A Preliminary Analysis of Generative Lexicon of Gaddi Language

Bailochan Naik
Ph.D. Research Scholar
Centre for Linguistics, JNU, New Delhi
Lecturer-in English, Kesinga Mahavidyalaya, Kesinga, Kalahandi, Odisha
Email Id: nbailochan1990@gmail.com
==

Abstract

The present paper tries to understand the generative lexicon on Gaddi language through studying and explaining the relevant literature available in the domain. Considering the interdependency of the approach, the paper has taken a specific domain of linguistics and has tried to understand the relevance of the approach, specifically the theory in generative lexicon. I have followed the model "qualia structure" of generative lexicon to understand how the four levels of the structure contribute in the meaning formation. This paper presents some examples from Gaddi language, which facilitate our understanding of the theory.

Key words: Gaddi language, Generative Lexicon, Qualia Structure, Constitutive, Formal, Telic, Agentive

A Brief Introduction to the Language

Gaddi is one of the scheduled languages of Indian constitution among the 234 mother tongues. It is a considerable spoken language of Himachal Pradesh (Palampur, Bharmaur, Mandi, Kangra, and Bilaspur districts), (approximately 135, 838 speakers). It is also spoken in other parts of Indian states like Uttarakhand (approx. 12700 speakers), Delhi, etc. It has got various alternative names, like Bharmauri Bhadi, Pahadi Bharmauri, and Panchi Bharmauri Rajput, Gadiali, etc. The majority of the Gaddi speakers include several castes of the Gaddi Tribal Society, are, namely, Khatri, Brahmin, Dhangar, Rajput, Thakur and Rana. The Ethnologue states the language possesses 100,000 speakers. The World Oral Literature and the UNESCO reveal 120,000 and 3976 speakers respectively.

However, the language has been recognized as a variety of Hindi. It is the mother tongue of the Gaddi people and the medium of instruction in the schools of Palampur area along with

==
Language in India www.languageinindia.com ISSN 1930-2940 Vol. 24:3 March 2024
Bailochan Naik
A Preliminary Analysis of Generative Lexicon of Gaddi Language   75

Hindi and Pahadi. Since they have not possessed script of their own, so, they use Devnagri as their script presently, albeit used Takri before. Gaddi language is a borrowed one, in the sense that it is mostly influenced by Indo-Aryan languages, like Hindi, Punjabi, Pahadi, etc. because of which one of the interesting sociolinguistics phenomena exists, is that, the majority of the Gaddi people are bilingual or multilingual, who have a fluency in Gaddi, Hindi, Kangri and Pahadi, that's why code mixing and code switching are the common scenario taken place among the younger generation of the Gaddi people, so the very language acts as a bridge between the younger and the older generation for communication.

The word order of Gaddi language is SOV (Subject-Object-Verb). There are 32 distinctive consonant sound units and 15 vowels including diphthongs. There is a major existence of retroflex in the language. Postposition in the language is of two types, i.e. inflectional and derivational. In this language, all types of syllabic structures are found, like mono-syllabic, disyllabic, tri-syllabic, Quadra-syllabic and poly-syllabic words.

We know that language is the communication system employing arbitrary symbols. The symbols which we store, normally become words and the words stores exist in two forms: **Dictionary and Lexicon. The later one gets extended into generative lexicon.** The following are the possible information associated with lexical entries is represented at different levels. Some of the examples have been taken here from Gaddi language, let's have a look at the following.

Phonology

Phonological information associated with each entry, i.e. lexeme, defines a segmental and supra segmental properties of a lexeme.

Lexeme	Phonological Specification
Oɖɑ: 'house for pig'	/oɖɑ:/ vcv
Urni 'young female sheep'	/urni/ vccv
Bɑgʰ 'park/garden'	/bɑgʰ/ cvc

Morphology

Morphological information associated with each entry, i.e. lexeme, defines a lexical category, i.e. the word class associated with each lexeme.

