1. Overview

This paper discusses aspects of the subjunctive mood in Romanian. We explore the hypothesis that embedded subjunctive clauses in this language can have both de se and non-de se readings, and can be headed by either pro or PRO. We will take the following steps. First, we will argue that in Romanian, the matrix verb, rather than PRO/pro, ‘decides’ the de se vs. non-de se interpretations of subjunctive clauses; secondly, we will look at the Romanian subjunctive in interaction with the verb to know, and finally, we will identify a particular instance of the verb know in addition to the previously attested ones and sketch a semantic analysis for it.

Two puzzles concern us here. First, in the literature PRO is assumed to give rise to a de se interpretation (Chierchia 1989). However, we find unexpected availability of non-de se readings in control clauses in Romanian where (1), for example, can be used to report both de se and non-de se beliefs.

(1) Speră PRO să ajungă doctor într-o zi. [de se / non-de se]
Hope 3sg Subj. become 3sg doctor one day
a) ‘S/he hopes to become a doctor one day’ [de se]
b) ‘S/he hopes s/he becomes a doctor one day’ [non-de se]

In the non-de se case, PRO does not have a bound variable reading; what we have in (1a) is subject/syntactic co-indexation only; semantically, however, the subject ‘s/he’ in (1b) does not necessarily hold the hope about ‘her/himself’.

We propose that the availability of de se/non-de se readings in Romanian PRO headed constructions depends on the semantics of the verb embedding the subjunctive clause, i.e. it is the choice of matrix verb, and not the embedded PRO subject, that is responsible for the de se interpretation. Evidence for this will be presented in section 3 of the paper.

The second puzzle concerns the interpretation of the verb know. In contrast with verbs such as ‘want’ and ‘hope’, subjunctives embedded under ‘know’ in Romanian can only have a de se interpretation. What’s more, it seems that Romanian has two distinct instances of know, one of which, to the best of our knowledge, has so far gone unnoticed. Let us consider some illustrations. In

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1 The latter does not correlate with a distinction between de se and non-de se readings of the embedded subject.
(2), the interpretation of the verb know can be captured with Romero’s (2005) proposal for interrogative know.

(2) Ştiu cum să înot.
know1sg how Subj swim1sg
‘I know how to swim.’ → free style, butterfly, etc.

However, Romanian know with subjunctive clauses can also receive a different interpretation, reporting the subject’s ability to perform an action as self-knowledge, in (3). We label this instance ability know.

(3) Ştiu să înot.
know1sg Subj swim1sg
‘I know to swim’.

While both (2) and (3) involve self-ascription, (2) points to a certain manner of performing the action, whereas (3) points to the general ability to perform. Thus, Romanian has an overt way of resolving the ambiguity created by the English know how construction, and as we will see in section 4, it has a “built-in” de se know which quantifies over centered possible worlds\(^2\).

The paper is organized as follows. Section 2 introduces the Romanian subjunctive mood and points out some of the environments relevant to this paper. In section 3, we discuss the availability of de se and non-de se readings of the Romanian subjunctive, especially in interaction with intensional predicates such as want and know. Section 4 identifies a new instance of the verb know in Romanian in a subjunctive setting and sketches its semantic analysis. Section 5 concludes the paper.

2. The Romanian Subjunctive

The Romanian subjunctive is realized by the subjunctive marker să. With some intensional predicates (e.g. want), only embedded subjunctive clauses are allowed (4a); other intensional verbs allow only for the indicative (5a); finally, some intensional verbs allow for both indicative and subjunctive clauses in their complements, as in (6):

(4) a. Ion vrea să se joace. √ subjunctive
John want1sg Subj refl3 play3sg
‘John wants to play’.

b. #Ion vrea a se juca. # infinitive
John want1sg Inf refl3 play3sg
‘John wants to play’.

(5)  a.  Maria crede/i-a spus/a visat că Ion i-a scris.  √indicative
   ‘Mary believes/said/dreamt that John wrote to her.’
   b. #Maria crede/i-a spus/a visat să Ion i-a scris.  #subjunctive
   Mary believes/said/dreamt Subj John wrote to her
   (lit.) ‘Mary believes/said/dreamt John wrote to her.’

(6)  a. Maria știe să joace tenis.  √subjunctive
   Maria knows Subj play tennis
   ‘Maria knows to play tennis.’
   b. Maria știe că (Alex) joacă tenis.  √indicative
   Maria knows Ind. (Alex) plays tennis
   ‘Maria knows that (Alex/she) plays tennis.’

