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(Relativized) Minimality, Datives, and Reflexive Suffixes

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Mne ne çitaetsja:
(RELATIVIZED) MODALITY, DATIVES AND
REFLEXIVE SUFFIXES[*]

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0. Introduction

In this paper I discuss some ideas for the analysis and interpretation of the Russian Dative Impersonal Reflexive Construction (DIRC) in (1), which contrasts with the regular active version in (2).

(1)   mne   ne   çitaetsja[1]
        me:Dat not read:3sgPRES.RFL

(2) ja   ne   çitaju
    I:Nom not read:1sgPRES
    "I don't read / I'm not reading"

The main characteristics of DIRC in (1) are the following:[2]

1. First,what seems to be the subject appears in the Dative. So, (3), with the Nominative *ja* instead of the Dative *mne*, is ungrammatical (but compare with the grammatical (2)).

(3)   *ja   ne   çitaetsja
        I:Nom   not   read:3sgPRES.RFL

2. Second, the presence of the reflexive suffix *-sja*, is required:[3]

(4)   *mne   ne   çitaet
        me:Dat not read:3sgPRES

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[1]Since the interpretation of DIRC is controversial and, precisely, the object of discussion in section 1., I will avoid giving any translation for it and, instead, will only provide word-by-word glosses until the matter is settled.

[2]This is not to say that these are the *only* properties of DIRC. There are other properties that have been observed with respect to DIRC (cf. Schoorlemmer 1994), but the ones in (3)-(8) are the ones that I consider crucial to grasp the essence of the configuration.

[3]This suffix has two allomorphs: *-sja* is used after consonant and *-s'* after vowel. Like its Romance counterpart SE, this suffix appears in a variety of configurations: reflexive/reciprocals; pronominal verbs; as an intransitivizer; and to form (medio)pasives, among others.

3. Third, the verb shows up in the default 3rd person singular. This means that there is no Person or Number agreement present. So, (5) with a 1st person singular marker in the verb is ungrammatical.

(5)   *mne   ne   çita**ju**s'
        me:Dat not read:**1sg**PRES.RFL

Also, in the past, where there is Gender agreement, the marking on the verb is always Neuter:

(6)   Mne   ne   çita**lo**s' ⁴
        me:DAT   not   read:**NeutPAST**.RFL

4. An adverb may appear, as in (7)

(7)   mne xoroßo çitaetsja
        me:Dat well read:3sgPRES.RFL

5. And, finally but most importantly, the expression in (1) carries modality. In the words of Borras and Christian (1971), "disinclination or incapacity to perform an action". This has usually been rendered with any of the three alternatives in (8):

(8)   i. I don't feel like reading
        ii. I'm not in the mood for reading
        iii. I can't read

        However, the inadequacies of these expressions to fully capture the kind of modality in (1) will become apparent immediately.

From all the properties in (3) thru (8), the crucial one and the one to be the backbone of my analysis is precisely the last one, the modality carried by (1).

The goal of this paper is twofold: first, to establish the meaning of (1); and, subsequently, to propose an analysis that both yields that meaning and accounts for all the properties in (3)-(8).
The paper is organized as follows: The first section is devoted to elucidate the intricacies of the modality in (1); the second one deals with the Dative NP and establishes what kind of argument it is. Next, I present my initial proposal (sections 3. and 4.), and finally (section 5.), in the light of the discussion in the previous sections, I turn to the role of the adverb mentioned with respect to (7).

1. The Kind of Modality in (1).

For the purposes of establishing the kind of modality behind (1), I will rely on the theoretical frame established by Kratzer (1991) and her previous work.
Kratzer's main idea is that modality is a relativized notion. Modal words are associated with a variety of readings: epistemic, dynamic, deontic, ... Kratzer claims that modal words are not really ambiguous, rather they just need some further specification about how they

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⁴The Past morphemes inflect for Gender and Number, but not for Person; they are the following: *-lo* (Neut.Sg.), *-la* (Fem.Sg.), *-l* (Masc.Sg.) and *-li* for the plural.

should be understood. Take, for instance, the cases in (9):

(9)   a. I can lift this box
        b. I can be the person you are looking for

In (9)a., *can* is interpreted as 'can. given my physical ablilities', as a posibility in view of my physical circumstances (and the general characteristics of our world). In (9)b., on the other hand, *can* is more readily interpreted as 'can. in view of the available evidence', a possibility given what we know.
This additional information needed to properly interpret a modal word, the *kind of modality* involved, is what Kratzer calls Conversational Background. The modal force of a modal word has to be interpreted with respect to these Conversational Backgrounds.[5]
The Conversational Background may be provided contextually (as in (9)), or linguistically, as with the italicized phrase in (10):

(10)   *In view of what you are telling me*, I can be the person you are looking for.

