

Causation as a Mental Process¹

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Abstract

Causative constructions are of great importance in typological studies of language. Therefore, the basic concern of the authors in this article has been primarily with the typology of causative constructions in Persian based on Comrie's typological framework. On the other hand, causation plays a central role in everyday human experience. So, it can be considered as one of the integral parts of human cognition or according to Lakoff a notion that exists in our mind (thought). The results indicate that Comrie's classification of causatives (morphological, lexical and analytic) is functionable in Persian. Moreover, the analysis reveals that in Persian, in addition to three types introduced by Comrie, there is another causative referred to in this article "*discoursal causative*". All in all, the paper pursues that causation is a mental process. In fact, the idea that human beings interpret and conceptualize causative constructions by the help of general functions of the mind is suggested.

Key Words: Causation, Typology, Mental Process, Volitional, Non-Volitional.

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1- Introduction

Causative constructions have played an important role in the recent history of linguistics, not only from a typological viewpoint, but also because they represent an important area of convergence between linguistics and such adjacent disciplines as philosophy, and cognitive approaches. In this paper, however, our concern will be primarily with the typology of causative constructions in Persian. The theoretical framework of this taxonomy is based on Comrie's typological approach. The claim is that causative construction exists in all languages, and it becomes most fascinating when languages are examined that have more than one means to signal causation. According to his typological framework, causatives are divided into morphological, lexical and analytic. Therefore, typology of Persian causatives seems worthy to study in order to examine Comrie's claim.

According to Lakoff (1987:54), causation is one of the most fundamental notions that exist in human thought. He also believes that from a philosophical viewpoint, one of the most fascinating mental categories is the category of causes. By considering causation as a mental process, it seems reasonably plausible to suggest that humans cognize events or stages of an event in a chronological order. In the second part of the article, a cognitive model will be proposed as an explanation for the typology of causative constructions.

The results indicate that Comrie's three types of causatives (morphological, lexical and analytic) exist in Persian. Moreover, it's revealed that in Persian in addition to three types introduced by Comrie there is another causative that is referred to in this article "*discoursal causative*". Moreover, the present paper represents that causation is a mental process. In fact, the idea that human beings interpret and conceptualize causative constructions by the help of general functions of mind is suggested.

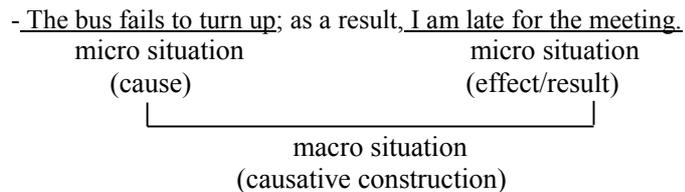
2-Typology of Causatives

The term "*typology*" has a number of different uses in linguistics. Asher Encyclopedia of Linguistics states: "typology is used to refer to the classification of

structural types across languages: the study of linguistic patterns or generalizations that hold across languages and a theoretical or methodological approach that contrasts with other linguistic theories" (Vol.9:4807).

According to Dabir-Moghaddam(1367:14), the term "*causative construction*" refers to those structures in which a person, an event or a phenomenon (which is called CAUSER) causes or motivates another person or thing (CAUSEE) to do an action, to have a new state or stay in its former state.

For Comrie(1992:165), any causative situation involves two components: the cause and its effect (result). He believes that the causative situation is a macro-situation which is the combination of two micro-situations. Let us imagine the following scene:



Briefly stated, when one event is thought to bring about the occurrence of a second event, it is called causation (Whaley, 1997:193).

2-1- Morphological Causative

In morphological causative, the causative predicate is related to the non-causative predicate by morphological means, for instance by affixation, or whatever morphological techniques. This means of causativization process is highly productive: in the ideal type any predicate can be subjected to a causative construction by appropriate morphological means. In Persian, this type of causative has two main sub branches:

2.1.1) Simple Morphological Causative

In Persian, this kind of causative is the result of the combination of present stem of non-causative predicate and causative suffix “-an”. The following verbs are examples of this type:

<i>non – causative</i>	<i>causative</i>
[paridan] (to jump)	[par an dan]/[par an idan]
[xabidan] (to sleep)	[xab an dan]/[xab an idan]
[davidan] (to run)	[dav an dan]/[dav an idan]
[xordan] (to eat)	[xor an dan]/[xor an idan]

This kind of morphological causative can be rewritten as follows:

simple morphological causative = present stem of non-causative predicate + “-an”

2.1.2) Compound Morphological Causative

This type of causative which is one of the most productive causatives is the combination of an adjective and the formative “kardan”. Its non-causative counterparts are the combination of an adjective and formative “/odan” or “budan”.