A property of the Romanian subjunctive is that with intensional verbs it gives
raise to both control\(^1\) and obviative\(^4\) readings. Control is optional in subjunctive
constructions, thus allowing for flexible binding relations with the main clause 5.
Under a control reading, we have agreement with the main subject and a bound
variable interpretation, as in (7a).

(7)  a. Vrea PRO să plece. [control reading]
   want\(_{3\text{sg}}\) Subj go\(_{3\text{sg}}\)
   ‘S/he wants to go.’
   b. (Ea i) vrea pro/ea/el să plece. [obviative reading]
   (she) want\(_{3\text{sg}}\) pro/she/he Subj go\(_{3\text{sg}}\)
   ‘She wants her/him to go.’

Summing up the Romanian facts, so far we have made the following
observations: (a) the subject of embedded clauses in control constructions is
PRO; (b) pro appears in obviative cases, it cannot be coindexed with the matrix
subject, and it can alternate with a lexical subject.

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\(^1\) In control constructions the subject of the matrix clause co-refers with the embedded
subject.

\(^4\) The term obviation refers to an obligatory disjoint reference effect holding between the
subject of a subjunctive complement and the matrix subject (Landau, 2004:856).

\(^5\) This is not possible in Spanish where when the subjunctive is used, the embedded
subject has to be of a different person than the matrix subject, in this case, 3\textsuperscript{rd} person
(even though the morphology is the same for 1\textsuperscript{st} and 3\textsuperscript{rd} person) as can be seen in (1a); the
complement of an intensional verb such as want can only be realized as an infinitival
clause when the embedded and matrix subjects co-refer, as in (1b):

(1)  a. Quiero que vaya
    want\(_{1\text{sg}}\) that SUBJ-go\(_{3\text{sg}}\)
    ‘I want him/her to go.’
   b. Quiero PRO ir
    want\(_{1\text{sg}}\) INF-go
    ‘I want to go.’
This puzzle shows that Romanian is different from other Romance languages, such as Spanish, as it can have both PRO and pro as subjects of the embedded subjunctive clauses, with different functions (e.g., control vs. non-control). In the next section, we follow up on the distinction between PRO and pro headed subjunctive clauses under propositional attitude verbs.

3. Non-De Se Readings of the Romanian Subjunctive

According to Chierchia (1989), PRO headed embedded (infinitival and gerund) clauses are inherently de se. However, Romanian does not allow embedded infinitival constructions with control verbs, hence PRO is the subject of embedded finite clauses in control constructions, whereas pro or an overt NP are the subjects of subjunctive embedded clauses in non-control constructions.

We argue that Romanian PRO constructions allow, in certain conditions, both non-de se and de se interpretations. The idea is that PRO sometimes is interpreted as a pronoun and the clause it appears in denotes a proposition, while other times, PRO is interpreted as an abstractor and the clause denotes a property; whichever the case, PRO is always ‘controlled’ (rather than having PRO as always linked to properties, and as such always de se, and pro as denoting propositions). The following scenarios illustrate these interpretations.

Scenario 1: Leo is looking at a picture and is hoping that the person in the picture will become a doctor one day.

In a case such as the one described in scenario 1, the Romanian subjunctive can be used to report de se and non-de se beliefs, in that it allows us to affirm (8) about Leo, who can either realize, or not, that the person in the picture is himself. The de se reading comes about if Leo knows that the desire is about himself, while the non-de se reading is available for a situation in which Leo’s wishes are not self-related.

(8) Speră PRO să ajungă doctor într-o zi. [de se/non-de se]

Hope 3sg Subj. become 3sg doctor one day

a) ‘He hopes to become a doctor one day.’ [de se]

b) ‘He hopes he becomes a doctor one day.’ [non-de se]

To elaborate on these readings, in the de se interpretation, the hoper hopes to become a doctor. Syntactically, PRO moves upwards and at LF it leaves a trace, as in (9b):

(9) a. (lit. Rom. (8a)) He hopes PRO becomes a doctor…

b. LF: [\(x; t\), becomes a doctor]

c. The interpretation of embedded clause: \(\lambda x\). \(\lambda w\). x becomes a doctor in w.

In the non-de se interpretation, the complement clause denotes a proposition. Given our scenario, this means that Leo does not know that he is the guy in the picture.
(10) a. (lit. Rom. (8b)) He hopes PRO/proi becomes a doctor…
   b. LF: $\lambda w.[[\text{PRO/proi}]]^{\text{w}}$ becomes a doctor in w
   c. Interpretation of embedded clause: $\lambda w.$ Leo becomes a doctor in w

Another scenario that perhaps shows more clearly the non-de se interpretation of the Romanian subjunctive is the following.

