TINKER, TAILOR, SOLDIER, SPY*

Ora Matushansky & Benjamin Spector
CNRS/Université Paris 8/ENS; LLF/Université Paris 7/ENS

`matushan@univ-paris8.fr; benjamin.spector@ens.fr`

Abstract

We examine the distribution and interpretation of post-copular noun phrases in French when they appear with and without an indefinite article (*Marie est (une) physicienne*). We propose that the alternation is due to the fact that the indefinite article marks saturation of an NP-internal argument slot, and show that because of this, post-copular indefinite NPs are usually but not always existentially quantified, while bare NPs are predicative. This theory leads to new perspectives both on cross-linguistic marking of post-copular NPs and on the treatment of the indefinite article.

1   Introduction

As observed by Kupferman (1979), Pollock (1983), Boone (1987), Longobardi (1994), Chierchia (1998), and Roy (2001), among others, unmodified post-copular noun phrases in the singular (henceforth, extended NPs or xNPs, without a special distinction between DPs and NPs) in French, as well as Dutch and in German, can appear with or without the indefinite article *un(e)*:[1]

(1)   a.   Cynthia était une espionne.   French
           Cynthia was   a   spy
           Cynthia was a spy.

      b.   Cynthia était espionne.
           Cynthia was   spy
           Cynthia was a spy.

Under what conditions do indefinite articles disappear in French post-copular xNPs? To answer this question we will assume that such xNP marking reflects/marks saturation of various argument slots of the nominal predicate. We first show how this saturation is

---

   [1] Everything we will say below has to do with unmodified nouns. Nouns modified by a relative clause trigger automatic article insertion. On nouns modified by an AP or a PP see de Swart, Winter and Zwarts (2004).

reflected in the interpretation of the post-copular xNP and then argue that various languages treat different nominal argument slots slight differently: while in Dutch (de Swart, et al. (2004) and in German xNP-marking behaves as in French, Instrumental vs. Nominative Case-marking on Russian post-copular xNPs is different in an interestingly predictable way. This leads us to conclude that the indefinite article is not (necessarily) interpretable.

1.1 Distinctions

The first difference between the structures in (1) is the fact that the presence/absence of the indefinite article affects in what contexts the copular sentence may appear:

(2) a. Qui est Cynthia ? – *(Une) espionne.
         Who is   Cynthia   a   spy.
         Who is Cynthia? – A spy.

     b. Qu' est Cynthia ? – (Une) espionne.
         What is   Cynthia   a   spy.
         What does Cynthia do? – She is a spy.

Secondly, the time argument slot of a bare post-copular xNP must be bound by that of the main verb, while this is not necessarily so when the article is present:

(3) <u>Scenario</u>: At a fund-raising event all former or current governors must identify themselves. What about Bush?

     a. #Bush est gouverneur.   false
         Bush is   governor.

     b. Bush est un gouverneur.   true
         Bush is   a   governor
         Bush is a governor.

Thirdly, the world of evaluation of an indefinite post-copular NP can be independent of that of the main verb, unlike that of a bare xNP:

(4) Harry Potter est (un) magicien.
     Harry Potter is   a   wizard
     Harry Potter is a wizard.

The variant containing a bare NP predicate can be appropriate only if the speaker places herself in the imaginary world; no such belief is required with an indefinite NP.[2, 3]

1.2 Animacy and scalarity

The empirical generalization due to Kupferman (1979), Pollock (1983), Boone (1987), and Roy (2001), as well as de Swart, et al. (2004), is that only certain semantic types of nouns allow article omission: professions (*médecin, avocat*), titles (*prince, roi*), hobbies

---

[2] It should be noted that the two readings cannot be readily distinguished by some speakers, because 'placing oneself in the imaginary world' is so easy.

[3] For more distinctions see Coppieters (1975, 1983) and Roy (2001).

(*alpiniste, aventurier*), functions (*ministre*), occupations (*étudiant*), status (*chômeur* 'unemployed'), and some others. Furthermore, only animate nouns allow the variation:

(5)   Julie était *(un) génie.   ok if *genius* is understood as an occupation or social function
      Julie was   a   genius
      Julie was a genius.

