics has been defined and elaborated upon by various scholars, particularly within cognitive linguistics. According to Charles J. Fillmore, "A frame is a structured mental representation of a situation or event, consisting of various entities and roles that are contextually linked". Fillmore (1982) introduced the idea of frame semantics, arguing that the meaning of a word is best understood by the conceptual frame it evokes. [1] For example, the verb sell presupposes a frame of a commercial transaction involving a seller, buyer, goods, and money. Another scholar George Lakoff defined the term "frame" as mental structures that shape the way we see the world, influencing both thought and language. They are foundational to understanding how people conceptualize experiences and use metaphors. [5] Lakoff expanded the concept of frames into political and social domains, showing how framing impacts public discourse and decision-making. Additionally, Marvin Minsky explained frames as data structures for representing stereotyped situations, used in artificial intelligence and cognitive psychology, linguistics. [9] A frame includes slots (elements) that can be filled with specific instances or default values. His definition influenced the cognitive perspective on frames in linguistics, linking it to computational models of understanding. Besides that, Ronald W. Langacker also stated that frames are cognitive domains or conceptual structures that provide the

background knowledge necessary to interpret linguistic expressions. [4] In his book Cognitive Grammar, Langacker emphasized that frames are integral to the semantic interpretation of grammar and lexicon. While Erving Goffman defined frames as schemata of interpretation that enable individuals to understand and classify events, actions, and experiences, Gilles Fauconnier stated that frames are conceptual structures that organize mental spaces, temporary mental constructs used in reasoning and understanding language. [2] Fauconnier's work in mental space theory builds on frames as foundational to how language maps onto cognition. Another definition of the term frame was given by Eleanor Rosch declaring that frames are closely related to prototypes and categorization, representing typical or idealized instances of concepts. [7] While her work focuses on cognitive psychology, it influences the linguistic perspective on how frames guide categorization and meaning.

RESULT AND DISCUSSION

Frames are important to understanding words as they link words to real-life situations, making it easier to grasp their meanings. Furthermore, it helps to understand cultural differences as frames differ across cultures, which explains why some concepts are harder to translate or understand in another language. Moreover, frames are essential to grasp contextual meaning as they provide the context needed to interpret language in specific situations. [3]

To do frame analysis, first, a specific concept should be chosen such as "space" or travel. After that, the boundaries of the frame should be defined by considering what it includes and excludes. The frame of "restaurant," might consist of roles (e.g., waiter, customer), objects (e.g., menu, table), and actions (e.g., ordering, paying). The next step is defining the core elements including upper-level nodes, which represent the essential components of the frame, and slots, which are variable elements or specific details that can change depending on the scenario. In the "space" frame, core elements might include location (fixed) and direction (slots). Following this, linguistic expressions are examined by analyzing how the concept is expressed in language. If we take space category as an example, there are prepositions: in, on, under, above; verbs: enter, exit, ascend, descend; nouns: room, path, boundary and adjectives: near, far, wide, narrow in English. Another step is creating a diagram or schema to represent the frame.

The frame for a "house" includes components such as a foundation, walls, floor, ceiling, and roof. Even if we only see part of a house, those visible elements can trigger the "house" frame. This, in turn, activates related subframes associated with the unseen parts of the house, filling in missing details based on default assumptions. For example, if some parts of the house are unusual or partially hidden, the frame will "search" for these details based on the typical structure of a house. Even if the house itself is out of sight, the observer can still "imagine" it because the "being located" frame requires filling a terminal with the "somewhere" subframe, linking it to the general "house" frame.

Consider the category of "house" in different linguistic cultures. In British English, this category includes terms such as housing estate, council house, Georgian house, bungalow, suburban semi-detached house, terraced house, tower block, and thatched cottage. In American English, it includes Victorian houses, farmhouses, plantation houses, apartment buildings, New England houses, row houses, brownstones, ranch houses, mobile homes, and apartment blocks. Despite the cultural and architectural differences, all these types fit into the broader concept of "house" because their dictionary definitions share the overarching meaning [HOUSE].

For example:

Bungalow:

(BrE) A house entirely on ground level.

(AmE) A small house, typically all on one level.

This shows how frames accommodate cultural variations while maintaining a shared core meaning.

Thatched cottage – a house in the countryside with a thatched roof;

Brownstone – a house with a façade made of soft reddish-brown stone, commonly found in New York City [LDELC]. [6]

This classification arises because the concept of "house" is structured through a series of frames that represent it as a type of building designed for people to live in (a building for people to live in [LDELC]). According to this definition, a house as a living space can be described using

various groups of features that form the slots of the "house" frame, represented by objects within the house that define its spatial localization. [6]

The first group of features includes the architectural aspects of a house as a building. This category comprises concepts such as foundation, basement, walls, windows, doors, floors, ceilings, attic, and roof. For example, Crichton (329):

Bright sunlight streamed in through the big windows on the fifth floor.

This sentence activates the slots "window" and "floor."

The second group of features centers around the concept of a room, which is defined as a division of a building with its walls, floor, and ceiling, typically used for a specific purpose [LDELC]. This category includes concepts such as hallway, corridor, living room, dining room, kitchen, and bathroom. For example, I placed a man in the corridor last night and told him to make an accurate note of any sound he might hear from Renfield's room. Stoker (297)

Here, the slots "corridor" and "room" are activated. [14]

Each room, based on its functionality, includes a stereotypical set of furniture or specific items and appliances. For example, a living room typically contains chairs, a table, a sofa, an armchair, and a television. Thus, the previously mentioned room slots can also be characterized by multiple "furniture" slots.