Conversational backgrounds that determine the *facts* relevant for the interpretation of a modal are **realistic** conversational backgrounds;[6] they are also referred to as *Modal Bases*: In (9)a., the *relevant facts* are my physical conditions or circumstances - the modal base is, thus, circumstantial; in (9)b., the relevant facts are the information that we have (what we know): the modal base is epistemic. In both cases, the modal force (possibility) is interpreted *relative to* the corresponding modal base. The table in (11) gives an overview:

(11)

Modal Force	**Modal Base** (Realistic Conversational Background: facts)
possibility *necessity*	*circumstantial* (in view of the circumstances) *epistemic* (in view of the evidence)

Let us consider another example:

(12)   I could go to Paris.

I could go to Paris may be interpreted as something like 'in view of my physical conditions or my general circumstances (maybe I had a car, or maybe I was the only one that didn't catch that virus, or maybe I found someone to feed my cats), in view of all that, the possibility existed for me of going to Paris'. In this case, the modal is interpreted with respect to a Circumstantial Modal Base. If, on the other hand, *I could go to Paris* is interpreted as 'given what we know and how things are developing (we know that the company has established prizes for people reaching some sales quotas, we know that the prize for this year is a trip to Paris, and that my sales volume is reaching that quota...), it is possible… for me to go to Paris', then the possibility modal is being interpreted with

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[5]More concretely, sentences headed by modals express a proposition only if a conversational background has been provided. For details, cf. Kratzer (1991).
[6]Cf. section 5. for discussion of the other type of Conversational Background that Kratzer (1991) identifies.

respect to an Epistemic Modal Base:[7]

(13)   a. Given my circumstances (physical or other), I could go to Paris.
<div align="right"><- Circumstantial Modal Base.</div>

       b. Given what we know and how things are developing, I could go to Paris.
<div align="right"><- Epistemic Modal Base.</div>

Cast in the more traditional terms of accessibility relations, modal bases determine for every world the set of worlds which are accessible from it, that is, they determine precisely the accessibility relations. Epistemic modal bases are functions that assign to every possible world a set of propositions which constitute the body of **knowledge** in that world; circumstantial modal bases are functions that assign to every possible world w a set of propositions which constitute the **facts about the nature** of things in w.

In general, as mentioned above, Modal Bases may be provided contextually, like in the case of (12). Notice also that in the case of (12) under the interpretation of (13)a., the range of circumstances that are relevant is very wide. This doesn't have to be so: it is a well-known fact about modals that they can specialize for the kind of circumstances involved, the circumstances that are relevant for the interpretation of the modal.[8] Certain modal may require some special kind of circumstances to be the relevant ones for its interpretation. The Hungarian case in (14) is an example.

(14)   a. én nem **tudok** aludni (nagy a zaj)   (Hungarian)
          I   not   can   sleep   big the noise
               'I can't sleep (because the noise is too big)
       b. én nem **bírok** aludni (nekem fáj a fejem)
          I   not   can   sleep   me:DAT hurts the head-my
               'I can't sleep (because I have a headache)'

The modal word *tud* in (14)a. specializes for external circumstances: the relevant facts for my inability to sleep are those noises out there. On the other hand, *bír* in (14)b. specializes for internal circumstances: in this case I can only blame my own headache for my sleepless night. This is summarized in the table in (15):

(15)

	Modal Force	*Modal Base*
tud	possibility	circumstantial - external
bír	possibility	circumstantial - internal

Let me now go back to (1). (1) can be uttered in a situation in which, having had all sorts of problems, my mind is too upset to concentrate on any reading. In that sense, it can be rendered by (8), repeated here as (16)a., b. or c.:

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[7]This has a direct counterpart in what has been called Root and Epistemic modality, respectively: *root* modality comprises all occurrences of modals with a circumstantial modal base, and *epistemic* modality comprises all occurrences of modals with an epistemic modal base. (Cf. Kratzer (1991, p.650).
[8]Further differentiation within an epistemic modal base is as possible as within a circumstantial modal base.

(16)   a. I don't feel like reading.
        b. I'm not in the mood for reading.
        c. I can't read.

However, (1) cannot be uttered in a situation in which, having eaten a lot, my stomach is too upset to let me do anything else but lie down in bed and digest whatever I ate. In that situation, all English options in (16) are adequate, but not so the sentence in (1).
In general, whenever the reasons for one's (in)ability can be traced back to one's mental state, the configuration in (1) can be used. Whenever the reasons or circumstances are of a different nature (physical, external or internal, or any other kind), (1) will be inadequate.
From this and similar evidence, we can say, then, that the circumstances that are relevant in interpreting utterances like (1) must be **psychological** in nature, and conclude that the modality in (1) is specialized for psychological circumstances.
The modality in (1) is, thus, interpreted as in (17):

(17)   Modality in (1):

Modal Force	*Modal Base*
Possibility	Circumstantial - psychological
	[in view of (x's) psychological circumstances]

Now we can understand why the English alternatives in (16) were adequate in some cases, but not in others. (16)c. picks up the modal force in (1), namely *possibility*; (16)a. and b. pick up the psychological restriction on the (circumstantial) modal base: that is what the sentences in (16) share with (1). However, the 'feeling' of the English sentences (16)a. and b. is not restricted to *psychological* feeling; it can also be a *physical* feeling, and in that sense, they depart from (1), and thus, become inadequate renditions of (1). In the same line, English *can* is not restricted to psychological circumstances (although it accepts that kind of modal base); so, whenever *can* is used without that restriction on its modal base, it will become inadequate for something like (1). That is the case of the 'too-much-eating' scenario depicted above.