Scenario 2: Dana’s son Alex, at six months, has discovered that he can suck (his) fingers. Once in a while, he would reach with one hand and take his other hand and put it in his mouth, unaware that he was holding his own hand. He was probably thinking that it was somebody else’s hand, or a different object, otherwise he would not have to make it go to his mouth.

(11) Alex vrea PRO să sugă degetul.6
Alex want3sg Subj suck3sg finger-the
a) ‘Alex wants to suck his finger.’ [de se]
b) ‘Alex wants to suck the finger.’ [non-de se]

These data show that both de se and non-de se readings are available in the Romanian subjunctive constructions embedded under intensional verbs, and that these interpretations are not dependent on the presence of PRO. This is possible if indeed the Romanian subjunctive can denote both properties and propositions.

However, not all constructions containing an intensional predicate and an embedded subjunctive clause allow for these interpretations. As it will be shown in the next section, in subjunctive environments, the intensional predicate know behaves differently from other attitude verbs such as want and hope, in that, in contrast to what we have seen above, it makes available only a de se interpretation for its complement.

4. “Ability know”

Romero (2005) discusses different instances of the verb know, addressing the declarative, interrogative and concealed meanings of the verb. We discuss an additional instance in Romanian, which to our knowledge has not been observed before. In the philosophical literature, this is known as ‘know how’ know, and we label it here ability know. Our claim is that it has some resemblance with interrogative know and also with the modal can.

As mentioned before, in Romanian, the verb a ști ‘to know’ behaves differently than other intensional verbs such as a dori ‘to want’ and a spera ‘to hope’. First, in subjunctive constructions, the matrix subject of the verb to know

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6 It should be noted that Romanian also has a reflexive construction that parallels example (11):

1. Alex vrea să-și sugă degetul. [de se]
   Alex want3sg Subj Reflex suck3sg finger-the
   ‘Alex wants to suck his finger.’
must be coindexed with the subject of the embedded clause. PRO guarantees this coindexation. Second, a peculiarity of ability know is that it can only take a subjunctive complement where PRO only has a de se reading. The non-de se reading illustrated above is not available with ability know. To point out the differences between the usual to know-s versus ability know, we first look briefly at Romero’s (2005) analysis for the different types of know and in particular at the declarative and interrogative know-s which are of relevance to us here.

The first instance of know discussed by Romero (2005) concerns the declarative meaning of this verb (in the indicative), as rendered in (12).

(12) Ştiu că înot.
       know₁sg that swim₁sg
       ‘I know that I’m swimming’

The sentence in (12) could be uttered, for example, in a situation where there is some x who is swimming for the first time and who is being currently watched at it by person y. x is commenting on y being surprised by this, perhaps sudden, swimming, and is informing the surprised y that she is in fact aware that she is swimming. According to Romero, indicative know has the interpretation in (13):

(13) \[ \text{[[\text{know}_\text{dec}]]} = \lambda p \cdot \lambda x_e \cdot \lambda x_w \cdot \forall w' \in \text{Dox}_x(w) \ [p(w') = 1] \]
    (Romero, 2005:5),
    i.e., x knows p in w iff for all w’ \(\in\) Dox, p(w’) is true based on the doxastic alternatives of x in w (what x knows in w)

The denotation in (13) also accounts for the epistemic reading of the verb to know. Some more examples are given below:

(14) I know that Paris is the capital of France.

(15) Maria ştie că ( ea) / Alex a venit ieri.
       Maria knows that ( she) / Alex Aux came 3sg yesterday
       ‘Maria knows that she/ Alex came yesterday’

Another instance of know is the interrogative know. For this, Romero (2005:5) adopts Karttunen’s (1977) semantics for questions, where “an interrogative clause is a function from worlds to the set of true answers of that interrogative in that world” and Heim’s (1994) proposal for the strongly exhaustive use of know. An example is given in (16):

(16) Ion ştie cine a venit.
       Ion knows who Aux came 3sg
       ‘John knows who came’

       is true iff for all John’s belief worlds w’, the set of true answers to the question in the belief world w’ is exactly the
same as the set of true answers in the actual world w (Romero, 2005:5).

