Syntax and semantics of subjunctive clauses in Persian

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Abstract

This article examines the syntax and semantics of embedded subjunctive clauses in Modern Persian. We propose that subjunctivity in Persian is regulated via a temporal relation between the embedded subjunctive clause and the matrix clause time. The matrix V is proposed to Agree with/select all the embedded head Cs and Ts as [-Past] in a Multiple Agree fashion, along a proposal by Hiraiwa (2001) for raising and ECM constructions in Japanese. The head T, carrying an interpretable [-Past] feature checks the uninterpretable matching feature on C along a similar proposal by Landau (2004) for subjunctive clauses in the Balkan languages and Hebrew. We propose an analysis of embedded subjunctive clauses in terms of the semantic tense anaphoricity between the two clauses in the sense of Landau (2004), rather than a sequence of tenses from a morphological perspective which requires that the morphological tense specification of the selecting verb and the embedded subjunctive verb covary. The [-Past] feature on V is morphologically realized as the subjunctive prefix marker in accordance with the Persian morphology, and triggers a temporal interpretation simultaneous with, or posterior to, the matrix event time in present subjunctives. The paper also employs Reichenbach’s (1947) tripartite distinction between speech time, event time, and reference time to account for the fact that in the past subjunctive, the event expressed by the embedded subjunctive clause precedes the matrix event time.

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1. Introduction

In recent years, a variety of approaches to subjunctive clauses in natural languages have been proposed, including hypotheses in terms of realis/irrealis distinction, modality (Farkas, 1985, 1992a,b), nonveridicality (Giannakidou, 1997, 1998, 1999), including speaker’s commitment to the truth of the embedded clause (Siegel, 2009), tense defectivity (Picallo, 1985; Landau, 2004), and sequence of tense phenomenon (Costantini, 2007; Giorgi, 2009), among others. 2

From a typological point of view, subjunctivity is generally marked either through verbal morphology as in the Romance languages and Persian, or through a particle/complementizer external to the verb, as in Modern Greek and other Balkan

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2 We use the following abbreviations throughout the article:

AC: accusative SUB: subjunctive ASP: Aspect SG: singular
PST: past PSP: past participle IMP: imperative
languages, such as Bulgarian, Albanian etc., Bangla an IndoAryan language marks subjunctivity through the pre-verbal Neg and selection of the habitual auxiliary *thake* (Bhattacharya, 2004).

In this article, we provide some background information on Persian in section 2, with emphasis on the properties of subjunctive clauses in this language. Sections 3 and 4 provide arguments against the irrealis and nonveridical treatment of subjunctive clauses in Persian respectively. Section 5 discusses the temporal properties of Persian complex clauses. In section 6 we present a Minimalist analysis of Persian embedded subjunctive clauses. Section 7 introduces past subjunctives in Persian, the problem it poses to our analysis and the way it may be resolved. Section 8 concludes the paper.

2. Persian subjunctive clauses: a preview

Modern Persian is a pro-drop language that just like German, takes its phrasal complements to the left, but clausal complements to the right. The language has been traditionally treated as having a tripartite mood distinction as declarative, subjunctive and imperative. Windfuhr (1979:92) presents a three-way mood distinction in Persian as indicative, subjunctive and conditional. This language, like Greek and unlike English, lacks nonfinite clauses. The closest counterpart of English infinitival clauses in Persian is the subjunctive clause as it appears in sentences embedded under raising or control predicates (see Ghomeshi, 2001; Darzi, 2008, among others). Subjunctive clauses in this language have a distribution similar to Greek subjunctive clauses marked with *na-*, as discussed in Giannakidou (2009), in being a dependent mood selected by verbs of different semantic classes, such as volition *xasta* 'want', permission *ejaze-dadaen* (permission giving) 'allow', *maemm*-*kardæn* (prohibition doing) 'prohibit', direction *daestur-dadaen* (order giving) 'order', *towsiye kardæn* (advice doing) 'advise', *pišnaeh-dardæn* (suggestion doing) 'suggest', verbs of fear like *taersiædan* 'be afraid', and commission/implication *maejbur-budaen* (obliged being) 'have to', *maejbur-kardæn* (obliged doing) 'force'. This is indicative of the fact that that the higher verb somehow licenses the subjunctive (Giannakidou, 2009:9). The subjunctive mood may also be selected by some modals, like *momken-budaen* (possible being) 'may', an adverbial particle, etc. The *IF* operator in this language may select a subjunctive, or an indicative clause, where in the latter case, it refers to a counter factual proposition. So is the case with the modal *bayæd* 'must', which may take either a subjunctive complement or an indicative one. In the latter case, however, it may occur with a past stem as well and denotes obligation or counter factuality. The subjunctive form is restricted to embedded clauses in agreement with cross-linguistic observation, except in cases where it express wishes, requests, desires etc., with no affirmative illocutionary force, as in *xoda xeyret bede* 'May God bless you'. Purpose clauses are necessarily in the subjunctive mood.