2. The Dative

Having established the kind of modality in (1), let me now turn to the nature of the Dative NP.

2.1. Behaviour of Subject.

The Dative NP in DIRC shows the behaviour of a structural Subject. Like Nominative subjects (and unlike oblique Dative constituents), the Dative NP in (1) can control PRO, can be the antecedent for the anaphor *sebja* and, finally, it can also bind the anaphoric possessive adjective *svoj*. This subject-like behaviour can be observed in (18) thru (20).

2.1.1. Control of PRO in Gerunds.

In general, the PRO in a Gerund construction, like the one in (18), can be controlled by the Nominative subject of the main clause: this is the case of (18)a.. Oblique Datives, on the other hand, cannot be the controllers for such PROs, as is shown in (18)b.

The Dative of (1), however, patterns together with the Nominative in (18)a., and unlike the oblique Dative in (18)b.: it is the controller for PRO, as (18)c. shows.[9]

(18)   a. **Ja$_i$** sosredotochenno çitaju, PRO$_i$ sidja pod lampoj
       I:NOM engrossedly:ADV read:1sgPRES   seat:GER next lamp
           'I get totally absorbed in the reading, while seating next to the lamp'

      b. mama$_i$ **mne$_j$**   çitala, PRO$_{i/*j}$ sidja u okna
       mom:NOM me:DAT read:FemPAST   seat:GER by window
           'Mom read to me, while she was seating by the window' (NOT '...while I was sitting…']

      c. **Mne$_i$** ne çitalos', PRO$_i$ sidja u okna
      me:DAT not read:NeutPAST.RFL   seat:GER by window
           'I didn't feel like reading/I couldn't read [given my psychological conditions],
             while seating by the window'

2.1.2. Antecedent for anaphor *sebja*.

In general, a Nominative subject can be the antecedent of the reflexive anaphor *sebja* [(19)a.], but not so an oblique Dative [(19)b.]. In this case, again, one can observe the same pattern as in (18): the Dative in (19)c., like the Nominative subject in (19)a. and unlike the oblique Dative in (19)b., is the antecedent for *sebja*.

(19)   a. U sebja$_i$ **ja$_i$** xoroßo rabotaju
       at self:GEN I:NOM well:ADV work:1sgPRES
           'At my place I work well'

      b. U sebja$_{i/*j}$ mama$_i$ **mne$_j$** çitala
       at self:GEN   mom:NOM me:DAT read:FemPAST
           'At her place, my mother read for/to me' / * 'At my place, my mother read to me'

      c. U sebja$_i$ **mne$_i$** xoroßo rabotalos'
      at self:GEN   me:DAT well:ADV work:NeutPAST.RFL
           'At my place, I can work well [given my psychological circumstances]'

2.1.3. Antecedent for anaphoric possessive *svoj*.

As in the previous two cases, the Dative in (1) patterns together with Nominative subjects, and unlike oblique Datives, with respect to the anaphoric possessive adjective *svoj*: the Nominative NPs in (20)a. and b., and the Dative NP in (20)c. may be the antecedents for *svoj*, whereas the oblique Dative in (20)b. cannot.

(20)   a. **ja$_i$** çitaju v svoej$_i$ komnate
       I:NOM read:1sgPRES in own:PREP room:PREP
           'I read in my own room'

      b. mama$_i$ mne$_j$ çitajet v svoej$_{i/*j}$ komnate
       mom:NOM me:DAT read:3sgPRES in own:PREP   room:PREP
           'My mother reads for me in her own room' / *... in my own room'

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[9]Contrary to Schoorlemmer's 1994 claim that they cannot control (cf. her (52)c.). The problem with her test is that she uses purpose infinitives and, as we shall see (2.2.), those are incompatible, for independent reasons, with DIRC.

       c.DaΩe v svoej$_i$ komnate   **mne$_i$** ne   çitalos'
           even in own:PREP   room:PREP me:DAT NEG read:3sgNeutPAST.RFL
               'Even in my own room I can't sleep [given my psychological circumstances]'

2.2. Not Behaviour of an Agent.

On the other hand, the Dative NP in (1) does not show the behaviour and properties of an Agent. More specifically, it does not tolerate the presence of Class I adverbs, claimed to require an agentive NP in the clause,[10] as the contrast in (21) shows:

(21)   a. ja   naroçno / oxotno   tantsevala
             I:NOM deliberately/volontarily   dance:FemPAST
                'I deliberately / volontarily danced'
         b. *mne   naroçno / oxotno   ne   tantsevalos'
           me:DAT deliberately / volontarily not dance:NeutPAST.RFL

Likewise, sentences of the type in (1) do not accept purpose clauses, typically associated with agentivity. See the contrast in (22):[11]