This generalization was restated by Roy (2001) to claim that nouns denoting sub-kinds of humans (*femme* 'woman', *enfant* 'child') or "inherent properties" (*héros* 'hero', *terroriste* 'terrorist') require an article because they introduce an event variable. On the other hand, de Swart, et al. (2004) argue that post-copular xNPs with an optional indefinite article are a subclass of (human) predicates denoting a capacity. Both these proposals face the problem of nationality nouns (which cannot be distinguished from adjectives in French, but can in Dutch and in German): nationality nouns readily allow indefinite article omission (Eddy Ruys, p.c.), as do nouns like *Prix Nobel* 'the Nobel Prize winner' in French.

We propose that the generalization is really about [+ sentient, - scalar] nouns;[4] a scalar NP such as *génie* in (5) (Bolinger (1972), Matushansky (2002c)) forces the insertion of an indefinite article.

---

(6)   Generalization

Only nouns that are **[+ sentient, - scalar]** allow article omission in French.

The first point that needs to be discussed is that of scalar nouns, motivated by Bolinger (1972), García and Luis Méndez (2000), Matushansky (2002a, c), among many others. Scalar nouns can be diagnosed by their ability to be used as epithets and to appear in the complement of *seem,* in the *N of an N* construction (Matushansky (2002a, c)), with degree-modifying adjectives such as *utter* and with the exclamative *such*. To this list we can add the new fact that scalar nouns cannot function as bare predicates in French. To understand why, we need to recall that scalar nouns have a degree argument slot, while other nouns don't. We will see that this distinction is essential for predicate marking.

On the subject of [+ sentient] some caution is needed as well. First of all, there are some apparent counterexamples with non-human predicates, as in (7). We believe that either the subject is *anthropomorphized* in (7) or the generalization is about something more like [+ person].[5]

(7)   Fido est (un) chien d'aveugle   animate predicate
      Fido is (a   dog   of+blind
      Fido is a seeing-eye dog.

---

[4] We need to use the feature [+ sentient] rather than the customary [+ human] to account for the fact that (a) non-humanoid aliens in science-fiction/fantasy and (b) personified animals and objects in fairy-tales can be viewed as belonging to this class.

[5] This fact lends clear support to de Swart, et al. (2004), who distinguish capacity ("professional") readings from normal predicate readings. They also discuss some inanimate predicates in Dutch – these facts do not hold for French. We will not return to this issue here.

The second issue is that nouns denoting sub-kinds of humans (*femme*, *enfant*, *homme*) cannot be bare in the post-copular position. This suggests that a further elaboration of the [± sentient] distinction is needed (see Matushansky and Spector (2003)).

1.3 Dialects

Before we continue, it should be noted that reported judgments on the distribution of indefinite articles demonstrate the existence of at least three French dialects with respect to [+ sentient] nouns.

i. Indefinites are allowed as post-copular xNPs for all types of nouns (Pollock (1983)).

ii. Indefinites are allowed in the post-copular position only for scalar nouns (judgments from Kupferman (1979), Boone (1987), and Roy (2001)).

iii. Indefinites cannot appear as post-copular xNPs (some speakers that we have questioned). Post-copular xNP marking in this dialect seems to resemble what happens in Russian.

In this paper, we will be concerned with the dialect (ii).

2 Nominal argument saturation

To understand what happens in copular constructions we need to examine small clauses, which is what predicative copulas are based on. We will see that the features [± scalar] and [± sentient] play an important role there as well.

2.1 [- sentient] nouns

Non-scalar [- sentient] nouns (which disallow article omission in copular constructions) cannot appear in small clauses at all, with or without *un*, while scalar [- sentient] nouns can, as long as the article is present:

(8) a. *?Cet animal, je le crois   un mammifère
         this animal I it believe   a   mammal

    b. *Cet animal, je le crois   mammifère
        this animal I it believe   mammal

(9) a. ?Cette maison, je la crois   une affaire.
         this   house   I it believe a   bargain
         I believe this house to be a bargain.

    b. *Cette maison, je la crois   affaire.
        this   house   I it believe bargain/deal

These data show that we are dealing with two independent generalizations:

i. scalar nouns require an indefinite article

ii. [+ sentient] nouns allow article omission

The independence of two generalizations finds empirical support in Norwegian, where article insertion is correlated with scalarity/scalar modification (Delsing (1993)).

