Semantics of situations and pragmatics of prevention

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1. Intro

- Two types of readings emerge when someone doesn't want something to happen (e.g., for negated imperatives, 'not want', and 'fear'):
 - ABSTAIN: willingness to prevent someone from intentionally engaging in an activity;
 - AVOID: willingness to prevent an unintended outcome.
- (1) a. ABSTAIN

Don't call anyone! / I don't want to call anyone. / I'm afraid of calling anyone.

- b. AVOID
 - Don't (accidentally) call someone! / I don't want to (accidentally) call someone. / I'm afraid of (accidentally) calling someone.
- Cross-linguistically, some grammatical phenomena are sensitive to this distinction, e.g., anti-/re-licensing of *some* indefinites in English (observed in Szabolcsi 2004).
- I will focus on aspect and indefinite licensing in Russian and will argue that:
 - The complements of the target operators in ABSTAIN vs. AVOID cases have distinct compositional structures: a situation layer in AVOID, but not ABSTAIN cases. This explains the relevant facts about aspect and indefinites.
 - The choice between the two compositional structures in the cases at hand is driven by global pragmatic considerations about preventing unwanted scenarios. This explains the inferences arising in the two cases.

2. Core puzzles

- Aspect (to be revised): across the three environments, verbs that are part of accomplishment descriptions are imperfective in ABSTAIN cases and perfective in AVOID ones.
- Indefinites:
 - Negated imperatives and 'not want': only *ni* negative concord items (NCIs) in ABSTAIN cases, but both *ni* NCIs and dependent *nibud*' indefinites in AVOID cases.
 - 'Fear': only free choice indefinites (e.g., *libo*) in ABSTAIN cases, but both free choice and *nibud*' indefinites in AVOID cases.
- (2) a. Ne {zvoni / *pozvoni} {nikomu / *komu-nibud'}!
 not {call.IPFV.IMP / *call.PFV.IMP} {NI-who / *who-NIBUD'}
 'Don't call anyone!' (ABSTAIN)

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b. (Ostorožno!) Ne {*zvoni / pozvoni}
                                                      (slučajno)
                                                                    {nikomu /
                   not {*call.IPFV.IMP / call.PFV.IMP} (accidentally) {NI-who /
       (careful)
       komu-nibud'}!
       who-NIBUD'}
       '(Careful!) Don't (accidentally) call someone!' (AVOID)
(3) a. Ja ne xoču {nikomu / *komu-nibud'} {zvonit'
                                                      / *pozvonit'}.
       I not want {NI-who / *who-NIBUD'} {call.ipfv.inf / *call.pfv.inf}
       'I don't want to call anyone.' (ABSTAIN)
    b. Ja ne xoču {nikomu / komu-nibud'} (slučajno) {*zvonit'
       I not want {NI-who / who-NIBUD'} (accidentally) {*call.IPFV.INF /
       pozvonit'}.
       call.PFV.INF}
       'I don't want to (accidentally) call someone.' (AVOID)
(4) a. Ja bojus' {komu-libo / *komu-nibud'} {zvonit'
                                                          / *pozvonit'}.
       I fear {who-libo / *who-nibud'} {call.ipfv.inf / *call.pfv.inf}
       'I am afraid of calling anyone.' (ABSTAIN)
    b. Ja bojus' {komu-libo / komu-nibud'} (slučajno)
       I fear {who-libo / who-nibud'} (accidentally) {*call.ipfv.inf /
       pozvonit'}.
       call.PFV.INF}
       'I'm afraid of (accidentally) calling someone.' (AVOID)
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3. Prior work

- Imperfective vs. perfective aspect in imperatives in Slavic:
 - Oft expressed intuition: pragmatic competition b/n imperfective and perfective: "...a command to not open the window with the perfective forbids the addressee to succeed in opening the window leaving it open whether an attempt to open the window can be made. The use of imperfective makes a stronger prohibition against attempting to open the window." (Goncharov 2018)
 - Goncharov 2018 relies on an ad hoc intentionality operator in ABSTAIN cases to formalize this intuition.
- Indefinite licensing in English:
 - Goncharov 2020 (focuses on 'not want'): an intervening presupposition that "shields" some from anti-licensing in AVOID cases ("shielding" insight present in Szabolcsi 2004).
- I will propose a more uniform and principled analysis for both phenomena in a range of environments, preserving two insights from prior work:
 - There is indeed a (general) pragmatic competition between the two cases, but there
 are also compositional differences.
 - Something does indeed "shield" nibud'/some indefinites from anti-licensing in AVOID cases under negation, but it's something in the compositional structure.