(22)   a. ja   xoroßo   rabotala, çtoby   ugodit' svoemu naçal'niku.
             I:NOM well:ADV work:FemPAST so.that please:INF self's:DAT boss:DAT
                'I worked well to please my boss'
         b. *mne xoroßo   rabotalos',   çtoby ugodit' svoemu naçal'niku.
           me:DAT well:ADV work:NeutPAST.RFL so.that please:INF self's:DAT boss:DAT

2.3. The Meaning of the Dative NP.

Given all the previous evidence, i.e., that **(i)** the external argument of the verbs *çitat'*, 'to read', *rabotat'*, 'to work' and *tantsevat'*, 'to dance' (those in (18)-(22)) is associated with agent interpretations; that **(ii)** the Dative NP in (1), and for that matter, in (18)c.-(20)c., (21)b. and (22)b. does not have such an agentive interpretation; and **(iii)** that the verbs in all those cases are unergatives with no other argument available, we can conclude that the Dative NP in question is not the argument of the inflected verb itself.

The crucial point in understanding the nature of the Dative NP is its interpretation: the Dative NP is interpreted as denoting the individual whose psychological circumstances are relevant for the interpretation of the modality in (1) as established in (17).

The relevance of this fact, together with the evidence in this section 2. (showing that the Dative is not the argument of the inflected verb), will become apparent in the next section where I will elaborate on how the meaning of the dative NP interacts with the kind of modality carried by (1).

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[10]Cf. Jackendoff (1972).

[11]Even if the presence of purpose clauses is an instance of event-control rather than agent control, the ungrammaticality of (22)b. may be an indication of the stativity of its predicate. But if the predicate is stative, then, there can be no agent, which is precisely what we wanted to show.

3. A Proposal

Before I make explicit my analysis, let me introduce a notion proposed in Brennan's 1993 thesis: the difference between modal predicates and modal operators. Brennan identifies two types of modals, as in (23):

(23)   (VP-) Modals: Two Analysis[12]   [Brennan 1993:2.1.8]

        modal predicate: $\lambda P \lambda x$ (modal (^P)(x))

        modal (VP-)operator: λP (modal (^P))

Modal predicates denote relations between individuals and properties; they take, thus, two arguments, as opposed to *modal operators* that take only one 'argument'.[13] The 'extra argument' of a modal predicate, the one denoting the individual, has the property of further restricting the modal base. Remember that modals had to be interpreted with respect to a *modal base* that determined the accessibility relations. In a modal predicate, the modal base will be interpreted relative to its i-argument (the argument denoting the individual), in other words, the modal base will be 'keyed' to the i-argument,[14] the syntactic subject, in Brennan's work. Whenever the modal base of a given modal is keyed to the subject, we can talk about a *modal predicate*.
Let's consider an example, (9)a., repeated here:

(9)   I can lift this box

 In (9) the modal base restricting the modal is '**my** (physical) circumstances', the physical conditions that are relevant for the interpretation of the modal are my physical conditions, and not Thelma's or Louise's or Clark's; the worlds where especifically *my* physical conditions are the same, are the worlds that are accessible. The modal base (circumstantial) is interpreted relative to the individual denoted by "I", it is interpreted as *my* circumstances; in this sense, the modal base is keyed to the subject, and we can say that the subject is the subject of the modal.

In this same sense, given that the Dative NP in (1) denotes the individual *whose* psychological circumstances are relevant for the interpretation of modality, we can say that the modal base is interpreted relative to (the denotation of) the Dative NP; in other words, the modal base is keyed to (the denotation of) the Dative NP.

Summarizing our findings up to now: we have a modality specialized for psychological circumstances; we have a Dative NP denoting the individual whose psychological circumstances are relevant (i.e., restricting the modal base) and showing the behaviour of a subject, and we have a notion of modal predicate which allows a modal to have two arguments.

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[12]The reference to VP in (23) is tied to her particular analysis of English modals, and is not crucial to the analysis here.

[13]Notice the similarities with other treatments of root and epistemic modals as transitive or intransitive verbs, or as control or raising predicates.

[14]In Kratzer's account, modal bases involved sets of *propositions*; under Brennan's account, she has to deal with 'bundles of property expressions' (cf. 2.2.). For her final specific reformulation of accessibility relations, cf. her section 2.2.3.
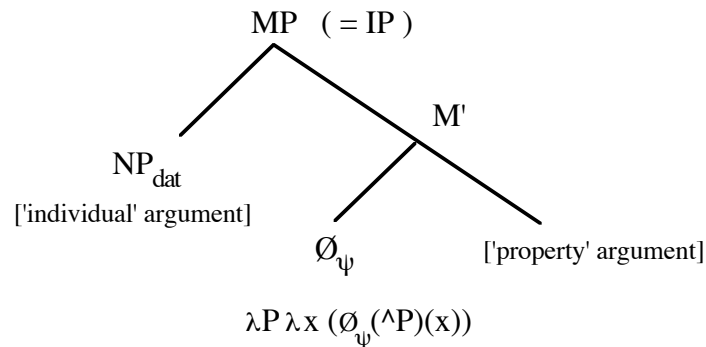
Based on all this, I will propose the following:

(24)   In DIRC [(1)] there is an empty modal head $\emptyset_\psi$, a modal predicate [cf.(23)] associated with a possibility modal force interpreted with respect to a modal base specialized for psychological circumstances [cf.(17)]. It selects two arguments, denoting, respectively, an individual (the one for whom the possibility exists) restricting the psychological modal base and realized by the Dative NP, and a property.
The denotation of $\emptyset_\psi$ is a relation between individuals and properties.