The subjunctive marker in Persian is the verbal prefix *be-*, which is similar in form to the imperative mood marker. The indicative mood lacks any morphological markers, though some grammarians have mistakenly treated the verbal prefix aspect marker *mi-* as the indicative mood marker. Windfuhr (1979:85) cites Lentz (1958) as stating that *mi-* marks an event not restricted in terms of its beginning or end. This makes it the marker of imperfect aspect, according to Windfuhr (1979:85). Following this proposal, Taleghani (2008:114) analyzes it as the head of the aspect phrase that marks the imperfective aspect. Persian imperfective aspect exhibits a pattern found in Romance and Salavic Languages (Comrie, 1976), in that the imperfective aspect marked with the verbal prefix *mi-* denotes habituality, genericity and progression of an event as the translation in (1) below shows. Thus, we tend to deny the existence of an overt indicative mood marker in Persian altogether. The subjunctive marker, but not the aspect marker, always appears on the present stem of verbs, and may also be optionally left out in some complex verbal forms. We do not take any stance with regard to the existence of imperative mood in Persian.

(1) *maen in ketab-o mi-xun-æm.*
  *I this book-AC Asp-read-1SG*  
  'I read/am reading/will read this book.'

(2) *mi-xa-m in ketab-o be-xun-æm.*
  *Asp-want-1SG this book-AC SUB-read-1SG*  
  'I want to read this book.'

(3) *in ketab-o be-xun.*
  *this book-AC IMP-read*  
  'Read this book.'
Unlike Romance languages, but just like Bangla, another Indo-Aryan language, the negative operator in Persian does not induce the subjunctive mood in an embedded clause. Moreover, both the negative verbal prefix na/ne/mi- and the aspect marker mi- are in complementary distribution with the subjunctive marker. However, the aspect marker may co-occur with the negative marker. This is shown in (4)–(5) below:

(4) mæn in ketab-o ne-mi-xun-æm.
   I this book-Ac not-ASP-read-1SG
   ‘I do not read/am not reading/will not read this book.’

(5) mi-xa-m in ketab-o be-(*næ/*mi)-xun-æm.
   ASP-want-1SG this book-Ac SUB-(not/Asp)-read-1SG
   ‘I want (not) to read this book.’

The complementizer ke ‘that’ is optional in all complement clauses in Persian as shown in (6). Purpose clauses may be introduced by ta ‘in order to’ as well which seems to be another complementizer in this language as it is incompatible with ke.

(6) aeli aparteman-eŠ-Š foruxt (ke/ta) xune be-xær-e.
   Ali apartment-his-Ac sold.3SG (that/in order to) house SUB-buy-3SG
   ‘I sold his apartment to buy a house.’

There are only a few verbs that seem to select both a subjunctive and an indicative complement clause. The propositional attitude verbs fekr kardan (thought doing), ‘think’, and hæds zædæn (guess hitting), ‘guess’, are two such verbs. This is shown in (7). Such shifts are common cross-linguistically among verb classes, and are usually accompanied by a change in the verb meaning (see Giannakidou, 1995; Quer, 1998), though such a semantic shift is not found in (7).

(7) mæn fekr mi-kon-æm (ke) aeli in ketæb-o mi/be-xun-æm.
   I thought ASP-do-1SG(that) Ali this book-Ac ASP/Sub-read-3SG
   ‘I think that Ali would read/be reading this book.’

The subjunctive form of the verb equivalent to be in English is baŠ in modern Persian. This is supported by the fact that the Persian verb corresponding to the English be appears as baŠ in the context of a subjunctive taking element as is shown in (8).

(8) aeli mi-xa-d reza inja baŠ-e.
   Ali ASP-want-1SG Reza here SUB-be-3SG
   ‘Ali wants Reza to be here.’

3. Against ir/relais analysis of mood in Persian

From a semantic/pragmatic point of view, the difference between indicative and subjunctive mood has also been defined in terms of the notions realis and irrealis. While realis refers to situations that have occurred or are actualized, irrealis refers to situations that have not occurred or are not actualized, as in counterfactual constructions (see Givón, 1994; Mithun, 1995). In this approach, subjunctive clauses are analyzed as being irrealis, whereas indicative clauses are considered as realis. This approach can account for the sentences in (1), (2), (4), and (8). For instance, the embedded sentence in (9) which is in the subjunctive mood, refers to a yet unrealized situation. However, the one in (10), which is in the indicative, refers to an actualized situation in which the referent of the embedded subject actually works.

(9) Reza mi-xad aeli kar be-kon-e.
    Reza ASP-want.3SG Ali work SUB-do-3SG
    ‘Reza wants Ali to work.’

(10) Reza mi-dun-e aeli kar mi-kon-e.
    Reza ASP-know-3SG Ali work ASP-do-3SG
    ‘Reza knows that Ali works.’

However, as Siegel (2009) notes, many researchers have cast doubt on the correlation between subjunctive and irrealis, as it breaks in both directions. As far as Persian data are concerned, though data similar to (9)–(10) may be analyzed in terms of ir/realis distinction, the sentences in (11)–(12) pose a serious problem for this approach. In these sentences, the
matrix factive predicates have selected an embedded subjunctive clause. This is also true with some factive emotive predicates in many Romance languages (see Quer, 1998 for Catalan; Meireles and Raposo, 1992 for Portuguese; Palmer, 2001 for Spanish, and Giorgi, 2009 for Italian)

(11) æli tunest be-r-e unja.
    Ali managed.3SG Sub-go-3SG there
    ‘Ali managed to go there.’

