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From perfectivity to performativity in conditionals

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1 Introduction

- This research documents a novel pattern in the expression of conditional statements about future in Farsi.

- When both p and ¬p (the antecedent proposition) are equally plausible future events, there are two possible ways of marking the antecedent of conditionals:[1]

- The antecedent of both conditionals have zero tense. They only differ in the property of their aspectual heads.

    - **Imperfective**

        (1) Agar jarime **be-š**-i,　　　　　 bayad pool-esh ro be-d-i
            If　 fine 　**IMPF**-become.$\varnothing$-2SG should money-its RA IMPF-give.$\varnothing$-2SG
            If you get a ticket, you must pay it. [2]

    - **Perfective** → '*performative*' interpretations in the consequent.

        (2) Agar jarime **šod**-i,　　　　　 bayad pool-esh ro be-d-i
            If　 fine 　become.**PERF**.$\varnothing$-2SG should money-its RA IMPF-give.$\varnothing$-2SG
            If you get a ticket, you must pay it. 　　　　　 →*warning*

- What I mean by *performative interpretation* is the use of ordinary sentences not to describe the world, but rather to change it.

    (3) a. This afternoon, John will be cleaning the rabbit cage.
         b. This afternoon, you will be cleaning the rabbit cage. 　　　　　　 → ***order***
            (Mandelkern, 2020)

- As is the case with (3), there is no linguistic reason to think that the two conditional utterances have fundamentally different semantic contents (beyond the obvious difference in the aspectual characterization of their antecedents). It seems reasonable to think that they are conditional statements with ordinary truth conditions in both cases.

- Following Condoravdi & Lauer (2011); Eckardt (2009, 2012), among others, I take a truth conditional approach to performative utterances.

- That is, I take performative utterances to have the same semantic content as other utterances. They denote propositions, which in situations talks are properties of situations. The performative interpretation is treated as a matter of pragmatics.

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[1] Farsi conditionals whose antecedents are not settled in the context set, have a zero tense antecedent (traditionally call subjunctive)(Mirrazi, 2022).

[2] Imperfective marker in Frasi has two morphological realizations depending on the deictic property of tense. *be-* is the variant that appears with zero tense.

In this talk:

- My aim is to derive the pragmatic differences between the two conditionals from their sole linguistic difference: the semantic properties of aspectual heads, and general principles of pragmatic reasoning.

- My main claims:

    – **Factual independence** of antecedent and consequent:
      → semantically encoded due to the denotation of perfective

    – **Performativity inference**
      → derived from pragmatic reasoning to maintain relevance in face of factual independence.

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2 Perfective vs. Imperfective conditionals

- The choice of aspect in the antecedent results in semantic and pragmatic differences between the two conditionals.

- In this section, I will provide data that illustrate the semantic and pragmatic differences between perfective and imperfective zero tense conditionals.

2.1 Imperatives

- Conditional imperatives provide a clear case of contrast between perfective and imperfective zero tense conditionals. As shown with the examples below, conditional imperatives in Farsi are ungrammatical with imperfective zero tense antecedents.

(4) a. *Agar farda   **be-bin-i**-sh,   in-o   beh-esh be-gu
         If   tomorrow **IMPF**-see.∅-2SG-him this-RA to-him   IMPER-say
         If you see him tomorrow, tell this to him.
     b. Agar farda   **did-i**-sh,   in-o   beh-esh be-gu
         If   tomorrow see.**PERF**.∅-2SG-him this-RA to-him   IMPER-say
         If you see him tomorrow, tell this to him.

2.2 Declaratives

- A declarative in the consequent of a zero tense conditional whose antecedent carries a perfective aspect necessarily get a performative interpretation. That is, perfective zero tense conditionals cannot be used to just describe the world.

- This is shown in the contrast in (5), where a perfective conditional cannot be used by a human right activist to describe the horrible situation Afghan women live in.