Another group is functional spatial slots. For instance, Follett (11):

Faber entered the house, hung his hat on the hall stand, washed his hands, and went in for tea. [12]

This activates the slots "house" and "hall-stand." While not explicitly mentioned, the slots "hall," "bathroom," and "dining room" are implied, as the described actions typically occur in these specific spaces. Upon entering a house, a person usually starts in the hallway (indicated by the presence of a hallstand, a functional item typically found there), washes their hands in the bathroom, and drinks tea in the dining room.

Analyzing textual descriptions of situations occurring in various spaces has allowed us to identify frames capable of representing different environments, such as offices, restaurants, buildings, open-air, town/city, countryside, sky, land, street, road, and square. Most of these frames can form oppositional pairs, fitting into the broader system of the "space" category.

Frames representing spaces consist of concepts tied to real-world objects. On a paradigmatic level, the lexemes verbalizing these concepts can serve as names for spatial areas on a syntagmatic level, regardless of whether they explicitly relate to the category of "space" or carry other categorical meanings. This applies primarily to most furniture slots within the "house" frame.

The process of identifying frames and their slots involves isolating the objects present in a given space, regardless of whether they localize other objects or are simply described as part of the space. For example, Crichton (395):

(98) In the master bedroom, I finally found some human clutter. One mirrored closet door stood open, and three expensive party dresses were thrown across the bed. She had been trying to decide what to wear. On the dresser top were bottles of perfume, a diamond necklace, a gold Rolex, framed photographs, and an ashtray with stubbed-out Mild Seven Menthol cigarettes. [10]

When objects repeatedly appear in descriptions of the same type of space, the concepts representing those objects become part of the frame structure for that space. In some cases, absence is just as telling. If a description emphasizes the lack of an expected object in a particular space, it implies that the object is typically part of the frame. For instance, in the "office" frame, the absence of a carpet might suggest it is a culturally expected feature: They entered a small, bare room that looked out onto a blank wall. There was no carpet. A photograph of a pretty girl hung on the wall, and there was a pair of handcuffs on the hat stand...

This office is characterized by the presence of a desk, wall, photograph, and hat stand, but the explicit mention of the missing carpet suggests that carpets are culturally typical for such spaces.

Thus, it can be concluded that the frame "office" should include the slot "carpet." In addition to relationships within a single frame, there are also inter-frame relationships stored in memory. These relationships result from the fact that different frames incorporate the same linguistic material, and their scene elements are similar, being

defined by the same repertoire of entities, relationships, or substances, as well as contexts of use [Fillmore, 1975].

Our research has shown that almost all frame structures are characterized by slot overlap. For example, the slot "table" can appear in frames describing living spaces (dining table, card table), workspaces (office table, negotiating table), and public spaces such as restaurants. Similarly, the slot "tree" is found in frames describing forests or gardens, and the slot "car" is present in frames like "town/city," "road," or "street." Consider the following examples:

The door opened. Compared to the emergency room, the basement corridors of the county morgue were positively tranquil. There was a strong odor of formaldehyde. We went to the desk, where the thin, Harry Landon, was bent over some papers, eating a ham sandwich. – Crichton: 443

Here, the concept of TABLE, expressed by the lexeme "desk," appears in the context of the "morgue" frame.

We returned to the sitting room... By the time that we reached the table the rest of the party had arranged themselves. On the other side of Captain's empty chair sat Julia and Mrs. Stuyvesant Oglander; besides them there was an English diplomat and his wife, Senator Stuyvesant Oglander, and an American clergyman presently isolated between two pairs of empty chairs. – Waugh: 280

In this example, the slots "sitting room" and "table" of the "house" frame are activated.

He left a ten-dollar bill on the table and Mannichon followed him toward the door, feeling the allure of wealth. He passed the three wives at the bar. One day soon, he thought, a woman like that will be waiting for me at the bar.

Here, the "table" slot is again activated in a different context. This demonstrates the flexibility and interpenetration of slots across various frames, reinforcing the idea that certain concepts can transcend multiple spatial or contextual frameworks.

He shivered deliciously. - Shaw: 134

In this context, the concept of TABLE activates the frame "restaurant": first, the described subject leaves payment on the table, which is customary in restaurants and cafes, and second, the presence of a bar as a separate area within the space points to a restaurant, as this is a characteristic feature of such establishments.

When describing space, slots from other, non-spatial frames are also encountered. For example (Follett: 22):

My chaps don't go behind enemy lines and count bivouacs like you did.

Here, slots from the "war" frame are embedded into the spatial situation; however, they are legitimate components of the described spatial situation since, in this context, they act as areas of localization, possessing clear spatial meanings.

CONCLUSIONS

Frames are essential in cognitive linguistics because they connect language to our mental understanding of the world. By studying frames, linguists can better understand how meaning is constructed and interpreted in communication. The phenomenon of inter-frame connections is partly explained by the fact that static frames representing human knowledge about the world—particularly the spatial representation frames considered here—have the ability to overlap with each other as knowledge unfolds in discourse.

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