(12) espania movæffæq ˇsö-d ingilis-o Šekæst be-d-e.
    Spain successful become-PST.3SG England-AC beating Sub-give-3SG
    ‘Spain succeeded in beating England.’

Moreover, there are many languages like Spanish, Catalan (Quer, 1998), and Persian etc., that allow or require causative predicates to take a subjunctive complement clause. This is shown in (13). Such sentences make the irrealis analysis of the subjunctive clauses in Persian untenable as the embedded subject is understood to have performed the action expressed by the embedded predicate.

(13) æli mæn-o vadar kaerd (ke) in ketab-o be-xun-æm
    Ali me-A C force d did (that) this book-A C SUB-read-1SG
    ‘Ali forced me to read this book.’

Furthermore, sentences such as (7) above, where the matrix verb may select a subjunctive or an indicative clause with identical ir/realis property may not be easily explained under an approach where the subjunctive/indicative distinction has an irrealis/realis correlate. Finally, counter factuality in Persian is formed with the past stem of a verb and with the indicative, and not the subjunctive, mood. This is shown in (14)–(15), which undermine an irrealis treatment of Persian subjunctive clauses.

(14) bayæd mi-ræft-i unja.
    must A SP-went-2SG there
    ‘You should have gone there (Also: you had to go there).’

(15) ægær mi-ræft-i unja un-o mi-did-i.
    If A SP-went-2SG there s/he-A C ASP-saw-2SG
    ‘If you had gone there, you would have seen her/him.’

4. Against non/veridicality analysis of mood in Persian

A more recent approach to mood choice that has incorporated the notion of ir/realis is formulated in terms of non/veridicality (see Giannakidou, 1994, 1995, 1997, 1998, 1999, 2009). The fact that subjunctive clauses are selected by some Persian modals, volitional, directive, and permissive predicates, known as strong intensional in Farkas (1985, 1992a,b) may seem to suggest a nonveridical treatment of subjunctive clauses in the language. Giannakidou (2006) defines veridicality as in (16) below:

(16) DEFINITION 1. (Non)veridicality for propositional operators
    i. A propositional operator $F$ is veridical iff $Fp$ entails or presupposes that $p$ is true in some individual’s epistemic model $ME(x)$; otherwise $F$ is nonveridical.
    ii. A nonveridical operator $F$ is anti-verbatim $p$: $Fp$ entails that not $p$ in some individual’s epistemic model: $Fp \rightarrow \neg p$ in some $ME(x)$.

        (Giannakidou, 2006:9)

Under this pragmatic approach, the truth of a propositional attitude verb in a complex sentence entails the truth of the embedded clause. The semantic classes of assertive, fiction, factive, semelfactive, and epistemic verbs, etc., according to Giannakidou (1998, 1999), are veridical and select an indicative clause. For nonveridical classes of verbs like aspectual, volition, directive and perception verbs, such an entailment does not hold, and instead, they select a subjunctive clause. She takes a propositional attitude veridical verb like think in a sentence such as John thinks that Mary is honest, as being veridical as the truth of the whole proposition entails that in the world compatible with John’s set of thoughts, the
embedded proposition is also true. However, such entailments do not hold with a nonveridical verb, such as want. The truth of the sentence John wants Mary to go there does not entail that Mary would go there. (see Giannakidou, 2013). This approach to subjunctivity clearly does not account for the wide range of Persian data as (a) sentences like (11)–(12) above involve an embedded subjunctive clause, however the truth of the main proposition entails the truth of the embedded clause. (b) with verbs that may take either a subjunctive or an indicative embedded complement clause as in (7) above, repeated here in (17), the truth of the embedded proposition is the same irrespective of its mood.

(17) u fekr mi-kon-e (ke) æli in ketæb-o mi/be-xun-e.
   s/he thought Asp-do-3SG (that) Ali this book-ASP/Sub-read-3SG
   ‘S/he thinks that Ali would read this book.’

It is to be pointed out that the non/veridicality approach may not be rescued by saying that it has to be considered with respect to the speaker’s attitude or commitment to the falsity/truth of the embedded clause. Under this approach, indicative mood encodes speaker’s endorsement of the truth of the embedded clause, while the subjunctive does not. The data in (18) and (19) undermine this analysis (see Giorgi, 2009 for data from Italian in which semelfactive verbs select the subjunctive mood). The embedded sentence in (18) has a subjunctive mood, and it is continued with a confirmation by the speaker, indicating the speaker has commitment towards the truth of the embedded clause, contrary to the prediction made by the non/veridicality analysis. Similarly, the sentence in (19) has an embedded indicative clause, followed by a disconfirmation by the speaker, yet it is felicitous contrary to expectation. This undermines the non/veridicality treatment of subjunctive mood in Persian from the perspective of the speaker.

(18) u fekr mi-kon-e æli bigonah baš-e, væ dæqiqæn hæmintor-e
   s/he thought Asp-do-3SG Ali innocent Sub.be-3SG and exactly case-be.3SG
   ‘S/he thinks that Ali is innocent, and it is exactly the case.’