The following verbs represent this kind of causative:

<i>non-causative</i>	<i>causative</i>
[talx budan/ /odan] (being bitter)	[talx kardan]
[<i>narahat</i> budan/ /odan] (being unhappy)	[<i>narahat</i> kardan]
[bozorg budan/ /odan] (being large)	[bozorg kardan]
[xali budan/ /odan] (being empty)	[xali kardan]

compound morphological causative = adjective + “kardan”

2-2- Lexical Causative

The other kind of linguistic potentiality to codify the notion of causation is called lexical causative: where the relation between the expression of effect and the

expression of cause is so unsystematic as to be handled lexically, rather than by any productive/morphological process. According to Comrie, the clearest examples of lexical causative is produced by suppletion in which there's no system or order between the non-causative and causative pairs (1992:168).

In addition to suppletion, there may be no formal difference between non-causative predicate and its causative counterpart (zero derivation). In Persian, lexical causatives can be divided into 3 subparts based on two variables: 1) the number of free morphemes, 2) the possibility of formal shift:

2.2.1) Identical Lexical Causative

This kind of causative is called "*do vajhi*" (*zuvajhein*) in traditional grammar. In other words, there's no formal difference between two predicates and they have the same form. As the following examples show causative and non-causative pairs have the same form:

<i>non-causative</i>	<i>causative</i>
[jekastan] (to break)	[jekastan]
[poxtan] (to cook)	[poxtan]
[keʃidan] (to pull)	[keʃidan]
[boridan] (to cut)	[boridan]

2.2.2) Non-Identical Lexical Causative

Here, there is no similarity between non-causative predicate and causative one. The causative is the suppletive form of non-causative.

<i>non-causative</i>	<i>causative</i>
[mordan] (to die)	[koʃtan]
[raftan] (to go)	[bordān]
[daʃtan] (to have)	[dadān]
[ʔoftadan] (to fall)	[ʔandaxtan]
[ʔamadan] (to come)	[ʔavardan]

2.2.3) Compound Non-Identical Causative

Another type of causative is compound: it is the combination of at least two free morphemes. Also, in order to reach the causative form, a kind of suppletion takes place in the non-causative pair.

<i>non-causative</i>	<i>causative</i>
[?ata] gereftan] (to fire)	[?ata] zadan]
[didan] (to see)	[ne]an dadan]
[yad gereftan] (to learn)	[yad dadan]
[be ta?viq ?oftadan] (to delay)	[be ta?viq ?andaxtan]

2-3- Analytic Causative

The prototypical case of the analytic causatives are the cases in which separate predicates express the notion of cause and effect, as in English example like "I brought it about that John went" where separate predicate "bring about" represents cause and the predicate "go" expresses effect. In Persian, this causative is constructed as followed:

analytic causative = causer + analytic causative verb + *ke*[_s...subjunctive verb]

Consider the following examples:

- [madar farzanda] ra majbur kard *ke*[_sdar xane bemanad]].

The mother forced her child to stay at home.

- [mo?alem dane]amuzana] ra nasihat kard *ke* [_s xub dars bexanand]].

The teacher told his students to study well.

The above sentences reveal that: 1) each sentence is the combination of two single sentences (main clause and subordinate clause), 2) each subordinate clause is separated from the main clause by the connector "ke", 3) the verb of embedded sentence is always subjunctive.

2-4- Discoursal Causative:

Consider the following sentences:

A) [man xandidam. ?u narahat]od].

I laughed. He became unhappy.

B) [be mahze ?in ke xandidam, ?u narahat]od].

As soon as I laughed, he became unhappy.

C) [t]on xandidam, narahat]od].

Because I laughed, he became unhappy.

D) [be xatere xandidane man, narahat]od].

Because of my laugh, he became unhappy.