(5) *A human right activist describing the terror Afghan women experience*
     a. agar zan-an-e   afghan eteraz **be-kon-and**,   koš-te mi-šav-and
         if   woman-PL Afghan protest **IMPF**-do-∅-3PL kill-PP IMPF-become-3PL.
         If Afghan women protest, they will get killed.
     b. #agar zan-an-e   afghan eteraz **kar-d-and**,   koš-te mi-šav-and
         if   woman-PL Afghan protest do-**PERF**.∅-3PL kill-PP IMPF-become-3PL.
         If Afghan women protest, they will get killed.

- When the consequent can be interpreted performatively, i.e. aimed to change the world so as to include the future situation that it is describing, the perfective antecedent is felicitous. For instance, the perfective conditional (6-b) is acceptable when uttered by a Talib threatening Afghan women.

(6) *A speaker of Taliban threatening Afghan women:*

    a.   agar zan-an-e afghan eteraz **be-kon-and**,   koš-te mi-šav-and
        if   woman-PL Afghan protest **IMPF**-do-∅-3PL kill-PP IMPF-become-3PL.
        If Afghan women protest, they will get killed.
    b.   agar   zan-an-e afghan eteraz   **kar-d-and**, koš-te   mi-šav-and
        if woman-PL Afghan   protest do-**PERF**.∅-3PL kill-PP   IMPF-become-3PL.
        If Afghan women protest, they will get killed.   →*threat*

Performative interpretation of deontic modals in the consequent

- Deontic modals in the consequent of perfective zero tense conditionals, necessarily have a performative interpretation.

- The perfective conditional (7-b) implies that it is the speaker who imposes the obligation, and thus endorses the obligation. That is why the obligation cannot be at odds with the speaker's view of that obligation.

- As the contrast in (7) shows, only an imperfective conditional is felicitous with the continuation '*but I don't want you to pay*'.

(7)   a.   Agar jarime **be-š**-i,   bayad pool-esh ro be-d-i
            If   fine   **IMPF**-become.∅-2SG should money-its RA IMPF-give.∅-2SG
            If you get a ticket, you must pay it. ✓**but I don't want you to pay.**
    b.   #Agar jarime **šod**-i,   bayad pool-esh ro be-d-i
            If   fine   become.**PERF**.∅-2SG should money-its RA IMPF-give.∅-2SG
            If you get a ticket, you must pay it. ✗**but I don't want you to pay.**

- Both perfective and imperfective conditionals are felicitous in a context where the addressee is borrowing the speaker's car, and the speak is warning them that in the event of getting a ticket, they're responsible to pay it.

(8)   *Context: John is borrowing Mark's car. Mark to John:*
    a.   Agar jarime **be-š**-i,   bayad pool-esh ro be-d-i
            If   fine   **IMPF**-become.∅-2SG should money-its RA IMPF-give.∅-2SG
            If you get a ticket, you must pay it.
    b.   Agar jarime **šod**-i,   bayad pool-esh ro be-d-i
            If   fine   become.**PERF**.∅-2SG should money-its RA IMPF-give.∅-2SG
            If you get a ticket, you must pay it.   →*warning*

No epistemic reasoning, only authoritative claims

- When there is an epistemic modal in the consequent, and a performative interpretation is not possible, the antecedent of a zero tense conditional has to be imperfective. For, instance, the contrasts in (10) and (9) show that perfective conditionals are not felicitous in an epistemic reasoning scenario.

(9)   a.   agar harf-ha-ye shahed-e eini ra jeddi **be-gir-im**,   John
            if   word-PL-EZ witness-EZ visual RA serious **IMPF**-take-∅-1PL John
            ne-mi-tavan-∅-ad   ghatel   baš-ad.
            NEG-IMPF-can-PRES-3SG murderer be.∅-3SG
            If we take what the eyewitness said seriously, John cannot be the murderer.
    b.   #agar harf-ha-ye shahed-e eini ra jeddi **gereft-im**,   John
            if   word-PL-EZ witness-EZ visual RA serious take-**PERF**-∅-1PL John
            ne-mi-tavan-∅-ad   ghatel   baš-ad.
            NEG-IMPF-can-PRES-3SG murderer be.∅-3SG
            If we take what the eyewitness said seriously, John cannot be the murderer.

