A semantic analysis of mood choice in complement clauses in Persian

Narges Nematollahi, Indiana University

There is a vast body of literature on mood selection in complement clauses in Romance languages and Greek (e.g., Farkas 1992, Villalta 2008, Siegel 2008, Giannakidou 2011), but there are relatively very few studies (Darzi & Kwak 2015) on mood selection in Modern Persian, which makes a three-way distinction between indicative, counterfactual and subjunctive moods. This study starts to fill this gap. Applying similar diagnostics as suggested by Wurmbrand's (2014) study of English infinitives, we first divide the complement clauses in Persian into tensed and tenseless complements, and we show that while tensed complements can take indicative, counterfactual and subjunctive moods, tenseless complements always take subjunctive. We then investigate the data in view of the existing approaches to mood selection in other languages, and we show that Villalta's analysis of Spanish subjunctive, in which predicates with a comparative semantics are predicted to select subjunctive, does not account for the Persian data, where such predicates can select all three moods. We then argue that Farkas, Giannakidou and Siegel's analysis of mood selection in Romance languages and Greek, in which the notion of commitment to the truth of the complement clause determines the mood, provide a better account for most of the Persian data. We modify their analysis in order to accommodate the counterfactual mood. Finally, based on Baglini & Francez' (2015) semantics of MANAGE, we justify the selection of subjunctive mood in Persian by causative and implicative verbs.

Inspired by Wurmbrand's study of English infinitives, we argue that complement clauses in Persian can be put in two main groups: a) tensed complements (Ex.1) which are independent of the tense of the matrix predicate and can receive past, present and future interpretations relative to the tense of the matrix predicate, b) tenseless complements whose tense interpretation depends on the tense of the matrix clause, and therefore can receive only future (Ex.2) or simultaneous(Ex.3) interpretations relative to the tense of the matrix clause. Example 1 shows that the complement to *dānestan* know' affords taking temporal adverbs of *fardā* 'tomorrow', *alān* 'now' and *diruz* 'yesterday'. In contrast, complements to *khāstan* 'want' always gets a future interpretation relative to the matrix tense. So in example 2 where the matrix tense is present, only the future temporal adverb *fardā* is possible. Complements to *saʔy kardan* 'try', as Wurmbrand puts it, "form a single temporal domain with the matrix clause". In example 3 where the matrix tense is past tense, future or present temporal adverbs are not available, and the complement clause gets a past interpretation automatically. Based on this diagnostics, i.e., (non)availability of different temporal adverbs, table 1 divides the major categories of Persian predicates into those with tensed and tenseless complements, and shows their selected mood for their complements as well. With regard to mood selection, as we will further see below, tensed complements can take indicative, counterfactual and subjunctive moods, while tenseless complements always take subjunctive.

1 *midānam* ***fardā*** *bārān miāyad* ***/alān*** *dārad bārān miāyad* ***/diruz*** *bārān āmad.*
I know tomorrow (will) rain.IND.3SG now is raining.IND.3SG /yesterday rained.IND.3SG
"I know that it will rain tomorrow/it is raining now/it rained yesterday."

2 *mikhāham fardā* ***/ (*diruz)*** *dars bekhānam*
I want tomorrow/(*yesterday) study.SUBJ.1SG "I want to study tomorrow/ (*yesterday)"

3 *saʔy kard* ***(*fardā) /(*alān)*** *dar rā bāz konad*
he tried (*tomorrow)/(*now) door open.SUBJ.3SG "He tried to open the door"

1) Tensed complements	**Factive** (IND) *dānestan* 'know'	**Doxastic** (IND/SUBJ) *fekr kardan* 'believe'	**Assertive** (IND) *goftan* 'say'	**Perceptive** (IND) *didan 'see, notice'*
2) Tenseless complements	**Preference** (SUBJ) *khāstan* 'want'	**Directive** (SUBJ) *dastur dādan* 'order'	**Causative** (SUBJ) *majbur kardan* 'to force'	**Implicative** (SUBJ) *movafaq shodan* 'to manage'

Table 1: Distribution of major categories of predicates in tensed and tenseless groups.