Finally, then, the meaning of (1), according to the proposal in (24) is as in (25):

(25)   Given *my* psychological circumstances, I can't read (there is no possibility for me to read).

and the syntactic representation for the modal projection, as in (26):

(26)

MP   (= IP)

M'

NP$_{dat}$

['individual' argument]

$\emptyset_\psi$ ['property' argument]

$\lambda P \, \lambda x \, (\emptyset_\psi(^\wedge P)(x))$

This proposal captures the fact that, as mentioned in the previous section, the Dative NP behaves like a non-agentive subject, indeed like the subject of a stative predicate, which is in fact what it is: the subject of a modal predicate.

An interesting consequence of this proposal that analyzes the Dative NP as the subject of the modal head, is that it accomplishes to unify (1) with other modal constructions in Russian that also take a Dative subject, be it an overt modal as in (27)a. or again an empty modal as in (27)b.:[15]

(27)   a. vam   nuzhno   poexat'   v   sanatorij.
          you.Pl:DAT necessary:MOD-PRED go:INF   to   hospital:ACC
                    'You need to go to the hospital'

        b. mne $\emptyset$ uxodit'. [from G&F (1991), their (6)]
            me:DAT   'must'   leave-INF
                    'I have to leave'

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[15]For an overview and proposal about how these subjects end up in the Dative, cf. Kondrashova (1994).

4. The Property Argument.

In the proposal in (24), the empty modal denotes a relation between individuals and properties. In the two previous sections I talked about the syntactic properties and semantic contribution of the i(ndividual)-argument. This section will be devoted to the property argument.

By the end of last section, the similarity in the syntactic realization of the i-argument among different modal constructions (basically, those in (1) and (27)) was pointed out. Note, however, that the syntax of the property argument is different in (1) and in (27). In (27) it has the shape of an infinitive; in (1), on the other hand, it is represented by a tense inflected verb with a reflexive suffix.

Infinitives may usually denote properties, but a tense inflected verb means that by the time the sentence enters the interpretational component, that verb has raised to the head of IP (whatever maximal projection one chooses as the highest one, but at least TP). And if we assume a VP-internal subject hypothesis, the denotation of an IP is hardly that of a property.

In order to get the inflected verb with the reflexive suffix to denote a property, I will make a proposal based on an interpretational rule proposed for totally independent reasons in Heim & Kratzer (1993).

But first, let's determine the syntactic structure corresponding to this part of the tree. I will assume a split inflexion, as in Chomsky (1993 and others). More specifically, I will follow the tradition (begining with Borer (1982) and more recently adopted for romance SE in Mendikoetxea (1992)) that analyzes clitics as the head of an Agr projection, and I will propose that the reflexive suffix *-sja* occupies the head of AgrsP, as shown in (28) below.[16] Notice that, as mentioned in section 2., the verbs that appear in DIRC are unergatives, thus, there is only one Agr^o for *-sja* to head. Given the characteristics of *-sja*, namely its pronominal nature, and at the same time its lack of specific featural content,[17] I will assume that *-sja* is the minimal expression of a pronominal head, that is, that its contents consists of just an index.

Since the inflected verb has an external agent θ-role to assign but there is no overt element for it, and since the presence of tense rules out the possibility of PRO, let us assume that the non-overt element bearing the agentive external θ-role of the inflected verb is *pro*.

Assuming, a VP-internal subject hypothesis, a *pro* is, thus, generated in the Spec-VP as the realization of the agentive argument of the verb, and raised to Spec, TP to check its Case.

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[16]The claims about the syntactic structure of DIRC concern the structure of the configuration at the interface level of LF. No claim is made about the derivation at the point of Spell Out.

[17]It has no specific marking for either Gender or Number or Person.

(28)

Agr_sP [property argument]

V-***sja*** $_i$

TP

pro $_i$

t_v

VP

t_{pro} t_v
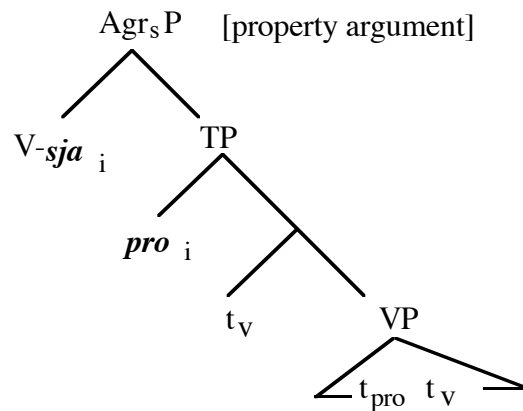
The crucial elements in this representation are the suffix *-sja* and the pronominal empty subject *pro*. As a pronominal, *pro* is just a variable. On the other hand, I have proposed that *-sja* just carries an index (in fact, is just an index).