(10)   *Context: We're watching a new detective movie. I'm reasoning about who might be the murderer.*
    a.   agar John ghatel **baš**-ad, lebas-eš bayad xuni   baš-ad.
            if   John murderer be.∅.3SG, cloth-his must bloody be.∅.3SG
            if John is the murderer, there must be blood on his clothes.
    b.   #agar John ghatel **bud**,   lebas-eš bayad xuni   baš-ad.
            if   John murderer be.**PERF**.∅.3SG cloth-his must bloody be.∅.3SG
            if John is the murderer, there must be blood on his clothes.

3

- The contrast in (11) shows that perfective zero tense conditional cannot felicitously be used to take a **wild guess**.

(11) *John is about to flip a fair coin. Mark takes a wild guess about the outcome.*
    a.   agar sekke ra **be-andaz**-i,   šir   mi-ay-ad
          if   coin RA **IMPF**-throw-$\varnothing$-2SG heads IMPF-come-3SG
          If you flip the coin, it will come up heads.
    b.   #agar sekke ra **andaxt**-i,   šir   mi-ay-ad
          if   coin RA throw.**PERF**-$\varnothing$-2SG, heads IMPF-come-3SG
          If you flip the coin, it will come up heads.

- The perfective conditional in (11-b) can only be felicitous when it can be interpreted as an authoritative claim.

- An example of such a context is given in (12), where the speaker warns the addressee against flipping the coin. The *authoritative* nature of this claim can be further illustrated with challengeability tests.

- Since the speaker of the perfective conditional in (12-b) is understood to claim that they *know* that the coin is not fair, the truth of their statement cannot be denied with *'That's not true'*. The only way a perfective conditional claim can be challenged is to ask the speaker to justify the *source* of their knowledge, with *How do you know?*.

(12) *John is about to flip a coin. He has bet on tails. Mark knows that the game is rigged. The coin is not fair, and has heads on both side. Mark is warning John:*
    a.   gar sekke ra **be-andaz**-i,   šir   mi-ay-ad
          if coin RA **IMPF**-throw-$\varnothing$-2SG heads IMPF-come-3SG
          If you flip the coin, it will come up heads.
          ✓**John: That's not true. It may come up tails.**   →*interpreted as a wild guess*
          ✓**John: How do you know?**
    b.   agar sekke ra **andaxt**-i,   šir   mi-ay-ad
          if   coin RA throw.**PERF**-$\varnothing$-2SG, heads IMPF-come-3SG
          If you flip the coin, it will come up heads.
          ✗**John: That's not true. It may come up tails.**   →*infelicitous as a wild guess*
          ✓**John: How do you know?**   →*warning*

2.3   Authoritative biscuit conditionals

- An interesting contrast between perfective and imperfective conditionals in Farsi can be seen in interpretations of biscuit conditionals. The choice of the aspect in the antecedent determines the inference associated with the biscuit conditional.

- Perfective biscuit conditionals invoke an inference that the speaker has some kind of *authority*.

- For instance, if a biscuit conditional is used by the speaker to give permission to the hearer, the antecedent has to be marked with perfective morphology.

(13) *The host is leaving the house. She tells her guest that he should feel free to help himself to some food, while she's not home.*
    a.   #agar gorosne **be-sh**-i,   ghaza tu yakhchal hast.
          if   hungry **IMPF**-become-$\varnothing$-2SG food in fridge   is
          If you get hungry, there's food in the fridge.
    b.   agar gorosne **shod**-i,   ghaza tu yakhchal hast.
          if   hungry become.**PERF**.$\varnothing$-2SG food in fridge   is
          If you get hungry, there's food in the fridge.   →*offer*

- In contrast, in a context where the speaker lacks the required *authority* to *offer* the food to the hearer, as in the context below, the antecedent has to be marked with imperfective morphology.