Villalta's (2008) analysis of subjunctive in Spanish suggests that subjunctive is selected by predicates with comparative semantics, one of whose properties is being gradable so allowing for overt comparative constructions or the use of degree adverbs like ENORMOUSLY. We argue that this analysis does not account for the Persian data; all three matrix predicates in examples 4-6 are gradable ones, passing many of the tests suggested by Villalta 2008:517-19. Yet, they select three distinct moods in Persian. *Khoshhāl budan* 'be happy' (ex.4) is factive and selects indicative. *Kāsh*, a particle which selects tensed complements and expresses the speaker's preference for an alternative situation, selects counterfactual mood (ex.5), and *khāstan* 'want' which belongs to predicates with tenseless complements takes subjunctive mood (ex.6).

4	*kheili*	*khoshhālam*	*diruz*	*bārān*	***āmad***	
	very	I am happy	yesterday	rain	came.**IND**.3SG	"I am very happy that it rained yesterday."
5	*kāsh*	*diruz*	*bārān*	***mi-āmad***		
	I wish	yesterday	rain	came.**COUNT**.3SG		"I wish it had rained yesterday."
6	*kheyli*	*del-am*	*mi-khāhad*	*bārān*	***biyāyad***	
	very	my heart	wants	rain	come.**SUBJ**.3SG	"I really want it to rain tomorrow"

Considering the mood selection in tensed complements in Persian, we argue that the notion of commitment to the truth of the complement, pursued for example in Farkas and Giannakidou's analyses of mood selection, seems to be promising in describing the data. We observe that indicative is selected in Persian when someone salient in context, i.e., the speaker, the attitude holder or some third party expresses certainty about the truth of the complement clause. In terms of possible worlds semantics, when the semantic of the matrix predicate is such that all the doxastic worlds it makes accessible are ϕ-worlds, the predicate selects indicative for its ϕ-complement. For instance, in Persian, as table 1 shows, factive, assertive and perceptive predicates, which presuppose or entail that the doxastic worlds accessible to the attitude holder are all ϕ-worlds, universally select indicative for their complements. On the other hand, uncertain doxastic predicates, e.g., *shak dāshtan* 'doubt' or *gomān kardan* 'conjecture', select subjunctive (ex.7) because they only express a possibility of ϕ being true, and do not commit anyone to the truth of the complement. Importantly for our analysis, we observe that even in cases of uncertain doxastic predicates, as soon as there is someone in the context who considers the complement to be true, the indicative mood is selected (ex.8), and not the subjunctive. In example 8, the use of indicative for the complement of DOUBT implies that the speaker herself has no doubt about the truth of the complement. The counterfactual mood, on the other hand, is opposite to the indicative mood in the sense that counterfactual marks the situations where all the doxastic worlds accessible to the attitude holder are not-ϕ worlds. For instance, example 5 above implies that it did not rain yesterday. Table 2 summarizes the characteristics of the three moods in tensed complements.

7	*shak dāshtand*	*ke*	*re?is*	***esta?fa bedahad***	
	doubted. 3PL	that	chair	resign.**SUBJ**.3SG	"They doubted that the chair would resign."
8	*shak dāri*	*ke*	*hess*	***khatā mikonad****?*	
	doubt. 2SG	that	sense	err.**IND**.3SG	"Do you doubt that (our) senses do make mistakes?"

Description	ϕ is taken to be true	not-ϕ is taken to be true	Both ϕ and not-ϕ are considered as possible
Selected Mood	Indicative	counterfactual	subjunctive

Table 2: Summary of mood selection in tensed complements

In tenseless complements, which universally take subjunctive, we argue that a similar factor to what we saw for subjunctive mood in tensed complements can explain the subjunctive mood in tenseless complements as well, i.e., subjunctive is selected when both ϕ and not-ϕ are considered to be possible. As for preference predicates, following Heim's (1992) definition of WANT, *a wants* ϕ presupposes that in doxastic worlds of *a*, both ϕ and not-ϕ are possible, or in other words, *a* believes neither ϕ nor not-ϕ. In the case of implicative and causative predicates, however, these predicates entail the truth of ϕ (ex. 9), so following our analysis so far, one expects them to select indicative. However, in their work on the semantics of MANAGE, Baglini & Francez (2015) state that sentences with MANAGE are felicitous only in contexts where "it is assumed that there was, at a contextually specified time, a situation in which the truth of the

prejacent (=complement) was undetermined". If this element in their proposed semantics can be extended to all the implicative and causative predicates, it will justify their selection of subjunctive in Persian.

9 *movaffagh shodand* *bāzi rā* ***bebarand***
managed. 3PL the game win.**SUBJ**.3PL "they managed to win the game" (entails 'they won')