The main idea behind the solution that I will propose is that the *-sja* suffix, or its index, acts as a λ-operator, binding the variable introduced by *pro*.[18] For totally independent reasons, Heim and Kratzer (1993) propose a rule that accomplishes just that, the rule of Predicate Abstraction:

(29)   <u>Predicate Abstraction Rule</u>

For any variable assignment g:

if α is a branching node whose daughters are an index i and a node γ,

then $[[\alpha]]^g$ is that function f such that, for any x∈D, f(x)= $[[\gamma]]^{g\ x/i}$.

If we look back at (28) now, we'll see that that structure fits (29) perfectly: α, the branching node, is AgrsP, and its daughters are an index (namely, the one of *-sja*) and γ, the TP node in (28). The effect that the index i in Agr has is to make a predicate out of the sentence 'x reads', namely, the predicate that denotes (the characteristic function of) the set {x∈D: x reads}.
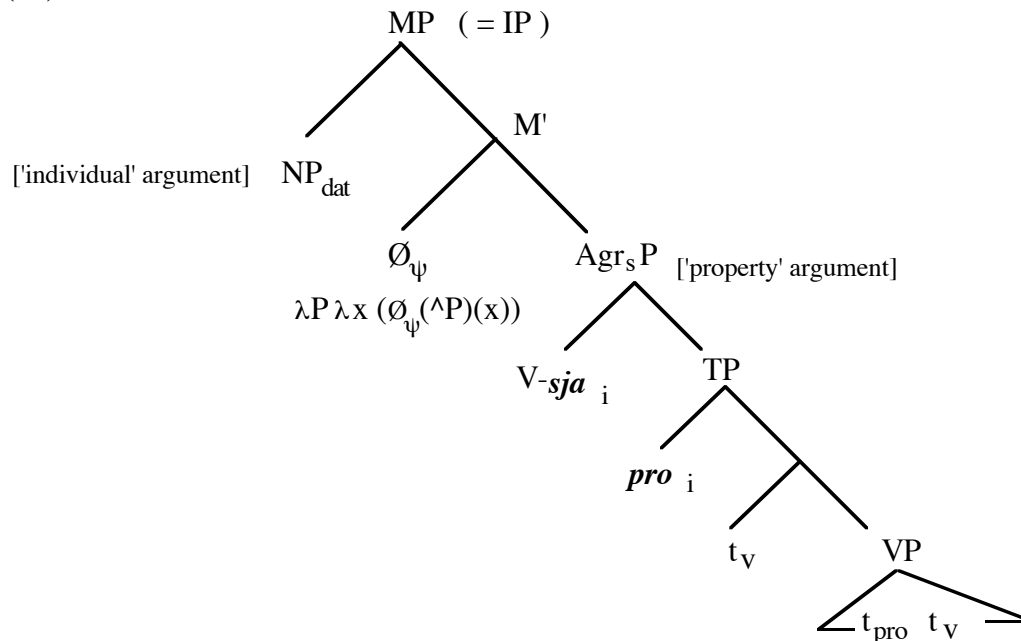
The interpretation of the Agr_sP, then, fits perfectly as the first argument of the modal head, as specified in (23) and (24).[19]

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[18]If *-sja* in $AgrS^o$ is a λ-operator for *pro*, and if there is something like existential closure at the level of VP, then we might have an extra reason to move *pro* out of the VP: within the VP *pro* is a variable under the scope of existential closure and the λ-operator could not bind it.

[19]An additional advantage of treating *-sja* as a λ-operator is that it formally captures the idea traditionally associated with the different manifestations of SE/SI in various languages that it "absorbs" or "suppresses" a θ-role. The consequences of such a suggestion are far-reaching and, thus, out of the scope of this work, but worth exploring.

The final representation is as in (30):