(14) *Amir and Masoud are guests in an Airbnb. Amir to Masoud, who is worried about food:*

a. agar gorosne **be-sh**-i,   ghaza tu yakhchal hast.
    if   hungry **IMPF**-become-∅-2SG food in fridge   is
    If you get hungry, there's food in the fridge.
b. #agar gorosne **shod**-i,   ghaza tu yakhchal hast.
    if   hungry become.**PERF**.∅-2SG food in fridge   is
    If you get hungry, there's food in the fridge.
    But ask for the host's permission first.

2.4   Independence

- Perfective conditionals always presuppose an independence between the antecedent and consequent. If the consequent follows from the truth of the antecedent, the perfective conditional is infelicitous.

  (15) a. agar farda   došanbe **baš-ad**, pas farda   sešanbe ast.
            if   tomorrow Monday be.∅.3SG after tomorrow Tuesday be.PRES.3SG
            If tomorrow is Monday, the day after is Tuesday.
        b. #agar farda   došanbe **bud**,   pas farda   sešanbe ast.
            if   tomorrow Monday be.**PERF**.∅.3SG after tomorrow Tuesday be.PRES.3SG
            If tomorrow is Monday, the day after is Tuesday.

- Natural laws and generalizations can only be expressed with imperfective conditionals, as the infelicity of the perfective conditional in (16-b) shows.

  (16) a. agar ab   dagh **be-šav**-ad,   mi-juš-∅-ad.
            if   water hot **IMPF**-become.∅-3SG IMPF-boil-PRES-3SG
            if water heats up, it boils.
        b. #agar ab   dagh **šod**,   mi-juš-∅-ad.
            if   water hot become.**PERF**.∅.3SG IMPF-boil-PRES-3SG
            if water heats up, it boils.   →*unless as warning against burning*

- Contexts where a conditional is used to highlight the dependency between antecedent and consequent to argue for or against the antecedent proposition, provides another environment to illustrate the independence between antecedent and consequent of perfective conditionals. That is, perfective conditionals are not felicitous in question and answer pairs like (17).

  (17) A: why (not) p?
        B: Because if p, q.

- The examples in (18)-(20) show that only imperfetcive conditionals are felicitous in such contexts.

  (18) A: Why don't you tell her the truth?   B:..
        a. agar haghighat ra   beh-esh **be-guy**-am,   narahat mi-šav-∅-ad.
            if   truth   RA to-her **IMPF**-tell-∅-1SG, upset IMPF-become-PRES-3SG
            If I tell her the truth, she'll get upset.
        b. #agar haghighat ra   beh-esh **gof-t**-am,   narahat mi-šav-∅-ad.
            if   truth   RA to-her tell-**PERF**-∅-1SG, upset IMPF-become-PRES-3SG
            If I tell her the truth, she'll get upset.

  (19) *Rodica is leaving the house to go shopping.*
        Zahra: Why are you going to the store now?   Rodica: Because...
        a. agar alan **be-rav**-am, mi-tun-∅-am   tu   haraj xarid bo-kon-am
            if   now   **IMPF**-go-∅-1SG, IMPF-can-PRES-1SG in   sale   buy

            IMPF-do-∅-1SG
            if I go now, I can shop on sale.
        b. #agar alan **raf-t**-am,   mi-tun-∅-am   tu haraj xarid bo-kon-am
            if   now go-**PERF**-∅-1SG, IMPF-can-PRES-1SG in sale   buy IMPF-do-∅-1SG
            if I go now, I can shop on sale.

(20)   *A: Can you please give me a ride to school? B: Sorry, I can't.*
       A: Why not? B: Because...

    a.   agar to ro **be-resun**-am   madreseh, dir-am mi-šav-∅-ad
          if   you RA **IMPF**-reach-∅-1SG school,   late-me IMPF-become-PRES-3SG
          If I give you a ride to school, I will be late.

    b.   #agar to ro **resun-d**-am   madreseh, dir-am mi-šav-∅-ad
          if   you RA reach-**PERF**-∅-1SG school,   late-me IMPF-become-PRES-3SG
          If I give you a ride to school, I will be late.

