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Causative Constructions in Modern Persian

Abstract. This article is a conceptual exploration of causative constructions in Modern Persian. Based on a typology of causative constructions proposed by Song (1996), Persian causatives are surveyed in both formal and functional terms. The data are then exploited in order to shed further light on the cognitive basis of causativity, and to recast Song's formulation of causative types in more solid cognitive terms drawn from Talmy's (1985, 1988, 2000) force-dynamic account of causation. A tentative account of the grammaticisation of factual/nonfactual causation in Persian concludes the discussion.

1. Introduction

Language-speakers are capable of mental structuring of the relative prominence of the elements in an experience, the specificity of such elements, as well as the point of view adopted. As such, grammatical distinctions mark subtle distinctions in the mental structuring of events (Langacker 1987, 1991, 2000). For Talmy (2000), "the basic function of grammatical forms is to structure conception" (2000: 24). As grammatical (closed-class) forms cannot express contentful concepts, they exhibit a number of neutralities, i.e. constraints against specifying such factors as bulk, token, and substance (Talmy 2000:30-32). For instance, the schema of a preposition may pertain to the abstract characterizations of a path irrespective of its size or the kind of material it comprises.

Although the origin of the inventory of such grammatical forms still remains to be determined, some elements seem to have been copied from mechanisms of structuring already in place for other cognitive systems such as those of visual perception, motor control, and reasoning/inferencing (Talmy 2000: 38). If so, then at least parts of the posited inventory of closed-class conceptual categories are innate. Given the interrelationship between innate and universal, this would bind conceptual studies of language to those of cross-linguistic variance/invariance in the use of such forms.

This article is a conceptual exploration of causative closed-class forms in Modern Persian. Based on a typology of causative constructions proposed by Song (1996), Persian causatives are surveyed in both formal and functional terms. The data are then exploited in order to shed further light on the cognitive basis of causativity, and to recast Song's formulation of causative types in more solid cognitive terms drawn from Talmy's (1985, 1988, 2000) force-dynamic account of causation. Also a tentative account of the grammaticisation of factual/nonfactual causation in Persian is proposed.

2. Typology of causative constructions

Shibatani (2002) considers causation[1] "a basic category in human conceptualization" and "an ideal field of investigation for cross-linguistic comparison leading to the study of language universals and cross-linguistic variation" (Shibatani 2002: 17). Cognitive research on causation would benefit from studies of causative types given the universal character of such types, which might bear, among other things, on the way the mind cognises causation. Surveying a data base of 408 languages within the functional-typological framework, Song (1996) proposes a tripartite typology of causative constructions. The first type of causative constructions in Song's typology is called the COMPACT type. It embraces lexical and morphological causatives where verbal

elements of cause and effect—[Vcause] and [Veffect] respectively—are compacted into a single

word with no material intervening between them:

(1) JAPANESE

    Hanako ga   Ziroo o   ik-ase-ta.
    Hanako NOM[2] Ziroo ACC go-CS-PST
    (From Song 1996)

In the Japanese morphological example above, the verb *ik* (to go) and the causative suffix *-ase*

are [Veffect] and [Vcause] respectively. The formal fusion of these two elements is maximised

in lexical cases, e.g. *die* and *kill* in English.

    Likewise, Persian lexical causatives involve suppletion with no formal similarity between

the basic verb and the causative one, as in:

(2) COMPACT Type (Lexical Causative)

    a. Armin umæad xune.
      Armin came home
      "Armin came home."

    b. Mo'ælem Armin-o   ferestâd xune.
      Teacher Armin-DO sent   home
           "The teacher sent Armin home."

The morphological type, on the other hand, involves a process of suffixation through which the

causative suffix *-æn* (*-un* in Spoken Persian) is directly attached to the verbal base (the

imperative root) before adding tense/agreement inflection, as illustrated in (3).

(3) COMPACT Type (Morphological Causative)

    a. Mæn xænd-id-æm.
      I   smile-PST-1SG
      "I smiled."

    b. Unâ mæn-o xænd-un-d-ænd.
      they me   smile-CS-PST-3PL
      "They made me smile."

The morphological causative type is not productive anymore as the absolute majority of verbs in Modern Persian are compound ones where a light verb—usually *šodæn* (become), *dâdæn* (give), or *kærdæn* (make/do)—is compounded to a nominal/adjectival element. For such compound verbs, the light verb *kærdæn* (to make/do) is usually inserted in order to make the verb causative:

(4) COMPACT Type (Compound Verbs)

    a. Mâ xæste šod-im.
        we tired became-1PL
        "We got tired."

    b. Unâ mâ-ro xæste kærd-ænd.
        they we-DO tired-made-3PL
        "They tired us."

The causative suffix is only very marginally productive in contexts where the speaker intends to produce certain humorous effects. The use of the suffix as such implies that a superficially voluntary action was actually a forced move dictated by those in power, and against the actor's own will. Clearly, this use of the suffix is highly marked pragmatically, which makes it an appropriate device for passing satirical remarks on power-sensitive areas such as politics and administration. In such cases, the nominal/adjectival element of the verb is inflected for causation, tense and agreement with no light verb around:

(5) COMPACT Type (Morphological Causative for a humorous effect)

    a. Noxost-Væzir este'fâ dâd.
        Prime Minister resignation gave-3SG
        "The Prime Minister resigned."

    b. Noxost-Væzir-o 'este'fâ-un-d-ænd'!
        Prime Minister-DO resigniation-CS-PST-3PL
        "They made the Prime Minister resign!"

Song's second type of causative constructions is termed the AND type. Such constructions involve two clauses each, one containing the cause and the other the effect with < [Scause] –

[Seffect] > as the fixed order. The term AND is mnemonic of overt/covert marking of the

conjunction. Once covert, it is the temporal sequence of the events (marked by ordering of the

clauses) that signals causation.

(6) VATA (overt)

    N gba   le   yO-O   li.
    I   speak CONJ child-DEF eat
    "I made the child eat." (From Koopman 1984)

(7) ATCHIN (covert)

    Mar   kete ni-wat mu   tsov.
    3PL/PST make stone 3SG/PST fall
    "They made the stone fall."   (From Capell and Layard 1980)

    Both overt and covert AND-type constructions are permitted in Persian. Such constructions,

however, cannot be true AND-type causatives[3] in Song's formulation of the type as the [Vcause]

in these constructions is not sufficiently grammaticised to turn into a grammatical morpheme like

tell, order, or *make* in Vata (a Kru language spoken in Ivory Coast), Mianmin[4] (a Mountain Ok

language spoken in Papua New Guinea), or Waskia[5] (a Kowan language). Instead, the [Vcause]

in such "pseudo-causative" constructions is still highly specific in meaning. As in (8b) below, the

[Vcause] can be any event that is causally (and as a result also temporally) prior to the [Veffect]:

(8) AND Type (pseudo-) causative constructions (overt/covert)

    a. (Mæn) goft-æm (o) (un) mæšq-âsh-o   nevešt.
       I   told-1SG and s/he homework-his/her-DO wrote-3SG
      "I made him/her do his/her homework."

    b. Armin færyâd-kešid (o)   Ali tærsid.
      Armin shouted   and Ali feared
      "Armin frightened Ali with his shout."

    c. Mæhsul xoškid   (o) rustâ'iyâ gorosne mundænd.
      crops   dry-PST-3SG and villagers hungry stay-PST-3PL
      "The crops died, and the village went hungry."