(30)

```
                        MP  ( = IP )
                       /       \
                      /         M'
                     /         /  \
['individual' argument]  NP_dat   /    \
                             Ø_ψ       Agr_s P   ['property' argument]
                        λP λx (Ø_ψ(^P)(x))      /   \
                                          V-*sja* i   TP
                                                     /  \
                                                 *pro* i  \
                                                      /    \
                                                    t_V    VP
                                                          /   \
                                                    t_pro  t_V
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5. The Adverb as the Ordering Source.

Let us finally talk about the property mentioned in (33): the presence of an adverb. I repeat the example in (31).

(31)   mne   xoroßo   çitaetsja
        me:DAT well:ADV read:3sgPRES.RFL

I will begin by laying out the properties and characteristics of the adverbs that may appear in DIRC; next I will present the theoretical account for their presence, based again on Kratzer's notion of relativized modality.

Initial descriptions of these adverbs present them as 'manner' adverbs. In fact, they are not manner adverbs or, rather, they are not interpreted as manner adverbs. Although in some other contexts they could be interpreted as such, this is not the case in DIRC. The contrast in (32) between a DIRC and its active counterpart is clear in this respect:

(32)   a. mne xoroßo   rabotaetsja
        me:DAT well:ADV work:3sgPRES-RFL

        b. ja xoroßo   rabotaju
        I:NOM well:ADV read:1sgPRES

In (32)b., the active version ('I work well' or 'I am working well'), the adverb *xoroßo* can be interpreted as qualifying the way in which my work is going: my work is good. However, in (32)a. such an interpretation is unavailable. (32)a. cannot mean 'I can work well (given my psychological circumstances)'.
In the same line, adverbs that are clearly and unequivocally manner adverbs lead to

ungrammatical results:

(33)   *mne   vnimatelno / octoroΩno   rabotaetsja
        me:DAT carefully1:ADV carefully2:ADV work:3sgPRES-RFL

According to McConnell-Ginet's 1982 classification of adverbs, manner adverbs are what she calls Ad-V, adverbs whose meaning combines directly with the verb's meaning. To this same group belong adverbs like *mnogo* 'a lot, very much'. These too are ungrammatical in DIRC contexts:

(34)   *mne mnogo çitaetsja
         me:DAT a.lot read:3sgPRES-RFL

The adverbs in DIRC, thus, are not manner adverbs. What are they, then? They are second order evaluative predicates, the same kind that can form sentences like the following:

(35)   xoroßo[20]   (bylo),   ßto   vy   prißli
        well:ADV (be:NeutPAST) that:COMP you:2pl come:PluPAST
                'It is (was) good that you came'

The second restriction on the adverbs appearing in DIRC is that they have to be interpretable as psychological states; such is the case of *skuçno* 'boringly' or *udobno* 'comfortable':

(36)   a. emu   zivetsja   skuçno[21]
           him:DAT   live:3sgPRES.RFL boringly:ADV

        b. mne   udobno   çitalos',   (sidja   pod lampoj)
           me:DAT   comfortably read:NeutPAST.RFL seat:GER next lamp

Note also that the gloss that is sometimes offered for *mne xoroßo rabotaetsja* (as in (32)a.) is something like 'I am working and I feel well about it'. Also, if 'I am working well' is used for the same example, 'well' is used as a subject-oriented adverb, as in the sense of 'I'm feeling well in my working/as I work', never as conveying any information about the quality of your work (as already pointed out some paragraphs above): one could easily utter (32)a., in a situation where the work performed is actually pretty lousy. This fact about the interpretation of *xoroßo* in (32)a. gives further support to the claim that the adverbs in DIRC must be interpretable as psychological states.

To confirm this point, take a predicate adverb like *vaΩno* 'important(ly)', also a second order predicate like *xoroßo* in (35) but not a psychological state predicate; if such a predicate is used in a DIRC context, the result is ungrammatical:

(37)   *mne   vaΩno   rabotaetsja
        me:DAT importantly work:3sgPRES.RFL

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[20]Although *xorosho* in (35) is superficially ambiguous between the short neutral form of the adjective, and the adverb form, the stress pattern in other adverbs of the same type makes it clear that they are actually adverbs (e.g., *ból'no*[adv], 'painful(ly)' vs. *bol'nó*[adj], 'sick, ill').

[21]There is a considerable variation among speakers with respect to the degree of acceptability of examples like (36). In general, (36)a. seems to fare better than (36)b. Cf. fn. 26 for some speculation.

Finally, the last restriction is that adverbs in DIRC have to provide one of the ends of a gradation line, like the following pairs do: *xoroßo* 'good' vs *ploxo* 'bad'; *legko* 'easy' vs. *trudno* 'difficult'; *otliçno* 'perfect' vs. *skverno* 'bad'. Other psychological state predicate adverbs are acceptable as far as they can be (secondarily) understood as providing a line of gradation; such is the case of *skuçno* 'boring' (as opposed to *veselo* 'fun') or *grustno* 'sad' (as opposed to *radostno* 'happy'), or even *Ωutko* (not in the primary sense of 'horribly', but in the secondary sense of *ploxo* 'bad' - and, thus, opposed to *xoroßo* 'good').

Summarizing, then, the restrictions on the kind of adverb appearing in DIRC are the following:

(38) a. they are second order **evaluative** predicates (not manner adverbs);
      b. they must be interpretable as **psychological states**;
      c. they provide some sort of **gradation line**.

Let me now go back to Kratzer's Relativized Modality. Relativized Modality says that a modal is to be interpreted *relative to* a conversational background. In section 1, we saw that conversational backgrounds determining the *facts* relevant for the interpretation of a modal were *realistic* conversational backgrounds; and we called them *modal bases* (cf. (11)). Actually, this is not the whole picture. There is a second conversational background, one that has to do with *ideals*, like 'what we want','what is good for you', 'what is normal'... Conversational backgrounds having to do with ideals are *normative* conversational backgrounds.