2.5 Default discourse mapping

- In the default mapping of conditionals to discourse, the antecedent is understood to set up a question under discussion (QUD), which the consequent provides an answer to (Haiman, 1978; Ebert et al., 2014; Biezma & Goebel, to appear). Thus, it is the consequent that presents at-issue content in a default mapping.

- The QUD can be characterized as *'What is true at the selected p-worlds?/ what if p?'*.

- The reverse of this mapping is also possible. In the reverse mapping, the antecedent is understood as an answer to a question about the consequent.

- Thus, the at-issue content is presented by the proposition in the antecedent. The QUD for the reverse mapping can be characterized as *'What are the propositions p such that for all selected worlds in which p is true, q is true?/ When q?'*.

(21)   If you mow the lawn, I'll give you 5 dollars.

    a.   QUD: When would you give me 5?
    b.   Answer: If you mow the lawn, I'll give you 5.

- Only the default mapping to discourse is available to perfective conditionals.

- In contexts where the antecedent provides the answer to QUD (contains the 'at issue' content), a perfective conditional is infelicitous. The infelicity of perfective conditionals in examples (22)-(23) illustrates this point.

(22)   *A: How can I get to the mall?*   *B:..*

    a.   agar az   samt-e rast **be-r**-i,   ye saxtemun-e boland mi-bin-∅-i,...
          if   from side-EZ right **IMPF**-go-∅-2SG a building-EZ tall   IMPF-see-PRES-2SG,...
          if you go right, you will see a tall building,..

    b.   #agar az   samt-e rast **raf-t**-i,   ye saxtemun-e boland mi-bin-∅-i,...
          if   from side-EZ right go-**PERF**-∅-2SG a building-EZ tall   IMPF-see-PRES-2SG,...
          if you go right, you will see a tall building,..

(23)   *A: I hate Breaking Bad. What will change my opinion?*   *B:...*

    a.   agar ghesmat-ha-ye badi-š ro be-bin-i,   nazar-et   avaz
          if   episode-PL-EZ next-its RA **IMPF**-see-∅-2SG, opinion-your change
          mi-šav-∅-ad.
          IMPF-become-PRES-3SG
          "If you see its next episodes, your opinion will be changed."

    b.   #agar ghesmat-ha-ye badi-š ro **did**-i,   nazar-et   avaz
          if   episode-PL-EZ next-its RA see.**PERF**-∅-2SG, opinion-your change
          mi-šav-∅-ad.
          IMPF-becomePRES-3SG
          "If you see its next episodes, your opinion will be changed."

2.6 (Un)embaddability

- Perfective conditionals cannot be embedded under attitude predicates.

(24)   a.   #Ali fekr mi-kon-∅-ad   ke   agar baran amad,   xis mi-šav-∅-i
            Ali think IMPF-do.PRES-3SG that if   rain come.**PERF**.∅.3SG wet NEG-become.∅-2SG
            Ali thinks if it rains, you will get wet.
       b.   Ali fekr mi-kon-∅-ad   ke   agar baran be-ay-ad,   xis mi-šav-∅-i
            Ali think IMPF-do.PRES-3SG that if   rain **IMPF**-come.∅.3SG wet IMPF-become-PRES-2SG
            Ali thinks if it rains, you will get wet.

- Imperfective conditionals cannot be embedded under imperatives.

(25)   Bring an umbrella so that ...
       a.   agar baran amad,   xis na-šav-i
            if   rain come.**PERF**.∅.3SG, wet NEG-become.∅-2SG
            in case/if it rains, you don't get wet.
       b.   #agar baran be-ay-ad,   xis na-š-i
            if   rain IMPF-come.∅.3SG, wet NEG-become.∅-2SG
            if it rains, you don't get wet.

We have seen that perfective aspect in the antecedent of zero tense conditionals forces a performative interpretation.