Moreover, and contrary to (8a), the "causer" in (8b) has not necessarily brought about the

[Seffect] intentionally. Even a non-volitional agent, as in (8c), can serve as the causer. Finally,

with an OVERT conjunction in place, a secondary meaning is also conceivable where the first

clause is not an [Scause] anymore but a time adverbial marking immediacy. As such, speakers understand such constructions as "*as soon as S1, S2*." In (8a), however, S1 may mark both immediacy AND causation but not immediacy alone.

   Song's third type of causative constructions is called the PURP type in which "the event denoted by [Seffect]" "is no more than a goal or purpose yet to be realised by means of the event denoted by [Scause]" (1996:49). The term PURP is an element that signals a goal or purpose:

 (9) KOREAN

       Keeho-ka   Jinee-ka   wus-ke   ha-ess-ta.
       Keeho-NOM Jinee-NOM smile-COMP cause-PST-IND
       "Keeho caused Jinee to smile."   (From Song 1996)

Like an AND type construction, the two clauses here contain [Vcause] and [Veffect] that denote the relevant events. Contrary to the COMPACT and AND types, however, the PURP type is nonimplicative. In other words, the [Veffect] is not necessarily a factually substantiated event. In (9) above, for instance, Jinee might or might not have smiled despite Keeho's attempt to encourage her to do so. The PURP element may be a case marker, a verbal marking such as future tense or subjunctive mood, or an independent purposive particle. Whatever the PURP element, Song (1996) takes it to be "always marked by overt linguistic elements (i.e. nonzero marking). …Without the presence of the term PURP, it is extremely difficult to obtain the meaning of goal or purpose" (Song 1996: 84).

       According to Song (1996), in a PURP-type causative construction, "the perception of some desire or wish" and "a deliberate attempt to realise the desire or wish" "are highlighted" while the "accomplishment of the desire or wish" "is suppressed" (Song 1996: 142). Verbal markers of PURP, such as subjunctive, future tense, irrealis, incompletive aspect, etc., share a sense of nonfactuality. This is supposed to explain why causatives marked with what Givón (1994) collectively calls the IRREALIS modality are purposive: "[A] goal or purpose is, by

definition, something that is yet to be realised, that is to say, future-projecting or nonfactual"

(Song 1996: 50).

Like Agaw[6] (Ethiopia), Maasai[7] (Nilotic), Obolo[8] (Niger-Congo), Swahili[9] (a Bantu

language spoken in eastern and central Africa), and Tzotzil[10] (a Mayan language spoken in

Mexico), Persian exploits subjunctive mood in order to signal PURP-type causation.

(10)   PURP Type (Subjunctive Verbal Marker)
    (Mæn) goftæm   (unâ) be-r-æn.
    I   tell-PST-1SG they SUBJ[11]-go-3PL
    "I told them to go."

In (10) above, the [Scause] is purposive, and the [Seffect] nonimplicative. Irrespective of the

tense of the [Vcause], the [Veffect] is inflected for the subjunctive mood but never for tense. As

such, the subjunctive is the closest thing to English infinitives that Persian affords although

(contrary to English) the [Veffect] is still inflected for agreement. Persian has no genuine

nonfinite forms but only subjunctives and also the citation form (consisting of the past 3S form

plus the suffix –an, e.g. ræftæn, 'to go'). Like its Persian equivalent, the English [Scause] is

purposive, and its [Seffect] nonimplicative, although (contrary to Persian) the English [Veffect]

is NOT in the subjunctive mood. Apparently, Persian subjunctive is a morphological form with

no inherent function of its own which is employed as a convenient grammar carrier for (among

other things) causativity[12].

3. Semantics of causation

Talmy (1996) analyzes a causal event-frame into five distinct stages: (1) Agent intends to act,

e.g. John makes his mind he is going to break the window, (2) Agent sets his body or its part in

motion in order to initiate the event, say, he moves to grasp a stone etc., (3) Intermediate

(optional) sub-event(s) causally related to each other, e.g. the stone sails through the air, (4)

Penultimate sub-event; the stone forcefully makes contact with the window, and (5) Final

resulting sub-event, i.e. the window breaks.

Talmy (2000) explores the linguistic notion of "causative" in terms of force dynamics—the

interaction of entities with respect to force—given the parallels in this respect between the

linguistic system and "the conceptual systems for force interaction both in naïve physics and

psychology, and in early science" (p. 410). With regard to a steady-state "causative" pattern, as

in *the ball kept rolling because of the wind blowing on it*, an Agonist with a tendency towards

rest is opposed by a stronger Antagonist which forces it to move:

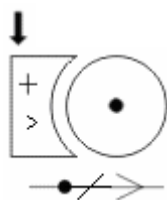(11)　A Steady-State Causative Pattern (Talmy 2000)

Ant　Ago
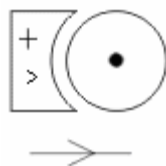
toward rest:　　　●
toward action:　>
stronger entity:　+

For a shifting force-dynamic pattern, as in *the ball's hitting it made the lamp topple from the*

table, on the other hand, an Antagonist's motion into (or out of) impingement produces the

causal effect:

(12)　A Shifting Causative Pattern (Talmy 2000)

Ant's motion into impingement:　↓

With the inclusion of an agent (as in [*I* the agent] *made* [*the lamp topple* the final event] *by* [*hitting it* the penultimate event] *with* [*the ball* the instrument]), the semantics of the sentence becomes more complex as "[t]his sequence must begin with a volitional act by the agent to move certain parts or all of his body. This in turn either leads directly to the intended event or sets off a further event chain, of whatever length, that leads to the intended event" (p. 421).