Another example is given in (17), and the semantics of interrogative know, in (18):

(17) Ştiu cum să înot (în stilul ăsta).
know$_{lg}$ how Subj swim$_{lg}$ (in style-the this)
(lit.) ‘I know how swim’ (in different styles; defining the manner of
action, brass, crawl, …)

(18)  $[[\text{know}_q]] = \lambda q \cdot \lambda x \cdot \lambda w. \forall w' \in \text{Dox}_x(w) \ [q(w') = q(w)]$

(Heim, 1994:9; Romero, 2005:5)

Next, we identify the additional instance of the verb know in Romanian and we
label it ability know. In the following subsection 4.1, we spell out the differences
in interpretation between this new know and the ones mentioned above, and
propose a semantics for ability know which takes into account parallelisms with
interrogative know, and also with the modal can.

Even though we are not aware of any linguistic discussion of knowing how
in Romanian, the general distinction between epistemic know and ability
know has been debated before in the philosophical literature. Gilbert Ryle,
among others, has pointed out the fundamental distinction between knowing that
something is the case and knowing how to do something. According to Ryle,
‘knowledge-how’ is an ability (a complex of dispositions), while ‘knowledge-
that’ is rather a relation between a thinker and a true proposition (Jason &
Williamson, 2001:411). David Lewis envisioned knowing what an experience is
as being able to remember, imagine, and recognize the experience. Possession of
such abilities is knowing-how (Lewis, 1990:516; Jason & Williamson,
2001:411). Jason & Williamson, on the other hand, “contest the thesis that there
is a fundamental distinction between knowledge-how and knowledge-that”
and argue that “Ryle was wrong to deny that “knowledge-how cannot be defined in
terms of knowledge that” (1971, p. 215). Knowledge-how is simply a species of
knowledge-that” (J&W, 2001:411).

Roughly summing up the arguments, the philosophical debate on this
issue has been divided between whether ‘knowledge-how’ should be considered
a subset of ‘knowledge-to’, or, whether they are completely distinct in
interpretation. This issue will not be resolved in this paper, where knowing how
will be treated as a kind of de se knowledge.

In English, know constructions can only appear with an infinitival clause
when preceded by the complementizer ‘how’ (or a wh- element). The meaning
of an utterance such as (19) includes both the knowledge and the ability of
performing an action, and also the different “subcategories” of this action,
meaning that the person knows, for example, how to stay afloat, and/or also
different swimming styles.
(19) I know how to swim.

(20) Știu cum să înot.
     know1sg how Subj. swim1sg
     ‘I know how to swim’

In contrast to English, Romanian has two distinct ways of expressing (19), both structure- and meaning-wise. On the one hand, it can use the \textit{know how} construction seen in English, with the interpretation, for instance, that the swimmer knows different swimming styles. On the other hand, in order to have the interpretation of swimming ability, Romanian makes use of a second option, illustrated in (21):

(21) a. Știe să înoate.
     know3sg Subj. swim3sg
     ‘S/he knows to swim.’

b. Știu să scriu
     know1sg Subj. write1sg
     ‘I know to write’

As mentioned before, a peculiarity of \textit{ability know} is that it is only possible with a \textit{de se} interpretation. The subjunctive embedded clause always represents a property self-ascribed by the subject of the matrix clause. This correlates with the fact that generally ability is a property, which is what we have in (21) with the embedded subjunctive clause. What (21) specifically points out is the ability aspect of the action.

At this point, one of the questions that arise is in what way does \textit{ability know} differ from the declarative and the interrogative \textit{knows} and also from the modal \textit{can}. Answering this question enables us to give \textit{ability know} a firmer ground on its own right. We look first at \textit{ability know} in comparison with declarative \textit{know}.

4.1 \textit{Ability know} vs. Declarative \textit{know}

Two main differences distinguish declarative \textit{know} from our postulated \textit{ability know}. First, as shown in (22), declarative \textit{know} illustrates factive knowledge and can only be used in indicative constructions and not with the subjunctive mood.

(22) Știe că Ion a venit ieri [factive \textit{know} + ind.]
     knows that John Aux came yesterday
     ‘S/he knows that John came yesterday.’
A second important difference is that with the epistemic/declarative know the events in the actual world have to support the claim (the subordinate clause must be true so-to-speak), as in (23) where the action has been done before. This is not the case for the subjunctive, in (24), which confirms the ability of the speaker to perform the action, but there is no evidence as to whether the action has actually taken place or not.

(23) Știu că înțot bine. [indicative: has been done before]  
    know_{1sg} that swim_{1sg} good  
    ‘I know that I swim well.’