4. Proposal

Summary

- The target complements in ABSTAIN vs. AVOID cases have distinct compositional structures (cf. prior work):
 - ABSTAIN: descriptions of temporally unsituated events, with no situation layer;
 - AVOID: an additional situation layer, with the events described by the verbs situated with respect to the situation's runtime.
- Russian aspect:
 - imperfective: can be meaningless (a morphosyntactic default for unsituated events), or meaningful (situates the event relative to the situation's runtime when there is a situation layer);
 - perfective: always meaningful (always requires a situation layer).
- Indefinites: the situation layer can also re-license dependent indefinites.
- Similar pragmatic considerations affect the choice between the two compositional structures whenever the speaker wants to prevent some scenarios. These considerations are global and don't rely, e.g., on lexical presuppositions of specific items.

4.1. Events, situations, and worlds

- Events, situations, and worlds form a mereological structure: e.g., an event can be part of a situation (written as $e \subseteq s$) or they can overlap (written as $e \circ s$), and either one can be part of a world.
- Worlds can be thought of as ultimate mega-containers for all events, and situations can be thought of as snapshots of some part of a world.
- The three differ, a.o., in if/how they are introduced compositionally:
 - Sentences denote *propositions*, i.e., sets of worlds, which are part of the lexical meaning of all predicates.
 - Events get introduced as part of the lexical meaning of some predicates.
 - o I adopt (ontologically enriched) Champollion's (2015) quantificational events semantics to make sure \exists binding the event variable always takes the lowest scope: verbs denote existential quantifiers over events (e.g., (5a)), and any further modification of e is done via the continuation f (e.g., (5b)), eventually closed off via a trivial continuation in (5c).
- (5) a. $[\![\text{open}]\!] = \lambda f_{vt} \lambda w_w . \exists e_v . f(e) \land e \subseteq w \land \text{open}(e)$ b. $[\![\text{the closet}]\!] \theta_{\text{theme}}] = \lambda V_{\langle vt, wt \rangle} \lambda f_{vt} \lambda w_w . V(\lambda e. f(e) \land \text{th}(e) = \iota x. \text{closet}(x))(w)$ c. $[\![\text{EVENT-CLOSURE}]\!] = \lambda e_v . \mathsf{T}$
 - Situations are optionally introduced into the compositional structure:

- \circ Lexically introduced events get situated relative to the situation's runtime, RT_s (same role as reference time in Reichenbach 1947, or topic time).
- "Optionally", i.e., no need for situations to build up to a proposition compositionally. I'm agnostic on whether all syntactic constituents of a certain kind have a situation layer, but not all non-finite clauses do.
- Many ways to cut the pie compositionally; I will not present a fully worked out compositional system, but a crude sketch of one of the options.
- This situation-introducing modifier will do (assumptions: any further regular event modifiers undergo an appropriate type-shift; some lexical items are sensitive to whether their input has a situation layer; s is existentially closed off at the end):

(6)
$$[SIT] = \lambda V_{\langle vt, wt \rangle} \lambda f_{vt} \lambda s_s \lambda w_w. s \subseteq w \wedge V(\lambda e. f(e) \wedge e \circ s)(w)$$

4.2. Situations and Russian aspect

- Main claim: In Russian, imperfective doesn't always require a situation layer (i.e., imperfective verbs can describe unsituated events), but perfective does.
- Two types of the IPFV head: a vacuous one in (7a), combining with a situation-less verbal projection (a morphosyntactic default), or a meaningful one, e.g., one that describes events whose endpoints are situated outside RT_s:

(7) a.
$$[IPFV_{vac}] = \lambda V_{\langle vt, wt \rangle} \lambda f_v \lambda w_w . V(\lambda e. f(e))(w)$$

b. $[IPFV_{sit}] = \lambda S_{\langle vt, \langle s, wt \rangle} \lambda f_v \lambda s_s \lambda w_w . S(\lambda e. f(e) \wedge \mathsf{RT}_s \subseteq \mathsf{runtime}(e))(s)(w)$
c. $[[[open] \ SIT] \ IPFV_{sit}]]] = \lambda f_v \lambda s_s \lambda w_w . s \subseteq w \wedge \exists e. f(e) \wedge \mathsf{RT}_s \subseteq \mathsf{runtime}(e) \wedge e \circ s \wedge e \subseteq w \wedge \mathsf{open}(e)$

• There is no vacuous version of the PFV head, it always combines with a situation-full verbal projection, e.g., perfective verbs can describe events that culminate within RT_s :

(8)
$$[PFV] = \lambda S_{\langle vt, \langle s, wt \rangle \rangle} \lambda f_v \lambda s_s \lambda w_w . S(\lambda e. f(e) \wedge \mathsf{culm}(e) \subseteq \mathsf{RT}_s)(s)(w)$$

4.3. Cases at hand

- Main claim: the relevant complements in AVOID cases have a situation layer, but those in ABSTAIN cases don't.
- An independent piece of evidence is that only AVOID cases allow *odnaždy* 'once'/'one day', which I take to be a situation-level modifier/existential closure (imperfective verbs are compatible with *odnaždy* if they are part of a situation description; see (16b)):
- (9) a. Ne {*otkryvaj / otkroj} odnaždy škaf (slučajno)!
 not {*open.IPFV.IMP / open.PFV.IMP} once closet (accidentally)
 'Don't once open the closet (accidentally)!' (only AVOID)
 b. Ja {ne xoču / bojus'} odnaždy (slučajno) {*otkryvat' / otkryt'}
 I {not want / fear} once (accidentally) {*open.IPFV.INF / open.PFV.INF}
 škaf.
 closet

'{I don't want to / I am afraid that I will} once (accidentally) open the closet.' (only AVOID)

- Negated imperatives and 'not want':
 - I assume that the imperative operator (Kaufmann 2012-style) and 'want' compose with their complements in the same way in ABSTAIN and AVOID cases (not crucial):
- ['Don't open the closet!' / 'I don't want to open the closet'] = 1 in w iff $\forall w' R_{imp/want} w$:

 a. ABSTAIN: $\neg [\exists e.e \subseteq w' \land \mathsf{open}(e) \land \mathsf{ag}(e) = \mathsf{addr/sp} \land \mathsf{th}(e) = \iota x.\mathsf{closet}(x)]$ b. AVOID: $\neg [\exists s.s \subseteq w' \land \exists e.\mathsf{culm}(e) \subseteq \mathsf{RT}_s \land e \circ s \land e \subseteq w' \land \mathsf{open}(e) \land (\ldots)]$

• 'Fear':

- ABSTAIN: 'fear' encodes a relation between its subject and its complement (propositional or not) in the world of evaluation.
- AVOID: 'fear' asserts the epistemic possibility of its propositional complement and presupposes the speaker's "fearful" attitude towards it (I think this at-issue vs. not-at-issue distinction is pragmatic and, thus, don't encode it lexically):
- ['I am afraid (a.) of opening the closet / (b.) that I'll open the closet'] = 1 in w iff a. ABSTAIN: fear(sp, $\lambda w'$. $\exists e.e \subseteq w' \land \mathsf{open}(e) \land \mathsf{ag}(e) = \mathsf{sp} \land \mathsf{th}(e) = \iota x.\mathsf{closet}(x), w$) b. AVOID: $\exists w' R_{bel} w [\exists s.s \subseteq w' \land \exists e.\mathsf{culm}(e) \subseteq \mathsf{RT}_s \land e \circ s \land e \subseteq w' \land \mathsf{open}(e) \land \mathsf{ag}(e) = \mathsf{sp} \land \mathsf{th}(e) = \iota x.\mathsf{closet}(x)] \land \mathsf{fear}(\mathsf{sp}, \lambda w''. \exists s.(...), w)$