(19) u yæqin dar-e æli bigonah-e, æmma intor ni-st.
   s/he positive have-3SG Ali innocent-be.3SG but case not-is
   ‘S/he is positive that Ali is innocent, but it is not the case.’

Moreover, while (17) is grammatical irrespective of the mood of the embedded clause, the sentence is rendered ungrammatical with an embedded subjunctive mood if mo’taqed budan ‘believe’, which is also a verb of attitude, replaces the matrix verb. This is shown in (20).

(20) u mo’taqed-e (ke) æli in ketæb-o mi/*be-xun-e.
   s/he believer-be.3SG (that) Ali this book-ASP/Sub-read-3SG
   ‘S/he believes that Ali would read this book.’

To sum up, we have presented thus far that an account of subjunctivity in Persian in terms of ir/realis or non/veridicality falls short of accounting for the whole range of subjunctive clauses in this language. In the following section, we will examine the temporal relation between the matrix event time, and the embedded subjunctive event time.

5. Temporal properties in Persian complex sentences

A time anaphoricity/dependency approach to embedded subjunctive clauses in natural languages in terms of the temporal relations between the relevant sentences has been circulating in the literature for roughly four decades. (see Bresnan, 1972; Bouchard, 1984; Picallo, 1985; Landau, 2004; Costantini, 2007; Giannakidou, 2009, among others).

Citing Bresnan (1972), and Bouchard (1984), Costantini (2007) introduces the sentences in (21) from spoken French subjunctives to show that an anaphoric tense is compatible with any time adverbial phrase. He takes this to indicate that the subjunctive clause in this language does not have a time reference of its own.

(21) pensavo che Maria partisse ieri/oggi/domain.
    I.thought that Maria left.Sub yesterday/today/tomorrow
    ‘I thought Maria would leave yesterday/today/tomorrow.’

(Costantini, 2007:29)

The Persian embedded subjunctive clause in (22) with a matrix past verb behaves somewhat similarly in that it may take any time adverbial phrases, as long as they denote a time interval simultaneous with or posterior to the matrix event time.

(22) u mo’taqed-e (ke) æli in ketæb-o mi/*be-xun-e.
   s/he believer-be.3SG (that) Ali this book-ASP/Sub-read-3SG
   ‘S/he believes that Ali would read this book.’
Reza liked Ali to go there today/tomorrow/*yesterday.

If we change the tense of the matrix verb into present, a past time adverbial in the embedded clause is no longer permitted, as it refers to a time interval that precedes the matrix event time. This is shown in (23). The ungrammaticality of the sentence with the embedded past time adverbial strongly suggests that the embedded subjunctive time is anaphoric to the matrix event time in the sense of Landau (2004).  

Reza likes Ali to go there today/tomorrow/*yesterday.

However, indicative taking matrix predicates may select an embedded clause with a variety of tenses and verb morphology. The sentences in (24)–(28) are instances of indicative complement clauses in the simple present, simple past, future, present perfect, and past perfect tenses respectively. Of more interest to us are sentences in (25), (27), and (28), in which, the time of the embedded event precedes the time of the matrix event. This is something that was shown to be impossible with subjunctive clauses, except in what has been traditionally called past subjunctive, which will be discussed as we proceed. The contrast between (23) on the one hand and (24)–(28) on the other supports the time anaphoric proposal of subjunctive clauses made in this article. So, we can legitimately conclude that if the embedded clause cannot provide an indexical tense for the verb, then the matrix verb will.

The discussion so far suggests that the subjunctive marker in this language seems to locate an event in a time t where t is either simultaneous with or posterior to the time t0 of the superordinate clause, or the speech time. This is shown in (29), where the matrix verb is in the past. Compare (29) to (2), repeated here in (30). In (29), the time of the embedded event is posterior to or simultaneous with that of the matrix event, however, it is anterior to the speech time. The embedded event in (30) is either simultaneous with the matrix event, namely the speech time, or is posterior to it; giving a future interpretation as the embedded clause may take a future time adverbial. The embedded event in (31) is construed to be posterior to the matrix event, however it may be posterior or anterior to the utterance time.

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4 This is called dependent tense in the terminology of Picallo (1985), Rizzi (1991) and Costantini (2007). We use Landau’s terminology in this article.

5 An anonymous reviewer raises the possibility that sentences like (29)–(31) may have undergone a restructuring operation that has turned them into mono-clausal sentences (Cinque, 2006). This proposal is untenable, as the complementizer ke ‘that’, which is a clause boundary marker in Persian (Darzi, 2008) may appear in front of the embedded clause as in (31).
(29) mi-xæst-æm in ketæb-o be-xun-æm.
   Asp-wanted-1SG this book-Ac Sub-read-1SG
   'I wanted to read this book.'

(30) mi-xa-m in ketæb-o be-xun-æm.
   Asp-want-1SG this book-Ac Sub-read-1SG
   'I want to read this book.'

(31) omidvar bud-æm ke æli in ketæb-o be-xun-e.
    hopeful was-1SG that Ali this book-Ac Sub-read-3SG
    'I hoped that Ali would read this book.'