2.2 [+ sentient] nouns and the structure of a small clause

We know that a small clause with a bare [+ sentient, - scalar] predicate is interpretable:

(10) Pierre croit   Marie physicienne.
Pierre believes Marie physicist
Pierre believes that Marie is a physicist.

The simplest assumption is that a small clause (SC) denotes a proposition and therefore has the semantic type $\langle s, t \rangle$. Thus its predicate must be of type $\langle e, \langle s, t \rangle \rangle$ (propositional function), abstracting away from the time argument slot and φ- and [$\pm$ sentient] features:

(11) a. $[\![physicienne]\!] = \lambda x \in D_e . \lambda w \in D_s . x$ is a physicist in w
      b. $[\![croire]\!] = \lambda f \in D_{\langle s, t \rangle} . \lambda x \in D_e . \lambda w \in D_s .$ in every world w' compatible with what x believes in w, $f(w')(x) = 1$

With the semantics in (11), the interpretation of (10) is straightforward:[6]

(12) $[\![Pierre\ croit\ Marie\ physicienne]\!] = 1$ iff in every world w compatible with Pierre's beliefs in the actual world w_0, Marie is a physicist in w.

The question is then, what does the indefinite article do that leads to the fact that a non-scalar predicate of a small clause cannot bear an indefinite article?

(13) *Pierre croit   Marie une physicienne.
Pierre believes Marie a   physicist

The most natural assumption is that the presence of the article triggers a type mismatch: *une physicienne* is not of the type $\langle e, \langle s, t \rangle \rangle$ and cannot combine with the subject. We can now formulate a generalization on bare post-copular xNPs:

---

(14) French predicate marking

The indefinite article in the post-copular position in French signals the saturation of one of the argument slots of an unmodified [+ sentient] noun.

---

(14) entails that the indefinite article contributes no meaning (i.e. *un(e)* is vacuous), but is only a reflex of a syntactic operation. To understand how this allows us to explain

---

[6] The meaning that we give to intensional verbs firmly commits us to the idea that nouns denote functions from individuals to propositions (type $\langle e, \langle s, t \rangle \rangle$, a.k.a. *propositional functions*) rather than functions from worlds to extensions (type $\langle s, \langle e, t \rangle \rangle$, a.k.a. *intensions*). We will see that this assumption is essential to our theory; see also Matushansky and Spector (2003) for some of its desirable consequences.

post-copular xNP-marking in French and to unify it with similar xNP-marking in other languages, we must start with the full lexical entry for *believe*/*croire*:[7]

(15) $[\![croire]\!]= \lambda f \in D_{\langle i, \langle s, t \rangle \rangle} . \lambda x \in D_e . \lambda t_1 \in D_i . \lambda w_1 \in D_s$. in all possible worlds w compatible with what x believes in w_1 at the time t_1, $f(w)(t_1) = 1$

The syntax of a small clause with a bare predicate, as in (10), is quite straightforward:[8]

(16)
$$VP_{\langle e, \langle i, \langle s, t \rangle \rangle \rangle}$$
$$V^0_{\langle \langle i, \langle s, t \rangle \rangle, \langle e, \langle i, \langle s, t \rangle \rangle \rangle \rangle} \quad SC_{\langle i, \langle s, t \rangle \rangle}$$
$$croire \quad subject_{\langle e \rangle} \quad predicate_{\langle e, \langle i, \langle s, t \rangle \rangle \rangle}$$

Suppose now that we were to insert an indefinite article in the SC predicate, i.e. saturate one of its argument slots with a variable.