Lexeme	Morphological specification
Nikka 'small boy'	N.3sg.
gaɳa 'go'	V+intransitive
e 'this'	D
pur 'on'	P

Syntax

Syntactic information associated with the entry, defines the context of the lexeme in terms of other categories.

Lexeme	Syntactic Specification
gaɳa 'go'	V [NP_] (gʰər gaɳa ləgurɑ)
	*V [_ NP] (gaɳa gʰər ləgurɑ) (Ravina)
Nɑ 'not' (neg.)	N [_ nɑ] (pʰəl-nɑ kʰaɳa cahinḍa)
	*V [_ nɑ] (pʰəl kʰaɳa-nɑ cahinḍa) (Byom)
E 'this'	D [_ N.sg.]
Pur 'on'	P [NP_ locative, directional]

Semantics

The semantic information associated with the entry defines the meaning of a lexeme, which can be done by lexical features in binary facing +/- values or it can be done by special symbol that coupled with more complex information.

===
Language in India www.languageinindia.com **ISSN 1930-2940 Vol. 24:3 March 2024**
Bailochan Naik
A Preliminary Analysis of Generative Lexicon of Gaddi Language   77

Lexeme	Semantic Specification
Urni 'sheep'	N[+animate, - human, -adult, -male]
Likʰ 'write'	V +transitive
E 'this'	D[Demonstrative definite]
Pur 'on'	Post-position [locative, directional]

Pragmatics

The pragmatic information associated with the entry, defines the context contributes to meaning.

Lexeme	Pragmatic Specification

The meaning of the lexeme 'bɑːɳɑː' which comes first into the native speaker's mind is 'plantation', which, we can say, word determines meaning, i.e. semantics, whereas, the same lexeme 'bɑːɳɑː' means 'final plowing', which is of course determined by the context, i.e. Pragmatics.

Generative Lexicon

The generative properties of language have been recognized since Noam Chomsky's *Syntactic Structures* (1957), but not until Pustejovsky proposed his theory of Generative Lexicon (GL) has the notion of generativity been applied to the lexicon, a component of grammar. The lexicon deals with a novel and exciting theory of lexical semantics that addresses the problem of "multiplicity of word meaning", that is, how we are able to give an infinite number of senses to words with finite means, which an active and central component in the linguistic description.

The essence of the theory is that the lexicon functions generatively, by providing a rich and expressive vocabulary for characterizing lexical information; by developing a framework for manipulating fine-grained distinctions in word descriptions; by formalizing a set of mechanism

===
Language in India www.languageinindia.com **ISSN 1930-2940 Vol. 24:3 March 2024**
Bailochan Naik
A Preliminary Analysis of Generative Lexicon of Gaddi Language   78

for specialized composition of aspects of such descriptions of words, as they occur in context, extended and novel senses are generated.

One of the most difficult problems facing theoretical and computational linguistics is defining the representational interface between linguistic and non-linguistic knowledge. Generative lexicon was initially developed as a theoretical framework for encoding selectional knowledge in natural language. This in turn required making some changes in the formal rules of representation and composition. Perhaps, the most controversial aspect of Generative lexicon has been the manner in which lexically encoded knowledge is exploited in the construction of interpretations for linguistic utterances in Generative Lexicon; the computational resources available to lexical items consist of the following four levels:

Level 1-Lexical Typing Structure: Giving an explicit type for a word positioned within a type system for the language.

Level 2-Argument structure: Specifying the number and nature of the arguments.

Level 3-Event Structure: Defining the event type of the expression and any sub eventual structure it may have with subjects and

Level 4-Qualia Structure: A structural differentiation of the predicative force for a lexical item.

4.3. Qualia Structure

A *quale* (singular of *qualia*), from Latin meaning 'of what kind of thing', is a term Generative Lexicon borrows from philosophy to indicate a single aspect of a word's meaning, defined on the basis of the relation between the content expressed by the word and another concept that the word evokes. Among the conceptual relations that a word may activate (for example, for the noun 'dog', having fur, barking, tail wagging, licking, etc.). Qualia relations as defined in Generative Lexicon are those that are relevant for the way the word is used in the language. For example, our knowledge that 'bread' is something that is brought about through 'baking' is considered a Quale of the word 'bread', this knowledge is exploited in our understanding of linguistic expressions, such as 'fresh bread' meaning 'bread which has been baked recently'.