Note that (29) may not be accounted for in terms of the Sequence of Tense (henceforth, SOT) approach to Persian subjunctive clauses. On the contrary, the sentence is rendered ill formed if the embedded verb participates in the SOT with the matrix verb, as shown in (32). Recall that past stems in Persian may not host the subjunctive prefix.

(32) *mi-xast-æm in ketæb-o be-xun-d-æm.
    Asp-wanted-1SG this book-Ac Sub-read-PST-1SG
    'I wanted to read this book.' (intended interpretation)

So far, the fact that subjunctive clause does not have an independent tense and needs a reference time for its interpretation makes the anaphoric tense analysis of the subjunctive clause tenable. Indirect evidence for this claim also comes from the lack of matrix subjunctive clauses with affirmative illocutionary force in Persian. Moreover, as We mentioned in section 1, all purpose clauses are in the subjunctive mood in this language. This was shown in (6) above repeated here in (33).

(33) Ali aparteman-eš-o foruxt (ke/ta) xune be-xær-e.
    Ali apartment-his-Ac sold.3SG (that/in order to) house Sub-buy-3SG
    'Ali sold his apartment to buy a house.'

A purpose clause construction is generally assumed to encode a particular relation between a matrix event and an embedded event, such that the matrix event is performed with the goal of obtaining the realization of the dependent event. Of course, under this definition, the purpose clause time reference may not antecede the matrix clause time reference as is attested in (33). As Cristofaro (1998) puts it in her typological observation: “in purpose relations, the time reference of the dependent event is predetermined as posterior to that of the main event.” Taking Persian subjunctive clauses, such as purpose clauses, as having some deficient temporal property is also compatible with Stassen’s (1985) proposal, according to which the dependent event in purpose constructions is a deranked clause that may lack tense, mood, aspect or person agreement.

6. A minimalist analysis

To account for the temporal relation between the matrix event reference time and its subjunctive complement reference time, we will adopt Landau’s (2004) theory of control in the Balkan languages and Hebrew, that involve embedded subjunctive clauses. We will also employ Hiraiwa’s (2001) theory of multiple feature checking or Multiple Agree.

In his analysis of finite control in the Balkan languages and Hebrew, Landau (2004) shows that control subjunctives, unlike free subjunctives, in the Balkan languages do not allow a tense mismatch between the matrix clause and the embedded subjunctive clause. This leads him to conclude that control subjunctive clauses have anaphoric or empty tense in the sense that the reference time of the embedded clause is severely restricted. To implement this dependency and to account for the clause-type of the embedded clause, he proposes that T and C heads come with a set of [T] and [Agr] features, with [T] always being interpretable on the head T and uninterpretable on the C. Note that the [T], for him, implies semantic tense, not morphological tense. It is selected for the embedded C by the matrix verb in control subjunctives. The heads C and T come into a checking relation for these features and checking guarantees that the tense on the embedded T is indirectly selected by the matrix verb. This is shown in (34) below.

Note that we are not concerned with the [Agr] in this article, as it is irrelevant to topic of our discussion.6

6 Landau (2004) has used IP instead of TP.
The syntax of selected tense

\[
\begin{align*}
V \ldots & \quad [CP_{[\alpha T]} [TP \quad T_{[\alpha T]}]VP] \\
\text{selection} & \quad \text{checking}
\end{align*}
\]

We follow Landau (2004) in assigning [-T] to anaphoric tense. Under this scenario, a complex sentence with an embedded subjunctive clause will have a feature composition on C and T as in (35).

(35) 

\[
\begin{align*}
\text{selection} & \quad \text{checking} \\
\text{reza} & \quad [vP \text{mi-xa-d} \quad [CP \text{ke}[-T] \quad [IP \text{æli} T[-T] \quad \text{be-r-e} \quad \text{unja}]].
\end{align*}
\]

Reza A SP-want-3SG that Ali S UB-go-3SG there

‘Reza wants Ali to go there.’

The [-T] feature on C then gets checked and deleted under Agree with the matching interpretable feature on the embedded T. The [-T] on T is semantically interpreted as simultaneous with, or posterior to, the matrix event time, namely as [-Past] with respect to the matrix event time. This makes the temporal property of the subjunctive in Persian somewhat compatible with the common idea that the subjunctive is modal (Roussou, 2000) or futurate, i.e., with subjunctive comes somehow future time orientation. This analysis also makes the right prediction with regard to the mood of purpose clauses which is always subjunctive. As mentioned earlier, the time reference of a purpose clause is predetermined as posterior to that of the main event. Moreover, it explains why the complementizer ta ‘in order to’ may head only embedded purpose clauses where the C bears a [-T] feature, as opposed to ke ‘that’, which may head all sorts of CPs irrespective of the feature composition of their head.

Now, we have to account for why once a selecting verb selects a [-T] complementizer, all embedded clauses within the sentence have to be in the subjunctive mood. This is illustrated in (36), in which changing the mood of any of the embedded clauses into the indicative renders the sentence ungrammatical.