The exertion of will may result in someone else's exercise of agency of an event as in *I made the squirrel leave its tree by fanning smoke in its eyes*, where "the causing event (smoke getting in the eyes) … results from events initiated by an Agent" (Talmy 2000: 531). Talmy calls such a semantic phenomenon **caused agency** or **inducive causation**. He posits a number of components involved in the cognitive structure of (inducive) causativity, namely, (a) an event of (sensory, informational, …) IMPINGEMENT on the entity, e.g. smoke *getting in its eyes,* (b) an internal event of COGNIZING or EXPERIENCING such an event; the squirrel's feeling of pain, and (c) an INTENT[13] component; the squirrel's decision to leave the tree. In other words, the inducing Agent—here, *I*—instigates (by means of fanning smoke into the squirrel's eyes) the induced Agent's—here, the squirrel's—decision to move as a result of wanting to stop feeling pain from smoke getting in its eyes. He adds to the structure an optional component of (d) PERSUASION whereby an entity enters a state of intent as a result of another entity's arguments, directions, etc. for the course of action as in *I persuaded him to leave the building (but he later changed his mind and stayed)* (Talmy 2000: 533).

In Song's cognitive account of causation (1996:141-148), on the other hand, the components of causation are posited as (a) GOAL: perception of a desire or wish to have something done ([Seffect], or [Seffect] plus PURP in the PURP type), (b) EVENT: an intentional attempt to realise GOAL ([Scause] in both AND and PURP types), and (c) RESULT:

accomplishment of GOAL ([Seffect] in the AND type, or [Seffect] plus AND). He captures the cognitive structure of causation as depicted in (13) below.

(13)   The Cognitive Structure of Causation (Song 1996)

GOAL $\longrightarrow$ EVENT $\longrightarrow$ RESULT

Talmy's and Song's cognitive accounts of causation are radically different both in approach and mechanism. Firstly, Talmy practices a "top-down" (function-to-form) approach whereby the semantics of causation and neighbouring functions are examined in terms of force-dynamic patterns. Forms (mainly English ones) are then added as formal realisations. Song, on the other hand, approaches things in a "bottom-up" manner by which forms are organised as types, and types as grammaticised forms of the different components of the cognitive structure of causation. In either approach, complications on the opposite pole are unfairly swept under the rug: While Talmy's analysis is thoroughly negligent of formal types, Song's theory fails to see how causation could be explored in a wider cognitive perspective. The want of a solid cognitive basis for Song's analysis has doubly afflicted his theory of causation with anomalies and inconsistencies. For instance, COMPACT and AND types are openly formulated in terms of forms, viz. incorporating [Vcause] and [Veffect] in one single verbal form for the COMPACT type, and conjoining [Scause] and [Seffect] in a fixed clausal order for the AND type. His PURP type, on the contrary, is formulated in terms of a function, i.e. the purposive orientation of the construction.

Secondly, Talmy's analysis primarily focuses on what the intermediary agent (the causee) does in the event-frame: IMPINGEMENT is a perceptional event performed by the causee. COGNIZING/EXPERIENCING of IMPINGEMENT is also an event internal to the causee's mind. Likewise, INTENT, which functions as the basis for the causee's decision to act, resides in the causee's mind. The causer's part is reduced to the instigation of IMPINGEMENT and/or

PERSUASION. In Song's analysis of causation, on the other hand, the whole event-frame is

organised around the causer's GOAL and EVENT. The causee's contributions to RESULT

together with their mental states are left thoroughly unexplored in Song's theory of causation.

Instead, he seems to be exclusively concerned with speakers' highlighting/suppressing some

stage(s) of the posited cognitive structure of causation (Song 1996: 146).

Finally, Talmy's (2000) analysis of causation does not deal with the question of cross-

linguistic typological variation and how it could possibly relate to the prominence of some

component or aspect of a causal event-frame in a speaker's mental structuring of causation. Song

(1996), on the other hand, identifies two combinations of the three aforementioned stages in (13)

as the AND and PURP types of causation, respectively:

(14) Types of Causation (Cognitive Structures)
    a. The AND type: EVENT + RESULT
    b. The PURP type: GOAL + EVENT

Although any case of causation necessarily involves GOAL, EVENT, and RESULT, "the whole

cognitive structure…is not utilized for linguistic or communicative purposes. Instead, different

stages are highlighted or suppressed" (Song 1996: 146). In an AND-type causative construction,

the speaker highlights RESULT while a PURP-type causative suppresses it. Song is silent on the

question of how the COMPACT type relates to his cognitive structure of causation. Instead, he

relates this type to others diachronically[14]. His analysis also fails to shed light on the question of

why we have [GOAL + EVENT] and [EVENT + RESULT] formal combinations but no such a

thing as [GOAL + EVENT + RESULT].

4. Discussion

4.1. Force-dynamic analysis of causatives

As the data in (15) and (16) below suggest, neither the inanimacy of the causer (the Antagonist)

nor that of the causee (the Agonist) puts any restriction on the Persian-speaker's use of

COMPACT- and AND-type causatives:

(15) Animate/Inanimate Entities (COMPACT Type)

    a. Mæryæm bæčče –ro tærsund.
       Maryam child-DO   fear-CS-PST-3SG
       "Maryam frightened the child."

    b. Mæryæm šiše-ro   lærzund.
       Maryam windowpane-DO vibrate-CS-PST-3SG
       "Maryam made the windowpane vibrate."

    c. Bâd   bæčče –ro tærsund .
       wind child-DO   fear-CS-PST-3SG
       "The wind frightened the child."

    d. Bâd šiše-ro   lærzund.
       wind windowpane-DO vibrate-CS-PST-3SG
       "The wind made the windowpane vibrate."

(16) Animate/Inanimate Entities (AND Type)

    a. Mæryæm færyâd-kešid   (o)   bæčče tærsid.
       Maryam shout-PST-3SG and child   fear-PST-3SG
       "Maryam frightened the child with her shout."

    b. Mæryæm dævid   (o) šiše   lærzid.
       Maryam run-PST-3SG and windowpane vibrate-PST-3SG
       Maryam's running made the windowpane vibrate."

    c. Bâd tond væzid   (o) bæčče tærsid.
       wind hard blow-PST-3SG and child   fear-PST-3SG
       "The strong wind frightened the child."

    d. Bâd   tond væzid   (o) šiše   lærzid.
       wind hard blow-PST-3SG and windowpane vibrate-PST-3SG
       "The strong wind made the windowpane vibrate."

The Antagonist and Agonist are both animate in (a) sentences but inanimate in (d) ones. In (b) and (c) sentences, on the other hand, only one of these two entities is animate and the other inanimate.