==
Language in India www.languageinindia.com ISSN 1930-2940 Vol. 24:3 March 2024
Bailochan Naik
A Preliminary Analysis of Generative Lexicon of Gaddi Language   79

Qualia relations are also referred to as qualia roles. The word role recalls the notion of semantic role used in the domain of verbal semantics to indicate how the various entities associated with a predicate participate in the event expressed by that verb (agents, patients, experiences and so forth). Qualia roles in Generative Lexicon were first conceived as an argument structure for nouns, and have since been extended to all the major categories.

Qualia encode aspects of a word's meaning that are often attributed as world language by contemporary linguistic theories, i.e. the knowledge we have about objects in the world due to human experience, as in the example of 'bread' and 'bake' above. In Generative Lexicon, the role of such knowledge is identified when it impacts the behavior of linguistic expressions in usage. So it can be clarified how the distinction between lexical meaning and world knowledge is approached in the model.

The notion that lexical items can store information relating to hidden events and activities associated with the word is a useful device for helping in the interpretation of linguistic expression, as noted above. In Pustejovsky (1991), a more elaborated set of relations is proposed, in addition to the hidden events, to represent the meaning of nominal. These relations are called Qualia, and the system of relation defining a single concept is called Qualia Structure. Qualia structure consists of four basic roles:

1-Formal: Encoding taxonomic information about the lexical item, i.e. the basic category of which distinguishes the meaning of a word within a larger domain (what kind of thing is it, what is its nature?).

2-Constitutive: Encoding information on parts and constitution of an object (what is it made of, what are its constituents?).

3-Telic: Encoding information on purpose and function (what is it for, how does it function?).

4-Agentive: Encoding information about the origin of the object (how did it come into being, what brought it about?).

==
Language in India www.languageinindia.com **ISSN 1930-2940 Vol. 24:3 March 2024**
Bailochan Naik
A Preliminary Analysis of Generative Lexicon of Gaddi Language   80

So, we can view the qualia structure of a lexical item, α, as the four features below where, C= Constitutive, F= Formal, T= Telic and A= Agentive;

α   C= what α is made of

                     F= what α is

QUALIA   T= Function of α

                     A= Origin of α

Some examples of Gaddi language on nouns and verbs have been explained, based on "Qualia Structure":

ɖoɳɑ: C= crops

''Harvest''   F= heap

QUALIA   T= production (reaping)

                 A= farming

The above lexicon 'ɖoɳɑ:' with a basic knowledge of the language, the very lexicon is verb in its grammatical category. The constitutive role of the lexical item is crops, where the form is heap, and telic and agentive roles are production and farming respectively.

bɔ:nkru   C= straw/grass/bush

"Broom"   F= bundle (straw)

 (Meant for   T= sweeping

Cow-shade)   A= artifact (knitting/binding/weaving)

As per the Qualia Structure, the constitutive role of the lexicon **bɔ:nkru** is straw or grass, whose formal role conctitutes bundle and the telic and agentive roles are sweeping and artifact (binding/weaving/ knitting) respectively.

===
Language in India www.languageinindia.com ISSN 1930-2940 Vol. 24:3 March 2024
Bailochan Naik
A Preliminary Analysis of Generative Lexicon of Gaddi Language   81

ciɽoɖ   C= parts of plants

'Bark'   F= cover (tough outer skin)

QUALIA   T= medication (domestic use)

               A= peeling

We notice from the lexical item ciɽoɖ that the constitutive role of the very lexicon is parts of plants, where layer or cover is its form. From the basic understanding of the very lexicon's purpose is medication and domestic purpose, where the agentive function is peeling.

ɟoɽɑ: C= material (thread)

"Rope"   F= string

 QUALIA   T= binding (pulling, pushing, dragging, etc.)