The overarching goal of this talk:

- Identifying the role of perfective aspect in these conditionals

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3   Theoretical assumptions: Situation Semantics

- **Tense & Aspect in Situation Semantics**

- I adopt the framework of situation semantics (Kratzer, 2021, 2012)

- I assume a standard Kratzerian view of conditionals according *if*-clauses to restrict the quantification domain of modals. Instead of quantifiers over possible worlds, in Situation Semantics modals are quantifiers over possible situations.

(26) $[\![$ if p, q $]\!]^{c,g} = \forall s'[s' \leq w_s.\ p(s') \rightarrow \exists s''[s' \leq s''\ \&\ q(s'')]]$

- Deictic tenses combine with a property of situations $\langle s,t \rangle$ and introduce a topic situation s which has s' as its part (represented by $\leq$), along with a presupposition about the temporal location of s'.

- Zero tenses denote an identity function. They do not introduce a topic situation or presupposition.

(27)   a. $[\![\textbf{present}_i]\!]^g = \lambda P_{\langle s,t \rangle}.\ \lambda s : s' \leq s\ \&\ \tau(s) \circ \tau(s_i).\ P(s') = 1$, where s_i is the speech situation by default.[3]
       b. $[\![\textbf{past}_j]\!]^g = \lambda P_{\langle s,t \rangle}.\ \lambda s : s' \leq s\ \&\ \tau(s) < \tau(s_j).\ P(s') = 1$, where s_j and is the speech situation by default.
       c. $[\![\varnothing]\!]^g = \lambda P_{\langle s,t \rangle}.\ P$

Aspect in Situation Semantics

- One major account of aspectual categories that is easily translatable into a situations framework is to define them in terms of mereological notions like whole and part (e.g. Verkuyl 1972; Krifka 1992; Filip 1999).

- According to Kratzer (2021), Davidsonian events and situations are the same kinds of things. They are both built from relations and individuals involved those relations. She argues that '*we don't seem to need both situation semantics and Davidsonian event semantics*'. Within a situation semantics, Davidsonian events are defined in terms of exemplifying situations.

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[3]An alternative is to represent the index *i* as a variable in the syntax.

- Some situations contain nothing that does not contribute to the truth of a given proposition (formally defined in (28)). These are *exemplifying* situations of a proposition (Kratzer, 2021).

  (28) *Exemplification*
       A situation *s* exemplifies a proposition *p* if whenever there is a part of *s* in which *p* is not true, then *s* is a minimal situation in which *p* is true.

       (Kratzer 2021: p.23)

  (29) *Minimal situations*
       A situation *s* is a minimal situation in which a proposition *p* is true ($p(s) = 1$) iff *s* has **no proper parts in which *p* is true**. This is represented with the notation $\downarrow p(s)$.

       (Kratzer 2021: p.24)

- There are two ways for a situation *s* to exemplify a proposition p:

  (i) **p is true in *all* sub-situations of s** : $\forall s'[s' \leqslant s \rightarrow s' \in \mathbf{P}]$

     (30) a. There is mud.

               (Kratzer, 2021)
          b. 'Mud' is a (exemplifying) situation that consists of mud and only mud (compare with 'Mud & sand').
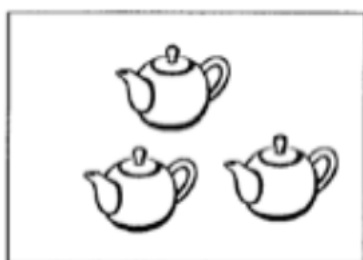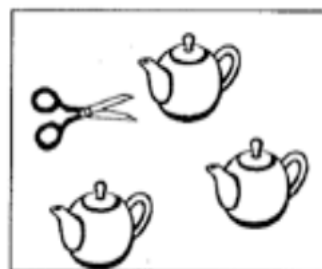
     (31) **Mud**   (32) **Mud & sand**

     (Kratzer 2021: p.24)

  (ii) **s is a *minimal* situation in which p is true. s** : $\forall s'[s' \leqslant s \rightarrow s' \notin \mathbf{P}]$

     (33) a. There are three teapots.
          b. 'Teapots' is a (exemplifying) situation that has three teapots and nothing else in it (compare with 'Teapots & Scissors').