On the contrary, Persian PURP-type causatives, as in (17c, d) below (also their neighbouring "letting" constructions[15] in (18)), are sensitive to the animacy of the Antagonist:

(17) Animate/Inanimate Entities (PURP Type)

      a. Mæryæm færyâd-kešid   (ke)   bæčče betærse.
        Maryam shout-PST-3SG COMP child   SUBJ-fear-3SG
        "Maryam shouted to frighten the child."

      b. Mæryæm dævid   (ke)   šiše   belærze.
        Maryam run-PST-3SG COMP windowpane SUBJ-vibrate-3SG
        "Maryam ran to make the windowpane vibrate."

    *c. Bâd   tond væzid   (ke)   bæčče betærse.
        wind hard blow-PST-3SG COMP child   SUBJ-fear-3SG
        The wind blew hard to frighten the child."

    *d. Bâd   tond væzid   (ke)   šiše   belærze.
        wind hard blow-PST-3SG COMP windowpane SUBJ-vibrate-3SG
        The wind blew hard to make the windowpane vibrate."

In (17c, d), the inanimate Antagonist renders sentences ungrammatical. Their counterparts in (32a, b), however, are well-formed given the animacy of the Antagonist. For "letting" constructions in (18) below, the animate/inanimate contrast, though milder[16], is still present:

(18) Animate/Inanimate Entities ("letting" constructions)
   a. Mæryæm gozâšt   (ke)   bæčče bexâbe.
        Maryam   let-PST-3SG COMP child   SUBJ-sleep-3SG
        "Maryam let the child fall asleep."

      b. Mæryæm gozâšt   (ke)   šiše   belærze.
        Maryam   let-PST-3SG COMP/ windowpane SUBJ-vibrate-3SG
        "Maryam let the windowpane vibrate."

    ??c. Bâd gozâšt   (ke)   bæčče bexâbe.
        wind let-PST-3SG COMP child   SUBJ-fear-3SG
        "The wind let the child fall asleep."

??d. Bâd gozâšt   (ke)   pænjere bæste bemune.
  wind let-PST-3SG COMP window closed SUBJ-stay-3SG
  "The wind kept the window closed."

As a "causing" event is missing here, such "letting" forms cannot be causative in the real sense of the word.

   Based on the Persian data examined above, I propose to organise Persian causative constructions along a hierarchy of semantico-cognitive properties diagrammed in (19). For each property or feature, two polarity values are specified (positive and negative correlating to the presence and absence of the feature in question), either of which is further sub-branched as a grammaticised form (letting, 1, 2, 3), or another branching node signifying a subordinate feature. Each grammaticised form, then, would be a combination of the semantico-cognitive properties that characterise a causative type:

  (19) A Hierarchy of Causal Features and Persian Causative Types
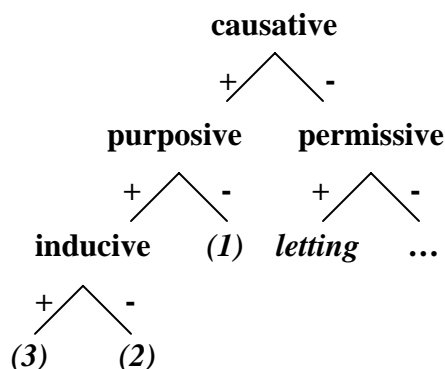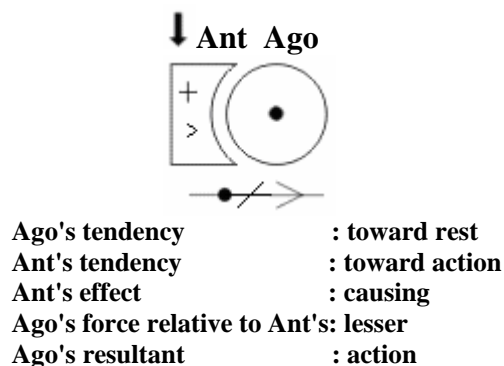

(1) **COMPACT, AND**
(2) **PURP₁** (purposive with animate Ant & inanimate Ago)
(3) **PURP₂** (purposive with animate Ant & animateAgo)

Persian COMPACT- and AND-type causatives are grouped together as *nonpurposive-causative* in the diagram. These two types are closely inter-related in Persian given that in neither case the Antagonist's causing event is highlighted as purposive. In both cases, an in/animate Agonist with an intrinsic tendency towards rest is opposed from outside by a stronger in/animate Antagonist

that finally overcomes the Agonist's resistance and forces it to move. As such, RESULT would be factual in both types. The relevant force-dynamic pattern is diagramed in (20).

(20) Force-Dynamic Pattern for COMPACT / AND Types

Ant Ago

Ago's tendency   : toward rest
Ant's tendency   : toward action
Ant's effect   : causing
Ago's force relative to Ant's: lesser
Ago's resultant   : action

The *noninducive-purposive-causative* grouping labelled PURP$_1$, on the other hand, is characterised as a force-dynamic pattern of an inanimate Agonist with an intrinsic tendency towards rest opposed from outside by a stronger/weaker animate Antagonist that intentionally tries to overcome the Agonist's resistance. The force-dynamic pattern is diagramed in (21) where the dotted box indicates that the elements inside are parts of a single psyche (here, the "causer"):

(21) Force-Dynamic Pattern for PURP$_1$

Ant   Ago

Ant to [volitionally] move Ago
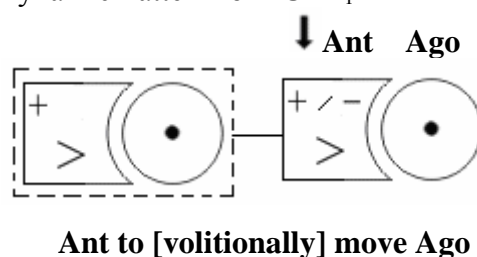
In (21), the animate Antagonist decides[17] to force the inanimate Agonist to move. As the Antagonist's force relative to the Agonist's is indeterminate (+ / - in the diagram), RESULT would be nonfactual.

The *inducive-purposive-causative* PURP$_2$ diagrammed in (22) is characterised with two psyches both of which are capable of volitional act:

(22) Force-Dynamic Pattern for PURP$_2$

Ant to [volitionally] move Ago
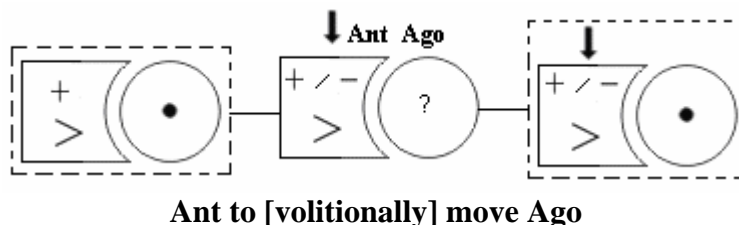
The Antagonist volitionally forces the Agonist to move. As a divided self, the Agonist now experiences an internal conflict between tendencies toward rest and action. The external conflict between the Antagonist and the Agonist is then partially rendered into the Agonist's internal conflict between these two contradictory tendencies so that if the Agonist is *persuaded* by the Antagonist (or if the Agonist's resistance is finally overcome by a stronger Antagonist even though the Agonist still disapproves of the Antagonist's action), then the Agonist moves toward action. RESULT is nonfactual in this case, too because forces toward rest and action (both inside and outside the Agonist's divided self) are indeterminate.