It's clear that there's a kind of "cause-effect" relationship in the above sentences. With no doubt these sentences reveal some causative notion in language. But the problem is that, we can not incorporate these causative sentences in the framework introduced by Comrie. In other words, according to a formal classification, the above sentences have no place in the three types of causatives introduced before, although we agree with the cause-effect relationship.

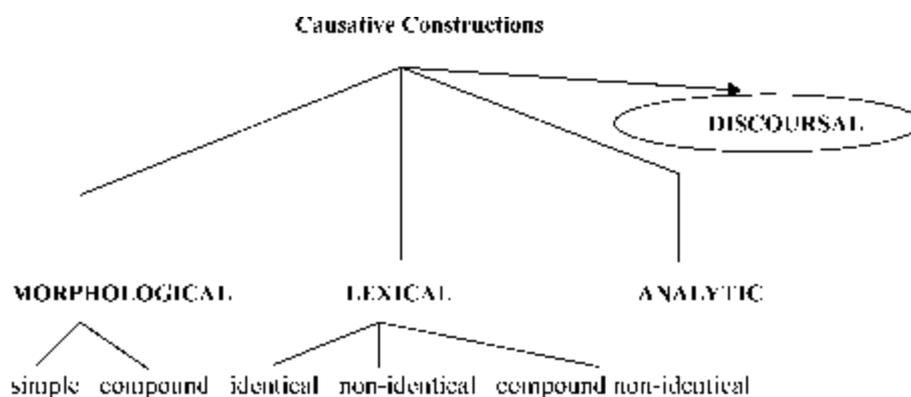
So, the claim is that in Persian (and perhaps in all languages) there's a fourth type of causative for which we propose "*discoursal causative*" in this article. In discoursal causative, the notion of causation is the result of the consequence of events in a given situation of discourse. In (A), the juxtaposition of two sentences (the first one indicates cause and the second effect) establishes a causative force. In (B), the existence of a temporal connector (*be mahze ?in ke: as soon as*) is the motivation of expressing a causative notion. By the help of this connector, we indicate not only the time of *his* unhappiness but also the reason of *his* unhappiness indirectly. In (C), because of a causative or resultative conjunction which has the notion of causation by itself, we have a causative construction. The last sentence (D) is a causative structure because there is a causative preposition (*be xatere: because of*) in it. All in all, when the textual or discoursal features of a structure codify some notion of cause-effect relationship the causative is called discoursal causative, although, there is no formal clue assigned to aforementioned types.

As, the characterization of cause given above is essentially independent of structural parameters, Comrie has not classified this kind of causative in his

typological framework. His classification is a kind of taxonomy based on formal features of causative structure, however the fourth causative proposed here, is the result of discorsal and semantic features of a structure.

3- Causative Constructions in Persian: A Typological Perspective

The following graph summarizes our discussion of causatives in Persian:



4- Mental Process of Causation

All linguists agree upon the idea that language is a system which connects meaning and form. So, on par with established tradition, we postulate two linguistic levels. The one is known as syntactic structure which represents form, while the level representing meaning is known as semantic structure.

Syntactic structure is a structural and/or hierarchical representation of sentences uttered by the speaker. It represents lexical elements in the sentence, the linear sequence and/or the hierarchical organization of these elements. Semantic structure is a level representing meaning. It contains information about meaningful relations between the lexical elements of the sentence.

There is also a nonlinguistic cognitive level of structure, which will be called “*cognitive structure*”. It’s nonlinguistic, because it does not belong to the domain of language, whereas both syntactic and semantic structures are part of language, since

they are governed by linguistic elements.

Crudely speaking, cognitive structure may correspond to what is called thought. Thought is what humans cognize through their senses. Cognitive structure represents what humans cognize of emotion, experience, or what may be referred to here as "cognizable". Cognitive structure must, however, be streamlined in order to be conveyed through the channel of language. It has to be reshaped in accordance with linguistic conventions, i.e. syntactic and semantic rules, or communicative rules. The Korean linguist, Song(1996:140-2) believes that cognizables are not holistic in nature. By that he means that they consist of parts or stages. In order to illustrate this fact he mentioned this example:

-The rock fell off the cliff.

This cognitive notion (cognizable) consists of a series of stages, e.g. the initial movement of the rock from its original position on the cliff, the start of the falling, the duration of the falling, the rock hitting the ground, the resting of the rock on the ground, etc. All these stages are cognized by the human mind.