(36) 

\[
\begin{align*}
\text{s/he} & \quad [vP \text{mi-xa-d} \quad [CP \text{ke} [TP \text{æli-ovadar} \quad \text{be-kon-e} \quad [CP \text{ke} [TP \text{be-r-e} \quad \text{unja}]]]].
\end{align*}
\]

s/he A SP-want-3SG that Ali-A Cforced S UB-do-3SG that S UB-go-3SG there

‘S/he wants to force Ali to go there.’

To account for the multiple Agree relation between the matrix verb and the embedded clauses, we adopt Hiraiwa’s (2001) theory of Agree. He accepts Chomsky’s (2001) elimination of equidistance in multiple specifiers. He proposes a mechanism that allows simultaneous multiple feature checking, leading to a refinement of Defective Intervention Constraint (hereafter DIC) of Chomsky (2000, 2001). Definitions of Agree and DIC are given in (37)–(38).

(37) Agree (Chomsky, 2000)

\[
\begin{align*}
\alpha > \beta \\
\text{Agree (} \alpha, \beta \text{), where } \alpha \text{ is a probe and } \beta \text{ is a matching goal, } \text{‘} > \text{’ is a c-command relation and uninterpretable feature of } \alpha \text{ and } \beta \text{ are checked/deleted.}
\end{align*}
\]

(38) The Defective Intervention Constraint (Chomsky, 2000:123)

\[
\begin{align*}
\alpha > \beta > \gamma \\
\text{(*Agree (} \alpha, \gamma \text{), } \alpha \text{ is probe and } \beta \text{ is a matching goal, and } \beta \text{ is inactive due to a prior Agree with some other probe.)}
\end{align*}
\]

CID claims that checked features induce intervention effect in the probe-goal relation between two syntactic objects at a distance. He goes on to say that: “an illicit derivation of the DIC in (38) [his 2] and a licit derivation of covert multiple feature checking in (39) [his 6] may not be distinguished under Chomsky’s (2000, 2001)”.

CID rules out (39) by definition, as once
α comes into an Agree relation with β, the latter becomes inactive, blocking further Agree relation between α, and a syntactic object that β c-commands, namely γ in (38).

(39) Covert Multiple Feature Checking
\[
\alpha > \beta > \gamma
\]
(Agree (α, β) and Agree (α, γ), where α is a probe and both β and γ are matching goals for α.)

(Hiraiwa, 2001: 69:6)

However, under his proposed Multiple Agree theory, Multiple Agree is defined as in (40) and may be schematically represented as in (41).

(40) Multiple Agree/Move (see Hiraiwa, 2000, 2001)
Multiple Agree (multiple feature checking) with a single probe is a single simultaneous syntactic operation; AGREE applies to all the matched goals at the same derivational point derivationally simultaneously. Multiple Move (movement of multiple goals into multiple specifiers of the same probe H) is also a single simultaneous syntactic operation that applies to all the Agreed goals.

(Hiraiwa, 2001:69:7)

(41) Multiple Agree as a single simultaneous operation
\[
\alpha > \beta > \gamma
\]
(Agree (α, β, γ), where α is a probe and both β and γ are matching goals for α.)

(Hiraiwa, 2001: 70:8)

Under the definition of Multiple Agree in (41), at the relevant stage of the derivation, the probe α being [+multiple] searches down in its c-command domain for all matching goals as long as there is no intervening inactive matching goal with the relevant feature. The derivation continues with α Agreeing with all the active matching goal features simultaneously, preventing β from inducing intervention effect. The simultaneity of Multiple Agree consequently results in no defective intervention effect, paving the way to redefine it as in (42).

(42) The Defective Intervention Constraint (derivationally revised)
A syntactic operation AGREE must obey a strict locality condition. AGREE (α, γ) is prohibited if there is a closer matching goal that is already inactive at the point of the derivation where the probe is merged; thus the DIC is restricted to a case where a probe for γ and a probe for intervening β are derivationally distinct.

(Hiraiwa, 2001:71:9)

He maintains that Multiple Agree in (41) and the strict derivational definition of DIC in (42) can correctly distinguish between illicit derivation in (38) and the licit Multiple Agree in (41).

He uses data from the multiple subject construction in Japanese complement to an ECM verb to make his case. He shows that while both embedded subjects or the higher embedded subject may optionally come into an Agree relation with the matrix v for accusative Case, the lower embedded subject may not be accusative Case marked if the higher embedded subject is marked for nominative Case. This leads Hiraiwa (2001) to conclude that in the former case, both embedded subjects have come into an Agree relation with the matrix v, whereas in the latter case the higher subject is inducing intervention effect as a syntactic object with an inactive feature (see Hiraiwa, 2001 for the Japanese data).

Under Hiraiwa’s (2001) proposal, the matrix verb in (36) comes into an Agree relation with all the C and T heads in its c-command domain marking them as [-T] as is shown in (43). Since all subjunctive verbs, but not complementizers, in Persian exhibit overt morphological agreement with their subjects, the embedded Ts and Cs are all assigned [+Agr] and [-Agr] respectively, not represented in (36) for simplicity. The [-T] on the Cs are checked and deleted by the corresponding
interpretable feature on the Ts. The [-T] on the Ts is, then, interpreted as [-Past] with respect to the matrix event time and is morphologically realized as the subjunctive prefix be.  