4.2. Grammaticisation of nonfactual as subjunctive

In 4.1 above, I analysed factual/nonfactual causatives in terms of force dynamics to the effect that a causative event is interpreted as factual if (and only if) the Agonist with a tendency towards rest is known by the speaker to be less forceful than an Antagonist with a tendency toward action so that the Antagonist finally overcomes the Agonist's resistance, and forces them to act. Otherwise, if the Antagonist is not known by the speaker to be sufficiently forceful or not, the causative event will be interpreted as nonfactual. It is still to be understood why the subjunctive mood is employed (in Persian) to grammaticise nonfactual events. In what follows, a tentative account of the grammaticisation of nonfactual as subjunctive is proposed. It is intended to show why GOAL and RESULT are incompatible in Persian causatives. The possible

implications of the analysis for a more general account of the aforesaid incompatibility are left to be determined, however.

Persian subjunctives are morphologically distinct verb forms largely confined to subordinate clauses[18] that often serve to express such mood categories as remoteness, unreality, or possibility. According to Ghomeshi (2001), embedded subjunctive clauses (with the embedded verb inflected for subject agreement) rather than infinitival ones function as clausal complements due to the fact that the language lacks verbal infinitives altogether. She also argues that such clauses lack Tense. As illustrated in (23), the particle *ke* (lit. 'that') optionally precedes subjunctive subordinate clauses as a marker of subordination.

(23) Subjunctive Subordinate Clause

    a. Armin mitune (ke) ketâb-o be-bær-e   xune.
       Armin can   that book-DO SUBJ-take-3SG home
       "Armin is able to take the book home."

    b. Armin ne-midune (ke) (âyâ) ketâb-o be-bær-e   xune yâ næ.
       Armin not-knows that Q   book-DO SUBJ-take-3SG home or not
       "Armin doesn't know whether to take the book home or not."

Persian subjunctives occur as clausal complements to both control and noncontrol verbs where (following Ghomeshi 2001) a control verb is understood as one taking subjectless infinitival/subjunctive complements. According to Wurmbrand (1998) and Landau (1999), there is a core set of verbs exhibiting control characteristics universally. These include modal verbs (e.g. *can, must, be able*), aspectual verbs (e.g. *start, finish*), desiderative verbs (e.g. *want, decide, promise*) and implicative verbs (e.g. *manage, forget*). As illustrated below, for either of these verb types, Persian uses an embedded subjunctive clause. The subject position cannot be filled by an overt nominal, and must take its reference from an antecedent in the main clause (the controller). Significantly, neither of these structures can serve as a PURP-type causative construction.

(24) Subjunctive Complements to Control[19] Verbs (noncausative)

      a. Mæn bâyæd be-r-æm   xune.
       I   must   SUBJ-go-1SG home
        "I must go home."

      b. Mæn šoru'-kærdæm otâq-o   tæmiz-bo-kon-æm.
       I   started-1SG   room-DO clean-SUBJ-do-1SG
      "I started cleaning the room."

      c. Mæn mixâm   Ali-o   be-bin-æm.
       I   want-1SG Ali-DO SUBJ-see-1SG
      "I want to see Ali."

      d. Mæn færâmuš-kærdæm ketâb-o   be-xær-æm.
       forgot-1SG   book-DO SUBJ-buy-1SG
      "I forgot to buy the book."

As illustrated in (25) below, subjunctive complement clauses to noncontrol verbs perform a

variety of functions. The most frequent ones include the objective argument for verbs of wanting,

advising, permitting, prohibiting, expecting, hoping, guessing and the like, as well as the

adverbial clauses of time and condition, and the PURP-type causative construction. Such

complement clauses may be optionally preceded by such particles as those of purpose and

condition.

(25) Subjunctive Complements to Noncontrol Verbs (non/causative)

      a. Mixâsæm   ke   Armin Ali-o be-bin-e.   **Volitive**
       wanted-1SG CMP Armin Ali-DO SUBJ-see-3SG
       "I desired that Armin would meet Ali."

      b. Age Armin Ali-o   be-bin-e   zæng-mizænæm.   **Conditional**
       if   Armin Ali-DO SUBJ-see-3SG phone-1SG
       "I'll call you up if Armin meets Ali."

      c. Sæbr-kærdæm ke   Armin Ali-o   be-bin-e.   **Time adverbial**
       waited-1SG   CMP Armin Ali-DO SUBJ-see-3SG
       "I waited till Armin met Ali."

      d. Goftæm   ke   Armin   Ali-o   be-bin-e.   **Causative**
       say-PST-1SG COMP Armin   Ali-DO SUBJ-see-3SG
       "I told Armin to meet Ali."

So far, I have identified the different functions (both causative and non-causative ones) subjunctives perform in Modern Persian. A question now arises concerning what links the subjunctive with such superficially diverse entities as modal, aspectual, desiderative, and implicative verbs, also clauses expressing (among other things) volition, condition, and causation in Modern Persian. I explore this question below in reference to two key features these entities have in common: They are all both nonfactual and nonfinite.

Persian subjunctives are the closest forms to verbal non-finites the language affords. In Persian, the past-tense morpheme $-d$[20] is suffixed to the verbal base immediately and prior to agreement inflection. Other verbal categories such as Aspect, Mood, and Negative, on the other hand, are prefixed to the verb. For marking subjunctive on the verb, tense inflection is completely erased so that the verb is actually tenseless. Multiple affixations are permitted except for subjunctive and negative. Once the negative prefix *na-* is attached to the verb, the prefix *be-* is suppressed. As a result, (26c) below is still in subjunctive mood although SUBJ itself is missing:

(26) Affix Ordering
    a. ne-mi-**xun**-d-im
        NEG-DUR-read-PST-1PL
    b. be-**xun**-im
        SUBJ-read-1PL
    c. næ-**xun**-im
        NEG-read-1PL

Interestingly, the prefix *be-* is not exclusively employed for marking subjunctives either. With imperatives, even with past-tense indicatives[21], for instance, the prefix is attached to the verb. In either case, however, the prefix is exclusive of negation as illustrated in (27) and (28).

(27) Imperatives

    a. In ketâb-o be-xun!
       this book-DO IMP-read
       "Read this book!"

b. In ketâb-o   næ-xun!
   this book-DO NEG-read
   "Don't read this book!"