On the other hand, Langacker (1987:143-144) claims that any verb designates a process, defined as a sequence of configurations (or states) conceived as being distributed over a continuous series of point in time.

Song (ibid) also considers causation as a cognitive process occurred in human's mind. He introduced three major components of causation:

- a) perception of some desire or wish*
- b) a deliberate attempt to realize the desire or wish*
- c) accomplishment of the desire or wish*

In order to assemble these three components of causation into a coherent whole, a temporal dimension (chronological order) is appealed to, whereby (a) precedes both (b) and (c), and (b) in turn precedes (c):

- (1) (a)→(b)→(c)**

5- Volitional vs. Non-Volitional Causative

Regarding the above three mental components, it can be said that when a causative structure is produced an act of **VOLITION** or **GOAL** causes an overt act (**EVENT**), which in turn causes a **RESULT**. This cognitive structure of causation can be rewritten in this way:

2) **VOLITION/ GOAL → EVENT→ RESULT**

The study of different causative structures reveals that the whole cognitive structure of causation in (2) is not utilized for linguistic or communicative purposes. Instead, different stages are highlighted or suppressed. It seems that in those causatives in which the causer has volition in order to reach goal (human) or is capable of having this feature (animism) we have the combination of the following features:

(3.A) **VOLITION / GOAL + EVENT**

and on the contrary (when the causer has no volition) the combination of these two:

(3.B) **EVENT + RESULT**

From this viewpoint causatives can be divided into volitional and non-volitional.

Regarding syntactic perspective, causatives are also divided into two main other groups. The first one involves the analytic causative which can be illustrated as following:

(4.A) {_s [Vcause] + [Veffect]}

(4.A) shows that the analytic causative is biclausal, by that we mean that the notion of cause and result is realized by two single clauses.

The second group involves the morphological and lexical causatives. It has the following structure:

(4.B) {, ... [Vcause + effect]}

In (4.B) the causative suffix, suppletion and zero derivation (what we can see in identical lexical causative) is considered as [Vcause] and the base form of the verb as [effect]. These causatives are monoclausal, the notion of cause and result is compacted in one single clause.

As discorsal causative is free from the current structural constraints and in this kind the main role is on the shoulder of meaning, each kind of the above mentioned structural strategies can be manipulated. On this base, the relationship between grammar and cognition is illustrated as followed:

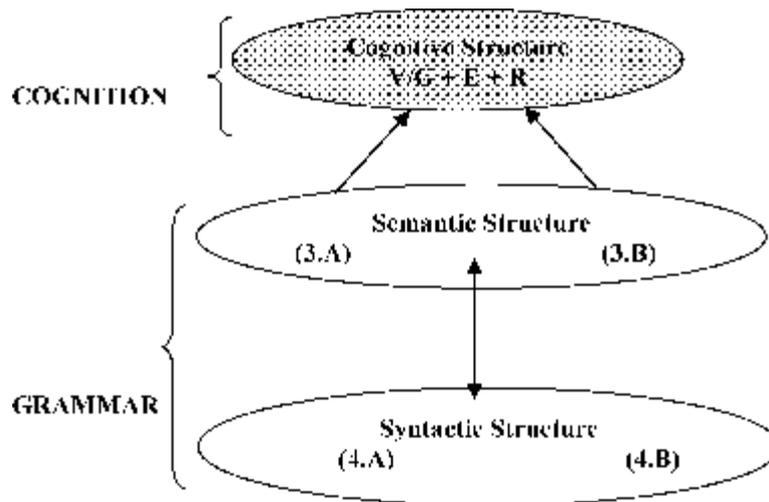


Figure 1- the relationship between grammar and cognition

Figure (1) shows that the syntactic structures of causation mirror the semantic structures of causation on a one-to-one basis. The semantic structures, however, mirror the cognitive structure in a collective manner.

Finally, we propose the following figures in order to illustrate what takes place in our mind when we produce a causative construction. In fact, these figures represent the part which is called cognitive structure in figure (1).