If modal bases (realistic conversational backgrounds) determine the accessibility relations, if they determine for each world the set of worlds that are accessible from it, the second conversational background, the normative one, induces, for each world, an *ordering* on that set according to how closer or further away the accessible worlds are from the ideal, determined by 'what is good', 'what we want', etc...[22] This second conversational background, thus, functions as the *ordering source*. The ordering induced by the ordering source is on the basis of a graded notion of modality, as found in expressions like *easily/hardly possible* or *good/slight possibility*.[23]
The interpretation of modals is, thus, relativized to two parameters:[24]

(39) **Modal Force**   **Conversational Background**

	Modal Base	**Ordering Source**
	(Realistic: facts)	(Normative: ideals)
possibility	*circumstantial*	*bouletic* (wishes)
necessity	(in view of the circumstances)	*deontic* (duties)
	epistemic	*doxastic* (beliefs)
	(in view of the evidence)	*stereotypical*
		…

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[22]Again, this conversational background related to ideals can be provided contextually. In (12) under the interpretation of (13)b., for example, a *stereotypical* ordering source could be at play: 'Given what we know (how things are developing), and *given the normal course of events*, I could go to Paris'.
[23]Note that the range of modifiers accepted by modals is quite limited: they are restricted to the ones mentioned in the main text and the like, which basically work as degree modifiers. This observation makes special sense in the context of a gradation (an ordering) having been induced by the ordering source.
[24]For the advantages of this view on modals over a more standard analysis and for the specifics of how the ordering is induced, cf Kratzer (1991).

What I want to propose here is that the adverbs we have been dealing with in this section represent precisely the 'ideals' ('what feels good', 'what feels comfortable', ...), according to which the modality will also be evaluated. In other words, in the same way the phrase 'in view of what you are telling me' was the overt linguistic representation of the (epistemic) modal base in (10), the adverbs *xoroßo*, *udobno* in (32) or (36) represent the linguistic contribution to the **ordering source**, the second parameter needed for the interpretation of a modal.

In DIRC, the empty modal head is evaluated relative to two parameters: a (psychological) circumstantial modal base and an ordering source. The psychological circumstantial modal base determines the set of worlds that are accessible; the ordering source, contributed to by the adverb when present,[25] induces an ordering in that set, according to how close of far away they are from that ideal.

If this is so, the meaning of a sentence like (40) is as in (41):

(40)   mne   udobno   çitalos',   (sidja   pod lampoj)
        me:DAT comfortably read:NeutPAST.RFL   seat:GER next   lamp

(41)   **a.**

Modal expression	Modal force	Relativizer (CB) <modal base; ordering source>	1st argument	2nd argument
$\emptyset_\psi$	*possibility*	circumstantial;*udobno* (psychological);'what feels comfortable'	*çitalos'* 'read'	*mne* 'me'

       b. Given my psychological state, the possibility exists for me, given *what feels comfortable* for me, of reading.

As Kratzer points out, not every kind of modal base can combine with every kind of ordering source; epistemic modal bases, for instance, take ordering sources related to information. In this sense, one can better understand the requirement that the adverb appearing in DIRC be a *psychological* predicate adverb [cf. (38)b]: if there is a correlation between the kind of modal base and the kind of ordering source, it is no surprise that a modal base restricted to *psychological* circumstances requires an ordering source related to *psychological* states.

Likewise, if the adverb is the linguistic contribution to the ordering source, which is in the base for a graded notion of modality, it is also non surprising that the adverb provides a 'gradation line' [(38)c] along which graded notions can be established.[26]

6. Conclusions.

To summarize, then, in this paper I have presented data concerning DIRC, a Russian configuration showing implicit modality, illustrated in (1), that can best be accounted for under Kratzer's notion of Relativized Modality.

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[25]Otherwise the context is always an excellent source to provide conversational backgrounds.

[26]This view applies to those dialects that consider adverbs like *udobno* 'comfortable' and *skuçno* 'boringly' as acceptable. Those other dialects in which condition (38)b. is not applicable, would consider adverbs as simple degree words to mark the corresponding graded notion of modality, like *easily* in 'easily possible', as specified in Kratzer (1991). Cf. fn. 23.

I have explained the properties (3)-(8) associated with DIRC by postulating an empty modal head, a modal predicate with two arguments denoting a relation between individuals and properties [cf. (24) and (30)]; following Kratzer, I have shown that the interpretive peculiarities of such modal head can be best explained by a modal base restricted to psychological circumstances. Moreover, I have shown that the Dative NP argument is in fact the argument of such modal (the one denoting the individual), and I have proposed that

the *-sja* suffix on the verb acts as a λ-operator, providing the 'property' argument for the modal. Finally, I explained the presence of the adverb as the linguistic contribution to the ordering source associated with the modal.

Many other questions remain to be answered about DIRC. Hopefully the proposal developed in this paper will contribute to find some answers.

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