(28) Indicatives (literary style)

a. Jomle-ye mardom motahayyer be-mân-d-ænd.
   All-of   people   surprised prefix-stay-PST-3PL
   "All people were surprised."

b. Anân montæzer næ-mân-d-ænd.
   they waiting   NEG-stay-PST-3PL
   "They didn't wait."

Even if we take imperatives to be still subjunctive in mood, such an argument does not apply to indicatives in (28) above. Moreover, only NEG suppresses *be-*, and NEG suppresses only *be-*. Finally, for each verb, two root forms (the imperative- and the past-tense- forms) are conceivable. As such, it is the root itself that signals imperative rather than the prefix *be-*.

From this it may be inferred that (contrary to standard assumptions in Persian grammars) *be-* is not SUBJ but AFF(irmative). It is a polarity prefix in complementary distribution with NEG (*na-*). If this is on the right track, Persian subjunctive is the absence of Tense when other related categories such as Agreement, Affirmative/Negative, and Aspect are still marked on the verb. In other words, Persian subjunctive is not a grammatical class with certain syntactic properties shared throughout all the members of the category but the residue of verbal morphology once Tense is taken away.[22]

As subjunctives are subordinate clauses in Persian, it is now the tense inflection of the matrix verb that relates the time of utterance and that of event/events occurrence for both matrix and subjunctive verbs. For two events EV_1 and EV_2 denoted by the matrix and subordinate clauses respectively, EV_1-T_{ime} precedes, and (as a result) delimits EV_2-T_{ime} in terms of temporal precedence.[23] Since the utterance time (UT-T) may precede/follow both EV_1-T and EV_2-T, or

only one of them but not the other, the event denoted by the verb in "subjunctive mood" may or may not have occurred yet. In other words, subjunctive clauses are factually indeterminate due to the absence of Tense, as depicted in (29):

(29) Temporal Interpretations of **Matrix Verbs** and Their *Subjunctive Complements*[24]

a. **Past**$_{matrix}$ & *Past*$_{compl.}$: $EV_1\text{-}T < EV_2\text{-}T < UT\text{-}T$

b. **Past**$_{matrix}$ & *Future*$_{compl.}$: $EV_1\text{-}T < UT\text{-}T < EV_2\text{-}T$

c. **Present**$_{matrix}$ & *Future*$_{compl.}$: $(UT\text{-}T = EV_1\text{-}T) < EV_2\text{-}T$

d. **Future**$_{matrix}$ & *Future*$_{compl.}$: $UT\text{-}T < EV_1\text{-}T < EV_2\text{-}T$

As for (29b-d), the event denoted by the subjunctive verb is still to take place; hence future-projecting or non-factual[25]. In (29a), on the other hand, the event denoted by the subjunctive verb precedes the time of utterance; hence factual. Despite that, and in practice, there is no way out to morphologically distinguish between (29a) and (29b) as the location of $EV_2\text{-}T$ on the time axis cannot be expressed on the relevant verb due to the absence of Tense in such cases. As illustrated in (30) below, for matrix present/future sentences, $EV_2\text{-}T$ is definitely future-projecting, and as a result, non-factual. Past matrix sentences, on the other hand, are ambiguous in that $EV_2\text{-}T$ may or may not have occurred yet. This ambiguity makes the "subjunctive" event semantically indeterminate. As such, the "subjunctive" event would be treated as nonfactual, *unless unambiguously specified otherwise*.[26]

(30) Non-Factual Subjunctives

a. $UT\text{-}T = [\ \ EV_1\text{-}T\ \ ] < [\ \ EV_2\text{-}T\ \ ]$
Az-eš mixân   to-ro   be-bin-e.
From-him want-3PL   you-DO SUBJ-see-3SG
"They ask him to meet you." **(non-factual)**

b. $UT\text{-}T < [\ EV_1\text{-}T\ ] < [\ \ EV_2\text{-}T\ \ ]$
Az-eš xâhænd-xâst   to-ro   be-bin-e.
From-him will-want-3PL   you-DO SUBJ-see-3SG
"They'll ask him to meet you." **(non-factual)**

c. $[\ EV_1\text{-}T\ ] < [\ EV_2\text{-}T < UT\text{-}T\ /\ UT\text{-}T < EV_2\text{-}T\ ]$
Az-eš xâsæn   to-ro   be-bin-e.
from-him wanted-3PL   you-DO SUBJ-see-3SG
"They asked him to meet you."   **(indeterminate: factual / non-factual)**

To summarise, subjunctive verbs in Persian function as expressions of future-projecting

nonfactual events: Without tense, the subjunctive verb will be temporally parasitic on the finite

verb of the matrix clause that precedes it (both in structural-linear and temporal sequences), and,

as a result, indeterminate in factuality. As such, the so-called SUBJ in Persian becomes a

convenient grammatical carrier for expressing volition, condition, and purposive causation given

that they all share an element of non-factuality in their cognitive formation.

The analysis of factual/nonfactual events in terms of finite/nonfinite verbs correctly predicts

that Persian COMPACT (lexical/morphological) causatives are factual events if they are

inflected as finite, but nonfactual otherwise:

(31) Factual/Nonfactual COMPACT-type Causatives

a. Gângesterâ   gerogân-o   koštæn   (un mord/*væli un næmord).
   gangster-PL hostage-DO killed-PL   he died   but he NEG-die-PST-3SG
   "The gangsters killed the hostage. He died/*But he didn't die."

b. Gângesterâ sæ'y-kærdæn gerogân-o   bo-koš-æn
   gangster-PL try-PST-3PL hostage-DO SUBJ-kill-PL

   (un mord / væli un næmord).
   he died / but he NEG-die-PST-3SG

   "The gangsters tried to kill the hostage (he died / but
   he didn't die)."

c. Mâdær bæččea-ro xâbund   (un xâbid /*væli un næxâbid).
   other baby-DO sleep-CS-PST-3SG   he sleep-PST-3SG but he NEG-
   sleep- PST-3SG
   "The mother made the baby sleep (he fell asleep/*but he didn't fall
          asleep)."

d. Mâdær sæ'y-kærd   bæčče-ro be-xâbune
   mother try-PST-3SG   baby-DO SUBJ-CS-PST-3SG

   (un xâbid   / væli un næxâbid).
   and he sleep-PST-3SG but   he NEG-sleep-PST-3SG

   "The mother tried to make the baby sleep (he fell asleep / but he didn't
   fall asleep)."