     (34) **Teapots**   (35) **Teapots & Scissors**

     (Kratzer 2021: p.25)

- Given the definition of exemplification, the set of exemplifying situations of a proposition must be either homogeneous or quantized (minimal).

  (36) A set of situations is homogeneous iff it is closed under the parthood relation. That is, whenever it contains a situation *s*, it also contains all (relevant) proper parts of *s*.

(37)   A set of situations is quantized iff it doesn't contain both a situation *s* and a proper part of *s*.(Kratzer 2021: p.29)[4]

- I will follow Cipria & Roberts (2000) in adopting a situation semantic without explicit quantification over events in the object language.

- Taking events to be exemplifying situations (Kratzer, 2021), aspect will combine with a property of situations expressed by VP and introduces structural constraints on its exemplifying situations.

- Perfective aspect restricts the set of situations exemplifying the proposition expressed by its embedded VP to quantized minimal situations (no proper part).

(38) $[\![\text{PERFECTIVE}]\!]^{c,g} = \lambda P_{\langle s,t \rangle}. \ \lambda s. \ \downarrow P(s) = 1$

- Imperfective aspect, on the other hand, specifies that the set of situations exemplifying the proposition expressed by its embedded VP is a homogeneous set.

(39) $[\![\text{IMPERFECTIVE}]\!]^{c,g} = \lambda P_{\langle s,t \rangle}. \ \lambda s. \ \forall s'[s' \leqslant s \ \&$
    there exists a contextually salient relation R such that $R(s)(s') \rightarrow P(s') = 1]$
                        (Adopted from Cipria & Roberts (2000); Arregui et al. (2014))

- Given that the zero tense does not introduce a topic situation, the antecedent of these conditionals denote a property of *exemplifying* situations.

- Denotations of antecedents of imperfective and perfective conditionals are given in (40).

(40) $[\![\ [_{\text{TP}} \ \varnothing \ [_{\text{AspP}} \ \text{IMPERFECTIVE} \ [_{\text{vP}} \ \text{P}] \ ] \ ] \ ]\!]^{c,g} = \lambda s. \forall s'[s' \leqslant s \ \&$
    there exists a contextually salient relation R such that $R(s)(s') \rightarrow P(s') = 1]$

(41) $[\![\ [_{\text{TP}} \ \varnothing \ [_{\text{AspP}} \ \text{PERFECTIVE} \ [_{\text{vP}} \ \text{P}] \ ] \ ] \ ]\!]^{c,g} = \lambda s. \downarrow P(s) = 1$ where $\downarrow$ represents minimal situations.

- An immediate advantage of the denotations of aspectual heads given above, is that it characterizes imperfective as a weaker alternative, since $\forall s' : s' \leqslant s$ will be vacuously true in situations that have no sub-situations.

- This explains the observation that imperfective conditionals are compatible with performative interpretation, and can make a biscuit conditionals.

3.1   Driving Independence from minimality

- My goal here is to argue that the factual independence between antecedent and consequent of perfective conditionals is the result of the minimality constraint perfective aspect puts on the value of the situation variable denoted by the antecedent.

- To characterize independence, I adopt Kratzer (1989)'s lumping framework according to which factual dependencies are tracked on the basis of lumping relations between propositions.

- A proposition lumps another proposition in a world *w* in virtue of certain part-whole relationships holding between situations of *w*.

(42)   For all propositions *p* and $q \in \mathbf{P}(S)$ and all $w \in W$: *p* **lumps** *q* in *w* iff $w \in p$ and $\forall s : s \leqslant w$ and $s \in p$, then $s \in q$).[5]

(43)   For all propositions *p* and $q \in \mathbf{P}(S)$ and all $w \in W$: *p* is **factually independent** of *q* in *w* iff $w \in p$ and $\exists s : s \leqslant w$ and $s \in p$, and $s \notin q$).[6]

- Minimal situations are poor lumpers (but they're easily lumped by other situations): (i) they do not contain any sub-situations irrelevant to the truth of a proposition they exemplify; (ii) they do not contain any proper sub-situations that make the proposition they exemplify true (*minimal situation*).