(24) Știu să înțot bine. [subjunctive: ability without evidence]  
    know_{1sg} Subj swim_{1sg} good  
    ‘I know (how to) swim well.’

Also, in (23), the speaker is aware of the fact that he performs the action well. In contrast, in (24) the claim is about the ability of the speaker (the speaker claims that he has the ability to perform the action), not necessarily based on fact (actual swimming).

A similar situation can be found if we look at ability know in comparison with interrogative know. In this case, we will see that Romanian has a distinct way of encoding/expressing the ability aspect of an action, in contrast with, let’s say, the manner of the action.

4.2 Ability know vs. Interrogative know

English appears to be ambiguous with respect to the reading of the interrogative know explained above, whereas Romanian has an explicit way of illustrating and of teasing apart this ambiguity. This is shown in (25) versus (26):

(25) Știu cum să înțot.  
    know_{1sg} how Subj swim_{1sg}  
    ‘I know how to swim.’

(26) Știu să înțot.  
    know_{1sg} Subj swim_{1sg}  
    ‘I know to swim.’

For Romanian speakers, the utterance in (26) with the embedded subjunctive has a more specialized meaning. While (25) may have both interpretations – manner and ability, (26) can only be about ability. In the appropriate context, speaking of ability, (25) is either dispreferred or not used at all.

Now recall that we proposed that the meaning of ability know also resembles a modal interpretation, in the sense that it has an ability ‘built-in’

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7 See also Farkas (2003).
factor, similarly to the modal can. The question here is whether it would be feasible to give this ability know the same denotation as for the modal. The answer is no, because they are not interchangeable in the same environments. We turn to the points of difference below.

4.3 Ability know Contrasted with the Modal Can

The modal can may be used with inanimate subjects, while ability know cannot, as it can only have a de se (self-acknowledgement) interpretation.

(27) Maşina poate să meargă repede.
   Car-the can3sg Subj go3sg fast
   ‘The car can go fast.’

(28) #Maşina știe să meargă repede.
   Car-the know3sg Subj go3sg fast
   ‘The car knows to go fast.’

Also, in a situation where a person may have had the ability to perform a certain action, but is presently unable of doing so:

(29) Știu să dansez, dar nu pot.
   know1sg Subj dance1sg, but not can1sg
   ‘I know to dance, but I cannot.’

In a situation where a person is capable of performing a well known or rehearsed action, such as counting in one’s sleep, in Romanian, this would be felicitous with the modal, but not with ability know:

(30) Pot să numere în somn.
    can3pl Subj count3 in sleep
    ‘They can count in their sleep’

(31) #Știu să numere în somn.
    know3pl Subj count3sg in sleep
    ‘They know to count in their sleep.’

In sum, we showed similarities and differences between ability know and the other instances of know (declarative, interrogative) as well as between ability know and the modal can. On the basis of this information, we can now propose a semantics for ability know.

4.4 Proposed Semantics for Ability know

Ability know reports the subject’s ability to perform an action as self-knowledge. In (32) we adopt a centered possible worlds semantics for ability know (following Anand, 2006:14-15 ‘de se ascription’):
The proposal in (32) builds on \textit{de se} ascription. We cannot have plain \textit{de se} ascription of properties, because somebody who knows (how) to swim does not necessarily know that she is swimming. It is about abilities. Thus, the formulation in (32) sketches a way of implementing this idea through quantification over centered worlds in which the subject does the things that in the actual world she believes \textit{(de se)} she can do. The proposal is preliminary, and ideally future work would allow a more detailed compositional analysis.

5. Conclusions

In this paper we explored the Romanian subjunctive and its use in \textit{de se} /\textit{non-de se} belief reports. Our account includes the following observations. With some intensional predicates, the subjunctive may have both \textit{de se} and \textit{non-de se} interpretations. Other intensional verbs, such as the verb to \textit{know} in subjunctive contexts, only allow for a \textit{de se} reading. It is the choice of matrix verb, and not the embedded PRO subject, that is responsible for the \textit{de se} interpretation. It was observed that the Romanian subjunctive distinguishes an additional meaning of the verb \textit{know}, which differentiates between action (manner) and ability. We labeled this instance \textit{ability know} and suggested that Romanian has an overt way of resolving the ambiguity created by the English ‘know how’ construction through this \textit{ability know}. We conclude that \textit{ability know} is specific enough to be granted its own semantic instance and that it resolves the beforesaid ambiguity by having a “built-in” \textit{de se ‘know’} which quantifies over centered possible worlds.

References