               A= Knitting, weaving, etc.

The lexical item ɟoɽɑ: is noun in its grammatical category. The constitutive role of the lexicon is material (thread), and the form is string. The telic role and the agentive roles of the lexicon are binding and knitting or weaving respectively.

ɖrɑ:t   C= Material (iron)

'sickle'   F= agricultural tool (reaping hook)

QUALIA   T= cutting (reaping)

               A= artifact (forging, hammering)

According to the Qualia Structure the constitutive role of the lexicon 'ɖrɑ:t' is material (iron), and the formal role is agriculturaal tool (reaping hook), whose telic and agentive roles are cutting (reaping) and artifact (forging, hammering) respsctively.

beddu   C= animal

==
Language in India www.languageinindia.com ISSN 1930-2940 Vol. 24:3 March 2024
Bailochan Naik
A Preliminary Analysis of Generative Lexicon of Gaddi Language   82

'Sheep'   F= mammal

QUALIA   T= food (clothing)

    A= rearing

  From the basic understanding of the lexicon 'beddu' we know that the constitutive role of the lexical item is animal, the formal role of the said item is mammal. The telic and the agentive roles of the lexicon are food and rearing respectively.

həɽu   C= herb (plants)

'Mustard'   F= spice/condiment

QUALIA   T= flavor

    A= farming (agriculture)

  The constitutive role of the above lexicon is herb, whose formal role is spice or condiment. The telic role of the lexical item is flavor and the agentive role is farming (agriculture).

pɑːɭ   C= human

'Shepherd'   F= worker (caretaker)

QUALIA   T= animal husbandry

    A= artifact (social construct)

  From the basic understanding of the language, the constitutive role of the lexicon 'pɑːɭ' is human and the formal role is 'worker' (caretaker). The telic role of the above lexicon is animal husbandry, whose agentive role is artifact (social construct) from the perception of human understanding.

gərɖu   C= material (wool, cotton leather, etc.)

'Blanket'   F= cloth

==

Language in India www.languageinindia.com **ISSN 1930-2940 Vol. 24:3 March 2024**
Bailochan Naik
A Preliminary Analysis of Generative Lexicon of Gaddi Language   83

QUALIA   T= warm

              A= artifact (knitting, weaving, stitching, etc.)

We notice that, the constitutive role of the above lexicon 'gərḏu' is material (wool, cotton, leather), where the formal role is cloth and the purpose and the agentive role of the object are for warm and artifact (knitting, stitching and weaving, etc.)

minka   C= species

'Frog'   F= amphibian

QUALIA   T= food

              A= natural

The constitutive role of the above lexicon 'minka' is species and the form of the said lexical item is amphibian. The purpose of the lexicon is food, since the perception of the human understanding, when species as a lexicon as a whole, we think of food, may be the purpose of frog of the speech community different from what has been written.

mei   C= species (animal)

'Buffalo'   F= mammal

QUALIA   T= food

              A= natural

From the basic understanding of the language, the constitutive role of the lexical item 'mei' is animal; whose formal role is mammal. The telic and the agentive roles are food and natural respectively.

ɑ:ḷ   C= water-body

'Pond meant

For fish'   F= fish-farm

==
Language in India www.languageinindia.com ISSN 1930-2940 Vol. 24:3 March 2024
Bailochan Naik
A Preliminary Analysis of Generative Lexicon of Gaddi Language   84

QUALIA   T= poultry

                A= artifact

According to the Qualia Structure, the constitutive role of the given lexicon 'ɑ:l' is water-body, and the formal role is fish-farm, where, the telic role is poultry and the agentive one is artifact.

bəgḍi   C= land

'plowed-land'   F= farm-land

QUALIA   T= production (crops)

                A= farming (ploughing)

The constitutive role of the given lexicon 'bəgḍi' is land and the formal role is farm-land, where, the function of the said lexicon is production (crops) and the agentive role is farming (ploughing).