4.4. Indefinite licensing

- Main claim: The situation layer can re-license *nibud'* indefinites under negation.
- *Nibud'* vs. *ni* under negation (other implementations possible):
 - Nibud' indefinites need to "depend" on something, with a potential to co-vary (see Pereltsvaig 2008 for details). Quantification over worlds in imperatives and 'want' licenses nibud'.
 - Ni NCIs are licensed by (local enough) negation and, when licensed, block nibud'.
 - The situation layer blocks ni-NCI licensing (the negation is no longer local enough) and by doing so re-licenses nibud'.
 - Thus, in the ABSTAIN cases at hand involving negation, only *ni* NCIs are licensed, but in the AVOID cases, either one can be licensed, depending on whether the indefinite scopes above or below the situation layer:
- (12) a. $ni: \forall w'Rw \neg [\exists x \exists e] \text{ or } \forall w'Rw \neg [\exists x \exists s \exists e]$ b. $nibud': \forall w'Rw \neg [\exists s \exists x \exists e]$
- Note: it is the situation layer itself that has to block *ni*-NCI licensing (i.e., the amount of compositional structure associated with it), not quantification over situations (thanks to Hedde Zeijlstra and Anna Szabolcsi, p.c., for urging me to clarify this).

- Relevant fact: kak-nibud' can be used instead of odnaždy as a 'once'-type modifier in examples like (9), and we wouldn't want to say that it licenses itself:
- (13) a. Ne {*otkryvaj / otkroj} kak-nibud' ètot škaf! not {*open.IPFV.IMP / open.PFV.IMP} how-NIBUD' closet 'Don't once open the closet!' (AVOID)
 - b. Ja {ne xoču / bojus'} kak-nibud' {*otkryvat' / otkryt'} škaf. I {not want / fear} how-NIBUD' {*open.IPFV.INF / open.PFV.INF} closet '{I don't want to / I am afraid that I will} once open the closet.' (AVOID)
 - Another relevant fact: *nikogda* 'never' is incompatible with AVOID, suggesting that if a situation layer is present, existential temporal quantifiers bind the situation variable and, thus, can't emerge as *ni* NCIs:
- (14) a. Nikogda ne {otkryvaj / *otkroj} ètot škaf!

 NI-when not {open.IPFV.IMP / *open.PFV.IMP} this closet

 'Never open this closet!' (only ABSTAIN)
 - b. Ja ne xoču nikogda {otkryvat' / *otkryt'} ětot škaf. I not want NI-when {open.IPFV.INF / *open.PFV.INF} this closet 'I don't want to ever open this closet.' (only ABSTAIN)
- *Nibud*' under 'fear' (situations don't play a role):
 - ABSTAIN-type 'fear' doesn't license *nibud*' indefinites (nothing for them to depend on).
 - AVOID-type 'fear' licenses *nibud*' indefinites thanks to the quantification over worlds.
- I assume the main insight extends to English *some* re-licensing, with the caveat that various types of indefinites have different licensing conditions in Russian and English.

4.5. Pragmatics of prevention

- Main claim: In ABSTAIN vs. AVOID cases, the choice to have a situation layer is driven by global pragmatic considerations on how unwanted scenarios can/should be prevented.
- Assumption: Introducing a situation layer (when it is not obligatory for syntactic reasons) needs to be justified.
- Intuitions:
 - In all three environments at hand, we directly or indirectly infer that the speaker (imperatives) or experiencer ('not want', 'fear') considers certain scenarios undesirable.
 - In the case of accomplishments, this attitude can be about a certain outcome (event culmination) or about the activity (potentially) leading to it.
 - If the attitude is about the activity rather than the outcome, we don't need to include the event culmination and will thus have imperfective no matter what.
 - If the attitude is about the outcome, whether we include the event culmination in our description (and, thus, have to introduce a situation layer) depends on whether we think it is possible to "nip it in the bud".