Causation

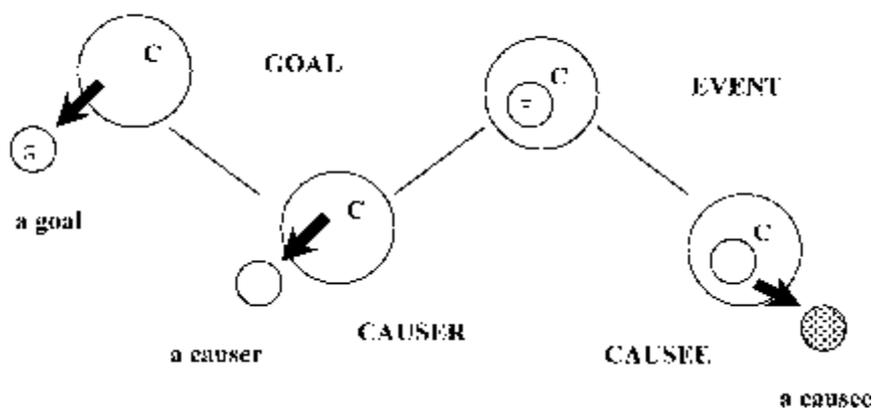


Figure 2- mental process of volitional causation

Look at the following sentences:

- [ʔali reza ra koʔt].

Ali killed Reza.

According to figure 2, a mental process reflecting a volitional causation takes place in our mind as follows:

Some **volition/goal** caused that Ali (**causer**) decided to kill (**event**) Reza (**causee**). This process can be rewritten in this way: $G \rightarrow Ca \rightarrow E \rightarrow Ce$.¹

- [sut zad. sage] bargat].

He whistled. His dog came back.

Having **volition/goal** made him (**causer**) whistle (**event**), as a result, the dog (**causee**) came back. $G \rightarrow Ca \rightarrow E \rightarrow Ce$.

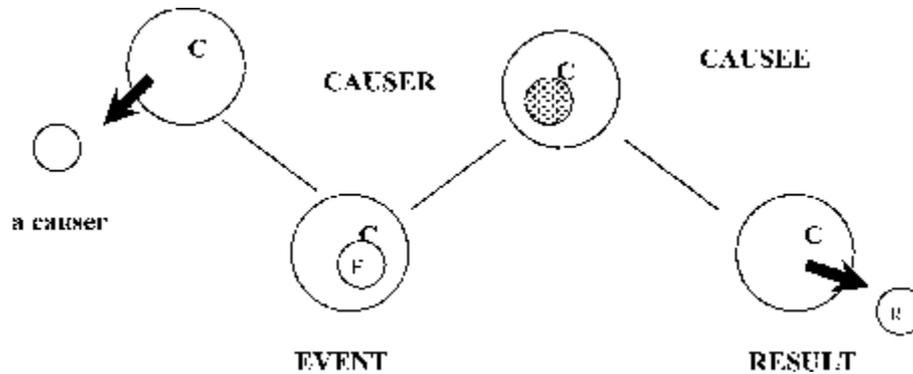


Figure 3- mental process of non-volitional causation

Now, consider the following examples:

- [gorbe mina ra tarsand].

The cat frightened Mina.

Regarding figure 3, a mental process representing a non-volitional causation occurs in our mind:

Mina has seen a cat (**event**), the cat (**causer**) makes Mina (**causee**) frighten (**result**).

$E \rightarrow Ca \rightarrow Ce \rightarrow R.$

- [sangi be [i]e xord o [ekaste]].

The stone broke the window.

A stone has been thrown at a window (**event**), it (**causer**) causes the window (**causee**) to break (**result**). $E \rightarrow Ca \rightarrow Ce \rightarrow R.$

6- Conclusion

Having verified Comrie's trichotomy (morphological, lexical and analytic), we reached the conclusion that his classification is functioning when checked against Persian data. Moreover, it's revealed that in Persian in addition to three types introduced by Comrie there is another causative called in this article "*discoursal causative*".

In addition, from a cognitive/functional point of view, we consider causation as a mental process. In fact, the idea that human beings interpret and conceptualize causative constructions by the help of general functions of mind is suggested. Through this perspective, causatives have been divided into volitional and non-volitional. Volitional causatives involve those causatives in which the causer has volition in order to reach *his* goal (human) or is capable of having this feature (inferred animism), whereas when the causer has no volition, we have a nonvolitional causative.

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