ḍroḷe   C= species

'honey-bee'   F= insect

QUALIA   T= honey collection

                A=natural

The constitutive role, as per the Qualia Structure, of the given lexicon 'ḍroḷe' is species, and the formal role is insect, whose primary function is collection of honey, and the agentive role is undoubtedly natural.

bʰɛnʈʰu   C= plants

'Brinjal'   F= vegetable

QUALIA   T= food

==
Language in India www.languageinindia.com **ISSN 1930-2940 Vol. 24:3 March 2024**
Bailochan Naik
A Preliminary Analysis of Generative Lexicon of Gaddi Language   85

A= farming (planting)

From the above given lexical item 'bʰɛnʈʰu' we notice that, the constitutive role is plants, and the formal role is vegetable, whose telic role is food, and agentive role is of course farming (vegetable plantation).

pʰarguddi   C= species

"Butterfly"   F= insect

QUALIA   T=

          A= natural

The constitutive role of the given lexical item 'pʰarguddi' is species and the formal role of the said lexicon is insect, whose telic role is not known to me I left it blank since I am with less data and scanty knowledge and understanding of the language. The agentive role of the lexicon is natural.

hillən   C= bird

"Eagle"   F= carnivorous

QUALIA   T= killing/hunting

          A= natural

The constitutive role of the above given lexicon 'hillən' is bird, and formal role is carnivorous. The telic and the agentive roles of the lexicon are killing/hunting and natural respectively.

puɳi   C= material

"A device use to

Separate solid   F=utensils, kitchen tool or equipment

Objects from liquid"   T= cooking

==
Language in India www.languageinindia.com **ISSN 1930-2940 Vol. 24:3 March 2024**
Bailochan Naik
A Preliminary Analysis of Generative Lexicon of Gaddi Language   86

QUALIA   A= artifact

As per the Qualia Structure, the constitutive role and the formal role of the lexicon 'puṇi' are material (iron, brass, etc.) and utensils (kitchen tool or equipment). Likewise, the telic role of the lexicon is cooking and the agentive one is artifact.

srɛṇa   C= material (wool)

"Pillow"   F= cushion

QUALIA   T= support (comfort)

      A= artifact (knitting, weaving, stitching)

The constitutive role of the above given lexicon 'srɛṇa' is material (wool) and the formal role is cushion. As a basic understanding from the Qualia Structure point of view and the language, the purpose of the lexicon is for support (comfort) and the agentive role of the said lexicon is artifact (knitting, weaving, and stitching).

Conclusion

From the above kaleidoscopic explanation, it can be inferred that, the four roles of the Qualia Structure, i.e. constitutive, formal, telic and agentive, have been explained in some extent with a handful of data availabe with some knowledge and understanding of the language. Albeit, the above explanation is a meagre to get a transparent idea, which, of course, does not kiss the feet of success and touch the realm of knowledge and needs more data, understanding, knowledge and explanation, but it may pave the way for further research in this field, particularly in generative lexicon in Gaddi language.

==

Work Cited

Allport, D.A. & Funnel. E. (1981), Components of the Mental Lexicon, Royal Society.

Duh. K., (2013), Generative Lexicon, NAIST Grammar Study Group.

==
Language in India www.languageinindia.com ISSN 1930-2940 Vol. 24:3 March 2024
Bailochan Naik
A Preliminary Analysis of Generative Lexicon of Gaddi Language   87

Fellabaum, C. (1997), The Generative Lexicon by James Pustejovsky, Linguistics Society of America

Malmakjaer, K. (1995), The Linguistic Encyclopedia, Rutledge New York.

Pustejvosky, J. and J, Elisabetta. (2016), Integrating Generative Lexicon and Lexical Semantic Resources.

Pustejovsky.J, (2013) The Generative Lexicon Theory, Springer

Pustejovsky, J. (2008), Introduction to Generative Lexicon, Oxford University Press.

Pustejovsky, J. (2007), Fundamentals of Generative Lexicon, Linguistics Summer Institute Standford 311.

Trask, R.L. (1999), Key Concepts in Language and Linguistics.

===