• Illustration:

- In (15a), the speaker doesn't want the addressee to partake in any door opening whatsoever because of the potential risk of the activity itself and, thus, goes for an unsituated event description (ABSTAIN).
- In (15b), the speaker doesn't want the end-state of the door being open to obtain.
 - If they think this outcome can be prevented by the relevant agent not engaging in any door opening events whatsoever, they should go for an unsituated event description (ABSTAIN).
 - If they don't think that all such events can be prevented (e.g., if the activity leading to the end-state cannot be controlled or might not even be recognized by the agent as something that can result in a certain end-state), they have to go for a situation description containing the end-state (AVOID).
- (15) a. Ne {otkryvaj / *otkroj} ètu dver'! Spinu nadorvëš'. not {open.IPFV.IMP / *open.PFV.IMP} this door back strain.FUT.2SG 'Don't [try to] open this door! You'll strain your back.'
 - b. Ne {otrkyvaj / otkroj (slučajno)} ètu dver'! Za nej not {open.IPFV.IMP / open.PFV.IMP (accidentally)} this door behind it monstr.

monster

'Don't {[intentionally] / (accidentally)} open this door! There's a monster behind it.'

- Evidence for such global reasoning, divorced from specific lexical items, from complex situation descriptions. E.g., in (16), the part of the situation outside the agent's control is if they see a monster or hear a scraping sound; the closet opening is intentional (as indicated by the purposive clause), and the aspect choice is determined solely by its placement relative to RT_s.
- (16) a. Ja ne xoču odnaždy otkryt' škaf, čtoby dostat' noski, i uvidet' I not want once open.PFV.INF closet to get socks and see.PFV.INF tam monstra.

there monster

'I don't want to once open the closet to get socks and see a monster there.'

b. Ja ne xoču odnaždy otkryvat' škaf, čtoby dostat' noski, i I not want once open.IPFV.INF closet to get socks and uslyšat' skrežet.

hear.PFV.INF scrape

'I don't want to once be opening the closet to get socks and hear a scraping sound.'

5. (Un)related issues

- Subject obviation (e.g., Farkas 1992; Schlenker 2005), illustrated in (17) for French, is orthogonal to ABSTAIN vs. AVOID, as the latter distinction obtains when there is no obviation.
- (17) a. Je veux partir. (obligatory de se)
 - I want leave.inf
 - 'I want to leave.'
 - b. Je veux que je parte. (obligatory non-de se)
 - I want that I leave.SUBJ
 - 'I want that I leave.'
 - As we have seen, the ABSTAIN vs. AVOID distinction obtains for non-finite clauses controlled by the matrix subject.
 - It also holds for cases when there is no control by the matrix subject:
- (18) Context: I am directing a movie and...
 - a. ... I am having second thoughts about a certain scene.

Ja ne xoču, čtoby Nina ubivala Anju (v ètoj scene).

I not want that.SUBJ Nina kill.IPFV.SUBJ Anya (in this scene)

'I don't want Nina to kill Anya (in this scene).' (ABSTAIN)

b. ... I want to make sure my actors are safe.

(Prover'te rekvizit!) Ja ne xoču, čtoby Nina (slučajno) ubila (check prop) I not want that.SUBJ Nina (accidentally) kill.PFV.SUBJ

Anju.

Anva

'(Check the prop!) I don't want Nina to (accidentally) kill Anya.' (AVOID)

- Root modals are also sensitive to the ABSTAIN vs. AVOID distinction:
 - Assumption: you can only impose obligations on people for things they can control.
 - Obligation regarding the activity vs. the outcome $(\Box \neg)$:
 - (19a): Olya isn't allowed to engage in any dying event (odd, unless she or someone else can somehow control this process).
 - o (19b): Olya can't be allowed to die, i.e., we need to prevent the outcome.
- (19) a. Olja ne dolžna umirat'.

Olva not must die.IPFV.INF

≈'Olya isn't allowed to die.' (ABSTAIN)

b. Olja ne dolžna umeret'.

Olya not must die.PFV.INF

≈'You/we/etc. can't let Olya die.' (AVOID)

• Again, this is about preventability, not who the target of obligation is:

(20) a. Context: Sasha is my child, and I am giving instructions to the baby-sitter.

Saša ne dolžna vxodit' v ètu komnatu.