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[4]The algebraic notions of homogeneity and quantization have been argued to capture grammatical and lexical aspectual distinctions (Krifka, 1992).

[5]Every situation that makes p true, contains a part that makes q true.

[6]there exists a situation that makes *p* true, but does not contain any part that makes *q* true.

- Thus, the factual independence between the antecedent and consequent is encoded in the denotation of perfective antecedents:

  - *Zero tense* → the antecedent denote the property of exemplifying situations
  - *Perfective aspect* → the situations that the perfective antecedent makes reference to are minimal situations.

3.2 Driving Authority from Independence

- The speaker authority inference can be derived from the presupposition of factual independence encoded in the semantics of perfective conditionals, and from how speakers reason about relevance between the question and answer pair set up by conditional constructions.

- Since independence comes as a part of the semantics of the aspectual head, it cannot be given up.

- After uttering the conditional, however, the antecedent and consequent propositions will not be informationally independent (learning the antecedent will lead to learning the consequent).

(44)   Let *W* be a set of possible worlds, propositions $P, Q \subseteq W$ and an agent's epistemic state $\sigma \subseteq W$ of worlds held possible. We say that the agent holds P possible ($\diamond_\sigma$ P) iff $\sigma \cap \neg P = \varnothing$.
P and Q are **informationally (or epistemically) independent** (on σ) iff for all $X \in \{P, \neg P\}$ and all $Y \in \{Q, \neg Q\}$ it holds that $(\diamond X \wedge \diamond Y) \rightarrow \diamond (X \cap Y)$.   (Franke, 2009)

- This violates the Mirror Constraint:

(45)   **Mirror Constraint(Biezma & Goebel, to appear)**
If two propositions are presupposed to be factually independent in *Cs*, then they cannot be informationally dependent in *Cs*.

- To overcome this violation, we could conclude that the speaker uses this mismatch to signal their authority to build a dependency between the two propositions by imposing a new law.

- The pragmatic strategy used is similar to bald-face lies. Harris (2020) argues that '*by uttering something that is obviously false, and that would be obviously uncooperative if taken literally, the speaker manages to flout the maxim of quality and indirectly communicate something else.*'

- Similarly, a speaker who uses a perfective conditional *lets shine through* that the antecedent and the consequent are factually independent, and yet claims that they are dependent. This is obviously contradictory and uncooperative if taken literally.

- Given the Cooperative Principle (Grice, 1975), the major underlying assumption that we make in a conversation is that all discourse participants are acting in a way to accomplish conversational goals. Assuming that the speaker knows that the addressee will not drop the Cooperative Principle in interpreting what they hear, they use a *'bald-faced'* contradiction to signal that the conditional utterance is actually an indirect speech act, and to produce the pragmatic effect of *speaker authority*.

4 Conclusion

- Perfective conditionals in Farsi give rise to a range of performative interpretation.

- My analysis has two components:

  - **In semantic level:**
    Factual independence of antecedent and consequent: → semantically encoded in the denotation of perfective antecedent, due to the minimality condition on situations that the perfective aspect makes reference to
  - **In pragmatic level:**
    Performativity inference → derived from pragmatic reasoning to maintain relevance in face of factual independence.

- This analysis groups Farsi perfective conditionals with other performative conditionals, whose antecedent and consequence are independently shown to be independent.

  – Biscuit conditionals (Biezma & Goebel, to appear; Franke, 2009)

    (46)   If you're hungry, there are biscuits in the fridge.

  – Conditional imperative (Schwager, 2006; Schwager et al., 2006)

- Farsi provides evidence that independence in conditionals can be linguistically encoded.

- This also highlights the central role of independence in performativity of conditionals.

- The analysis is in line with Kratzer (2011)'s account of Actuality Entailment associated with perfective aspect (see Hacquard (2020))

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