(43)  

The syntax of selected tense

\[
\text{[CP C[T] [TP T[T] VP [CP C[T] [TP T[T] VP ...]]]}\]

selection/ Agree

7. Present perfect and past/present perfect subjunctives in Persian

So far, we have argued that Persian present subjunctive clauses introduce an event simultaneous with, or posterior to, the matrix event time reference as they lack an independent tense of their own. The only problem that arises is with sentences that involve the so-called “past subjunctives/present perfect subjunctives”. Present perfect subjunctives, also found in German and French, are usually used in dependent clauses and indicate an event that precedes the main clause event time. Data to be introduced as we proceed show that Persian present perfect subjunctives contribute a time reference anterior to the matrix event time, a dilemma that needs to be addressed in an overall analysis of Persian subjunctive clauses.

Before we discuss present perfect subjunctives in Persian, we need to discuss briefly the verb morphology and present perfect in this language.

In addition to simple past, Persian also uses the perfective construction to describe an event that has taken place in the past. The present perfect form in this language is formed by adding the enclitic present forms of \textit{budaen} ‘to be’ to the past participle form of the main verb (Lazard, 1992). The present form of \textit{budaen} ‘to be’ is realized as an enclitic on the main verb, except in the third person singular, where it may optionally show up in its full form in a more formal register. The past participle form itself is formed by the past form of the verb followed by the perfective marker /e/ particle. In turn, the past form of the verb itself is either irregular, as \textit{went} in English, or is derived from the present stem of the verb, followed by the past morpheme. This is shown in (44)–(45) below.

(44)  

\[
\text{to in ketab-o xær-id-e-i} \quad \text{you this book-Ac buy-PST-PSP-2SG} \quad \text{‘You have bought this book.’}
\]

(45)  

\[
\text{s/he in ketab-o xær-id-e (ast). s/his this book-Ac buy-PST-PSP (is)} \quad \text{‘S/he has bought this book.’}
\]

We adopt Reichenbach’s (1947) tripartite distinction between speech time, event time and reference time to account for the semantic properties of present perfect tense. According to Hinrichs (1988:7), Reichenbach (1947) conceives of reference time as the temporal perspective from which an event is viewed. For each individual tense, the reference time, implicit in the discourse context or explicitly specified in the sentence through a time adverbial, is temporarily ordered with respect to the two other parameters, namely speech time and event time. He goes on to say that the distinction between simple past and present perfect in English has, for Reichenbach (1947), to do with the role that reference time plays in the temporal location of the events. The event time precedes the speech time in both simple past and present perfect tenses, however, it is viewed from a perspective in the past for the former and from the perspective of the present for the latter.

---

7. An anonymous reviewer gives the sentences in (i) below and asks how the indicative mood of the most deeply embedded clause may be accounted for.

(i)  

\[
\text{u mi-xa-d [CP ke [TP æli fekr kon-e [CP ke [TP mi-r-e unja]]]]} \quad \text{s/he Asp-want-3SG that Ali thought sub.do-3sg that Asp-go-3sg there}
\]

‘S/he wants Ali to think that he goes there.’

We said earlier with reference to the sentence in (7) that there are certain predicates like \textit{think} and \textit{guess} in Persian that may take either a subjunctive complement clause or an indicative one. That is to say, these predicates may select a CP with a C head bearing [-T] feature, or a C with no [-T] feature whatsoever. As such, in the latter case, these verbs do not come into any Selection/Agree relation with the embedded C, giving rise to an embedded indicative clause.
Being that as it may, we maintain that the semantic tense of the present perfect is jointly contributed by the past participle form of the main verb, and the present tense form of \textit{budæn} ‘to be’. Thus, the past participle of the main verb indicates that the event described is in the past, and the present form of the auxiliary \textit{budæn} ‘to be’ indicates that the reference time is the speech time from which the event is viewed. This is also suggested by the pluperfect in (46), which differs from the present perfect in that the past form of \textit{budan} ‘to be’ is used as a separate constituent, and as a result shifts the event in a time interval prior to the past time reference it contributes. Compare (46) to (45).

(46) u in ketab-o xar-id-e bud. 
\hspace*{.05cm} s/he this book-Ac buy-PSt-PSP was
\hspace*{.05cm} ‘S/he had bought this book.’

The subjunctive form of the present perfect tense consists of the past participle form of the main verb, followed by the subjunctive form of the verb for \textit{budan} ‘to be’, namely \textit{baš}, which hosts the subject verb agreement morphology. This actually gives us what has traditionally been called ‘past subjunctive’ in Persian and is shown in (47)–(48) below.

(47) æli arezu mi-kon-e reza unjæ raft-e baš-e. 
\hspace*{.05cm} Ali wish ASP-do-3SG Reza there went-PSP SUB.be-3SG
\hspace*{.05cm} ‘Ali wishes that Reza has been there.’

(48) æli omidvar-e reza salem res-id-e baš-e tehran. 
\hspace*{.05cm} Ali hopeful-is Reza safely arrive-Pst-Psp SUB.be-3SG Tehran
\hspace*{.05cm} ‘Ali hopes Reza to have arrived Tehran safely.’