Sasha not must enter.IPFV.INF in this room

'Sasha mustn't enter this room.' (ABSTAIN)

b. Context: We're at war, and I am talking to my generals.

Vrag ne dolžen vojti

v gorod.

enemy not must enter.PFV.INF in city

'The enemy mustn't enter the city.' (AVOID)

- Deontic vs. circumstantial readings for nel'zja (historically 'not-can'; lexicalized $\neg \lozenge$):
 - (21a): deontic (prohibition); we want to prevent a certain outcome, so we prohibit engaging in any kind of door-opening events;
 - (21b): circumstantial (lack of ability); we don't want to prevent anything, we're just saying a certain outcome can't be obtained.
- (21) a. Ètu dver' nel'zja otkryvat'.

this door NOT-CAN open.IPFV.INF

≈'This door mustn't be opened.' (ABSTAIN)

b. Ètu dver' nel'zja otkryt'.

this door NOT-CAN open.PFV.INF

≈'It's impossible to open this door.' (neither ABSTAIN, nor AVOID)

• Semelfactive and minimizers:

- Semelfactive perfective verbs aren't always associated with unintentional actions in the environments at hand, e.g.:
- (22) a. Už i ne vzgljani na nego! already MIN not look.PFV-SEMELF.IMP at him ≈'You can't even cast a single glance at him!'
 - b. Ja bojus {i / daže} vzgljanut' na nego.

I fear {MIN / even} look.PFV-SEMELF.IMP at him

'I am afraid of casting a single glance at him.'

- Intuition: in minimizer contexts, the smallest possible events need to be prevented, and semelfactives describe just such events (w/no further internal structure).

• Non-negated imperfective imperatives:

- Sometimes they convey lack of speaker investment/urgency (permissions, polite requests), but sometimes it's the opposite:
- (23) A: Možno ja doem tort?

may I eat-up.PFV.FUT.1SG cake

'May I finish the cake?'

B: (i) Doedaj.

eat-up.IMP.IPFV

≈'Sure, finish it.' (permission)

- (ii) Snačala sup doeš'! first soup eat-up.IMP.PFV 'First, finish the soup!' (command)
- (24) a. Vstavaj potixon'ku.
 get-up.IPFV.IMP gradually
 ≈'Start the process of getting up.' (no urgency)
 - b. Vstavaj nemedlenno! get-up.IPFV.IMP immediately 'Get up now!' (very urgent)
 - Intuition: the non-urgent cases of imperfective don't include the culmination because the speaker doesn't care or doesn't want to impose too much on the addressee; the urgent cases are about the immediate situation (the RT_s is now), so the culmination is outside RT_s . Cf. the (rude) past tense commands (the RT_s is like 5 minutes ago):
- (25) Vstal i vyšel!
 get-up.PAST.MASC.SG and leave.PAST.MASC.SG
 'Get up and leave!'
- Counterfactual uses of imperative forms do not imply wanting to prevent (or assure) anything; such imperative forms are always part of situation descriptions, and their aspect is determined solely by the placement of the events they describe wrt RT_s:
- (26) a. Ne otkroj ja dver' tak bystro, xuligany by uspeli not open.PFV.IMP I door so fast pranksters SUBJ have-time.SUBJ ubežat'.
 run-away.INF

'Had I not opened the door so fast, the pranksters would've had time to run away.'

b. Ne otkryvaj ja dver' tak gromko, Saša by ne prosnulas'.
not open.IPFV.IMP I door so loud Sasha SUBJ not wake-up.SUBJ
'Had I not been opening the door so loudly, Sasha wouldn't have woken up.'

6. Outro

- Accomplishments:
 - I have proposed a uniform, principled account of aspect and indefinite licensing facts from Russian in a natural class of environments, which are sensitive to the same pragmatic considerations about prevention.
 - I have also outlined a sketch of a semantics that combines events, situations, and worlds within a single ontology and a single compositional structure.
- Moving forward:
 - Explore the issues discussed in section 5 further.
 - Work out the details of the event-situation-world semantics and its applications to various event-related issues (e.g., anaphora to events vs. situations, "negative events").

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