As the application of an "AND…POSITIVE / BUT…NEGATIVE" diagnostic reveals, lexical/morphological causatives in (31a) and (31c) are interpreted as factual given the finiteness of the causative verb in each case. In (31b) and (31d), on the other hand, both "AND … POSITIVE" and "BUT…NEGATIVE" are congruent; then nonfactual.

Back to Song's cognitive explanation of causation, and his silence on the question of *linguistic* (but NOT *cognitive*) incompatibility of GOAL and RESULT, I propose that   Tense as a linguistic device is needed in order to signal the accomplishment of some desire or wish, viz. RESULT, via [Seffect]. Without Tense, RESULT will be non-factual; hence impossible to be verified in terms of its truth conditions. On the other hand, either [Seffect] or [Seffect]-plus-PURP signals GOAL in Persian. Since the language employs subjunctive to signal GOAL, such combinations as (GOAL + EVENT + RESULT) are linguistically incompatible due to their contradictory morphological requirements: While a nonfactual, nonfinite (hence subjunctive) [Seffect] is needed to express GOAL, a past-tense finite [Seffect] is required in order to capture the factuality of RESULT. As such, the language affords highlighting either (GOAL + EVENT) or (EVENT + RESULT) but not (GOAL + EVENT + RESULT) in order to avoid the contradictory morphological requirements of GOAL and RESULT.

Interestingly, we may still signal the linguistically incongruous combination (GOAL + EVENT + RESULT) provided that appropriate auxiliary devices and strategies are used as illustrated in (32) below.

(32) PURP-plus-AND Strategy
     Buq-zædæm   (ke)   be-ist-æn,   va   ist-âd-æn!
     horn-hunked-1SG COMP SUBJ-stop-3PL AND stop-PST-3PL
     honked the horn in order that they would stop, and they did stop!"

In addition to the subjunctive clause in (32), there is now a finite copy of [Seffect] conjoined to the complex. The nonfinite (subjunctive) [Seffect] expresses the future-projecting (non-factual)

GOAL, and the finite one the factual RESULT. This "PURP-plus-AND strategy" in the use of causative construction in Persian seems to capture all three stages of causation cited in Song's cognitive account of causatives and causation: Where there's a *cognitive* will, there's a *linguistic* way.

5. Conclusion

The discussions above on Persian causative types, the force-dynamic pattern(s) at work for each type, and the cognitive bases of the factual/nonfactual dichotomy in this respect (also how they are grammaticised in the language) indicate that a conceptual study of causation is necessarily dynamic, non-arbitrary, and multi-dimensional as such studies, in the final run, are meant to unify a messy repertoire of formal, semantic, and pragmatic variables in terms of man's unique possession, human cognition. This functionalist orientation in the study of grammar is a natural consequence of our interest in the way the human mind itself works. The logic of causation in Modern Persian as unfolded here is just one method for the human mind to capture its experiences with causal events. It is quite possible, if not inevitable, then, to come across different logics in different languages to express similar cognitive experiences. What is truly constant across languages, then, is the way human cognition exploits its resources to make sense.

Notes

[1] Masica (1976) defines causation as "an action that calls forth a particular action or condition in another person or object. This causation may be principally of two kinds, 'distant' and 'contactive'. In the latter the agent does something to the object, bringing about its new condition by direct contact; in the former he makes use of an intermediary agent and serves only as the 'instigator' of the act" (p. 55). It is the distant/mediated/indirect kind of causation which is the focus of attention in this article. In other words, I consider causation as (grammaticising) a speaker's cognitive experience of a causer instigating an action while some other entity (the causee) is the direct Agent for it. In *the pirate made the Prince drink rum*, for instance, *the pirate* (the causer) causes *the Prince* (the causee) to perform the drinking action.

[2] See Appendix for a list of abbreviations used in this article.

[3] For Song (1996), sentences like *Mary kicked John and he cried* in English are "ordinary *noncausative* (emphasis mine) constructions (used) for causative function (1996:151)." Likewise, such Persian sentences are used for a causative function without being a causative type (in Song's sense of the word) themselves.

[4] Smith and Weston (1974)

[5] Ross and Paol (1978)

[6] Hetzron (1969)

[7] Tucker and Mpaayei (1955)

[8] Faraclas (1984)

[9] Driever (1976)

[10] Aissen (1987)

[11] The abbreviation SUBJ stands for "subjunctive mood." See Appendix for a list of abbreviations used.

[12] See Section 4.2. for a detailed discussion of subjunctives as the grammaticised form of purposive causation in Persian.

[13] Talmy distinguishes between intention and intent as follows: "the latter entails expectations for certain consequences of undertaken actions" while "the former entails expectations of one's subsequently undertaking an action the idea for which one now has in mind" (Talmy 2000: 533).

[14] In the diachronic component of his theory of causation, Song (1996) states that "[t]he COMPACT type is … the unltimate outcome of formal reduction of the AND or PURP type. Therefore, the COMPACT type must be taken out of the typology for purposes of (the chapter on the functional basis of the typology), since it is the 'diachronic residue' of the other two types …" (song 1996: 134). His analysis does not seem to be particularly relevant to my conceptual exploration of the issues in this article. Firstly, I know of no diachronic evidence of any sort to suggest such a relation between the AND / PURP types and the COMPACT PURP-type causatives in Persian. Secondly, and even if COMPACT causatives are diachronically related to AND / PURP types in the language, for a real-time speaker of the language using all three types of causatives in Persian, the COMPACT causatives cannot be simply dismissed, or left idle, when it comes to the question of structuring their conception. Definitely, the average user of the language does not use a diachronic link between the COMPACT type and either of the other two in order to grammaticise some mentality of theirs. Instead, they exploit some conceptual potential of such closed-class forms in order to capture their mental experiences in formal terms. As discussed later in Section 4, Persian COMPACTcausatives seem to be conceptually closer to the AND type causatives. Whether they are also diachronically related or not seems to be just beside the point here. A diachronic link between these could point to "the collective mind" of Persian speakers of the past searching for right form(s) to express the intended meaning. Even without such a link, however, the analysis still makes sense to me.

[15] Although such constructions are not causative, Talmy's force dynamics framework successfully accommodates both 'causing' and 'letting' as cases of a stronger Antagonist.

[16] A 'letting' construction with an inanimate matrix Antagonist would significantly improve in acceptability when it is interrogative or negative:

(a) **Interrogative**
    Bâd gozâšt (ke) bæčče bexâbe?

(b) **Negative**
    Bâd nægozâšt (ke) bæčče bexâbe.

 The source of this contrast, whatever it proves to be, seems to be beside the point.

[17] As depicted in the dotted box, a stronger tendency (in the entity's divided self) toward action overcomes a tendency there toward rest. Hence, the Antagonist has decided to act.