The embedded clause in (47)–(48) has a time reference that precedes the matrix clause event time (see, Giorgi, 2006 for similar data from Italian, and Costantini, 2007 for similar data from Italian and spoken French). The embedded sentence may be modified by a past time adverbial, as long as it antecedes the matrix event time. This is shown in (49)–(50).

(49) æli arezu mi-kon-e reza diruz/ *færda unjæ raft-e baš-e. 
\hspace*{.05cm} Ali wish ASP-do-3SG Reza yesterday/ tomorrow there went-PSP SUB.be-3SG
\hspace*{.05cm} ‘Ali will wish that Reza will have been there yesterday/*tomorrow.

(50) æli arezu mi-kon-e reza diruz/ *færda salem res-id-e baš-e tehran. 
\hspace*{.05cm} Ali wish ASP-do-3SG Reza yesterday/ tomorrow safely arrive-Pst-Psp be-Pst.3SG tehran
\hspace*{.05cm} ‘Ali wishes for Reza to have arrived Tehran safely yesterday/*tomorrow.’

Putting the matrix clause verb in the past does not change the relative temporal ordering between the two events in (47)–(48). Putting them in the future leads to an interpretation in which the embedded event is interpreted as in the future with respect to the speech time, but as past with respect to the matrix event. This is illustrated in (51)–(52), which shows the past interpretation of the embedded subjunctive clause originates from the embedded clause itself.

(51) æli arezu xah-æd kærd reza unja raft-e baš-e. 
\hspace*{.05cm} Ali wish will-3SG did.3SG Reza there went-PSP SUB.be-3SG
\hspace*{.05cm} ‘Ali will wish that Reza will have been there.’

(52) æli omidvar xah-æd bud reza salem res-id-e baš-e tehran. 
\hspace*{.05cm} Ali hopeful will-3SG was Reza safely arrive-Pst-Psp SUB.be-3SG Tehran
\hspace*{.05cm} ‘Ali will hope Reza to have arrived Tehran safely.’

However, in the presence of a time adverbial in the embedded clause, the embedded event may be construed as posterior to the matrix event, just in case it is located in a time interval that precedes the indexical time adverbial. This is shown in (53).

(53) æli diruz arezu mi-kard reza ta færda unja raft-e baš-e. 
\hspace*{.05cm} Ali yesterday wish ASP-did.3SG Reza till tomorrow there went-Pst-Psp SUB.be-3SG
\hspace*{.05cm} ‘Ali wished yesterday that Reza will have gone there by tomorrow.’
The analysis that suggests itself is that the embedded event time needs to have a reference time with respect to which it is to be located somewhere in the past. The [-past] feature on the embedded T selected by the matrix verb is unable to do this because of its feature specification, namely [-past]. A temporal interpretation of the embedded clause as simultaneous with or posterior to the matrix event time is also blocked by the inherent contribution of past by the participle form. In the presence of a time adverbial in the embedded clause, the embedded clause takes it as the reference time, otherwise it shifts to precede the matrix event time. The shifting is supported by nonsubjunctive perfective constructions. In (54)–(55), the matrix predicate has taken a present perfect and a pluperfect complement clause respectively. In both these sentences, the embedded event time is construed to precede the matrix event time. Therefore, we conclude that the temporal ordering of the events in the present perfect subjunctives follows the same pattern observed in the corresponding nonsubjunctive forms. In both these construction, the embedded event time is construed to precede the matrix event time.

(54) æli mi-dun-est reza unja ræft-e.  
Ali ASP-know-Pst-3SG Reza there went-Pst-3SG  
‘Ali knew that Reza had been there.’

(55) æli fæhm-id-e bud reza salem res-id-e bud tehran.  
Ali realize-Pst-Pst was.3SG Reza safely arrive-Pst-Pst was.3SG Tehran  
‘Ali had realized that Reza had arrived Tehran safely.’

8. Conclusion

This article examined the syntax and semantic properties of embedded subjunctive clauses in Modern Persian. It was argued that subjunctivity in Modern Persian is regulated via the temporal properties of the matrix and the embedded clauses. Embedded present subjunctive clauses were shown to be temporally dependent on the matrix verb, in that they had to be either simultaneous with, or posterior to, the matrix event time. The proposal made in this article accounts for both the temporal relation between the matrix and the embedded subjunctive event times and for why purpose clauses in Persian have to be in the subjunctive. We adopted Landau’s (2004) analysis of subjunctive clauses in the Balkan languages and Hebrew, which involved the temporal relation between the matrix and the embedded clauses. Under our proposal, the matrix verb agrees with/selects for a head C and T as having the feature [-Past]. This feature is checked and deleted on C for being uninterruptable. Nevertheless, it remains on T to trigger the verbal subjunctive morphology and to make the embedded event to be construed as simultaneous with, or posterior to, the matrix event time. We also adopted Hiraiwa’s (2001) Multiple Agree proposal to explain why all clauses embedded under a subjunctive taking predicate have to be in the subjunctive. Finally, we addressed the present perfect subjunctive in Persian, in which the embedded subjunctive clause temporarily precedes the matrix event time. We proposed that the temporal relation between the two clauses in this construction follows a more general pattern having to do with the role the participle form plays in perfect constructions.

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