[18] A potential exception to this could be the imperative where the construction is a matrix clause. The imperative, however, is NOT morphologically identical with subjunctive as in the former the agreement inflection is missing:

 Subjunctive
  Mixam be-xænd-i.
  Want-1SG SUBJ-smile-2SG
  "I want you to smile."

 Imperative
  Be-xænd!
  SUBJ-smile
  "Smile!"

Even if distinct from each other, subjunctive and imperative moods in Persian seem to be morphologically and functionally related.

[19] Many linguists (including Manzini 1983, Bouchard 1984, Koster 1984, and Lebeaux 1985) also make a distinction between obligatory and non-obligatory control. I have avoided using these two terms throughout the article because (a) there is still some disagreement on the obligatory/non-obligatory status of some sentences, and (b) the distinction is not relevant to the issues addressed in this article.

[20] The morpheme is often attached non-neutrally so that it cannot be distinguished from the base:

  SUBJUNCTIVE PAST TENSE
  be- **šenâsæs**-am **šenâxt**-am
  SUBJ-know-1SG knew-1SG

However, causative suffixes precede even the past morpheme. With a CS inserted in between, the past morpheme will be inevitably neutral, which enables us to identify it as –d:

  SUBJUNCTIVE PAST TENSE
  be- **šenâs**-an-æm **šenâs**-ân-d-æm
  SUBJ-know-CS-1SG know-CS-PST-1SG

[21] For such indicatives, however, the prefix signals a literary style.

[22] This is in agreement with Quer's (2006) contention that 'subjunctive may be essentially seen as an epiphenomenon derived from other lexical, syntactic, or semantic factors and that as such it does not allow us to identify subjunctive clauses as one class' (Quer 2006:661).

[23] This is comparable with the temporal interpretation of English infinitive complements in terms of the time of occurrence of the tensed verb. In examples below, EV_2-T—time of occurrence for the non-finite verb— is understood as either past or future (factual and non-factual, respectively) depending upon EV_1-T:

 Temporal Interpretation of ENGLISH Infinitives

 a. John asked **Susan to give him a ride home** last week.
   (**Past**: EV_1-T $<$ **EV_2-T** $<$ UT-T)
 b. Yesterday John asked **Susan to marry him** after Christmas.
   (**Future**: EV_1-T $<$ UT-T $<$ **EV_2-T**)
 c. John usually asks **Susan to give him a hand with daily chores**.
   (**Future**: UT-T $=$ EV_1-T $<$ **EV_2-T**)
 d. John will ask **Susan to join him at Paris**.
   (**Future**: UT-T $<$ EV_1-T $<$ **EV_2-T**)

[24] My analysis of Tense as an ordering relation between two times is adopted from Demirdache and Uribe-Etxebarria's (2000) system of tenses. In more classical works like one by Reichenbach (1947), Tense does not directly order the event time (E) and the speech time (S). Instead, it orders a reference time (R) with respect to S. The differences between these two systems (though significant on a theoretical plane) are negligible as far as the points of interest in this article are concerned. My adoption of Demirdache and Uribe-Etxebarria's system and terminology here is due to its simplicity and conceptual economy as it dispences with R.

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[25] My analysis is not intended to reduce mood and tense as two universal categories of grammar to Reichenbachian primitives. Instead, it aims at unifying language-specific forms FUT and SUBJ in temporal-cognitive terms. Although the implications of this for the study of mood and tense in other languages are still to be explored, the universal category mood expressing the degree or kind of reality of a proposition is *prima facie* distinct from equally universal category tense. That subjunctive and future are *cognitively* similar in certain respects is not a new claim at all. For Song (1996), for instance, 'a goal or purpose is, by definition, future-projecting or nonfactual. This … is also evident in verbal markings used as PURP, e.g. future tense, irrealis, subjunctive mood, or incomplete aspect' pp. 50-51. Apparently, at a non-linguistic cognitive level of structure (roughly corresponding to what we call thought) where linguistic conventions (whether syntactic or semantic) do not govern, the differences between future and subjunctive are minimised to those between mood and tense whatever they are. At such a level, they would share the way events or stages of an event are cognised in chronological order. The differences between subjunctive and future in Persian seem to support this as they differ primarily in linguistic (both syntactic and semantic) terms: (a) Future is a tense while subjunctive is not, then (b) the Persian-speaker can pass a judgement on the truth value of a sentence whose verb is marked with FUT while a clause in subjunctive mood is neither true nor false by itself. As a result, (c) while FUT—the morphological realisation of future—occurs on verbs both in the main and subordinate clauses, subjunctive marking exclusively involves verbs in subordinate clauses that depend upon a (tensed) main clause for verification.

    Future and subjunctive seem to be different in terms of the conceived probability of occurrence of the event, too, which is a genuine cognitive factor:

> a. Midunæm ke emsâl bâz-hæm tsunâami xâhæd-âmæd / *bi-ây-æd.
> I-know that this-year again tsunami FUT-come-3SG / SUBJ-come-3SG
> "I know that a tsunami will strike again this year."
>
> *b.* Fekr-konæm ke emsâl bâz-hæm tsunâmi xâhæd-âmæd / bi-ây-æd.
> I-think that this-year again tsunami FUT-come-3SG / SUBJ-come-3SG
> "I think a tsunami will strike again this year."

In (a) examples above, the conceived certainty of occurrence of the event (openly expressed by the verb *danestan 'to* know') rules out SUBJ in the subordinate clause. In (b) sentences, on the other hand, both FUT and SUBJ are possible with the former implying a higher probability of occurrence.

[26] In (a) and (b) below, for instance, the (finite-factual) verbs *bâ'es-šodæn* (to be the cause of sth done) and *vâdâr-kærdæn* (to overcome an unwilling person to do something) lexically specify the factuality of the [Seffect] although the verb is in subjunctive mood.

> a. Mæryæm bâ'es-šod (ke) bæčče betærse.
> Maryam cause-PST-3SG COMP child SUBJ-fear-3SG
>   "Maryam terrified the child."
>
> b. Mæryæm bæčče-ro vâdâr-kærd (ke) bexâbe.
> Maryam child-DO force-PST-3SG COMP SUBJ-sleep-3SG
>   "Maryam forced the child to sleep."

Appendix

List of abbreviations used:

AFF	affirmative
ACC	accusative
COMP	complementiser
CONJ	conjunction
CS	causative suffix
DEF	definite
DO	direct object
DUR	durative
EV	event
EV-T	event time
FUT	future
IMP	imperative
IND	indicative
NEG	negative
NOM	nominative
PL	plural
PST	past
PURP	purposive
Q	question
SG	singular
S(UB)	subject
SUBJ	subjunctive mood
UT-T	utterance time
1	first person
2	second person
3	third person

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