2.3   A welcome prediction: type $\langle d \rangle$ xNP-internal saturation

Let us assume the following semantics for *genius* (abstracting away from the [+sentient] feature):

(17) $[\![genius]\!]= \lambda d \in D_d . \lambda x \in D_e . \lambda t \in D_i . \lambda w \in D_s$. x is a genius to the degree d in the world w at the time t

To combine this $\langle d, \langle e, t \rangle \rangle$ noun with a subject (type $\langle e \rangle$), we need to saturate the degree argument slot, and thus to introduce an xNP-internal degree variable, with a value set to the relevant standard of comparison for the context of the utterance (see Lewis (1979), Klein (1980), Heim (1985), etc.). However, by our proposal, saturation of a nominal argument slot triggers indefinite article insertion! Therefore, to be able to interpret a SC with a scalar noun, we need to insert the indefinite article, which yields the observation that scalar nouns cannot be bare.

It is easy to see that the compositional semantics of the small clause comes out right:

(18)
$$VP_{\langle e, \langle i, \langle s, t \rangle \rangle \rangle}$$
$$V^0_{\langle \langle i, \langle s, t \rangle \rangle, \langle e, \langle i, \langle s, t \rangle \rangle \rangle \rangle} \quad SC_{\langle i, \langle s, t \rangle \rangle}$$
$$croire \quad subject_{\langle e \rangle} \quad SC'_{\langle e, \langle i, \langle s, t \rangle \rangle \rangle}$$
$$d \quad predicate_{\langle d, \langle e, \langle i, \langle s, t \rangle \rangle \rangle \rangle}$$

We now predict correctly that a [- sentient] indefinite xNP can appear as a small clause predicate or with the predicative *be* if it is [+ scalar] (be the subject [+ sentient] or not):[9]

---

[7] Independent evidence for syntactic representation of time and world variables can be found in Farkas (1993) and Percus (2000). Such xNP-internal variables can be bound (via being coindexed with a bound variable), or remain free (and get their referent from an assignment function determined by the context).

[8] Once *believe/croire* is combined with its subject, we obtain the semantic type $\langle i, \langle s, t \rangle \rangle$. To obtain a truth value in the matrix clause, the time and world variables slots are filled with UT and w_0, respectively.
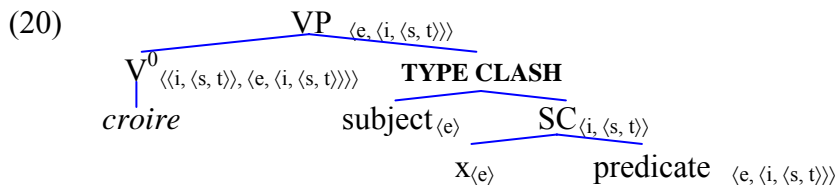
[9] We still don't know why [- sentient] xNPs cannot be bare, but see section 6 for some speculations.

(19) a. Marie croit   ce meuble   *(*une) table/*($\checkmark$ une) affaire
   Marie believes this piece of furniture   a   table/   a   bargain
   Marie believes this piece of furniture a bargain.

 b. (?) Un   génie, Mozart l'était   depuis l'enfance
   a   genius Mozart it+was   since   the+childhood
   Mozart has been a genius since childhood.

To summarize, an indefinite article is obligatory with scalar nouns, both in small clauses and in copular sentences (and as long as no other determiner is present).[10]
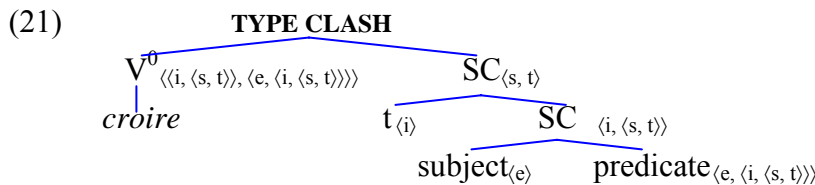
2.4 Type ⟨e⟩ xNP-internal saturation

We can now explain why non-scalar indefinite xNPs are not allowed in small clauses: if the individual argument slot of the predicate is saturated, we get a type-clash internal to the small clause:

(20)

$$VP_{\langle e, \langle i, \langle s, t \rangle \rangle \rangle}$$

$$V^0_{\langle \langle i, \langle s, t \rangle \rangle, \langle e, \langle i, \langle s, t \rangle \rangle \rangle \rangle}$$ **TYPE CLASH**

croire $subject_{\langle e \rangle}$ $SC_{\langle i, \langle s, t \rangle \rangle}$

       $x_{\langle e \rangle}$ $predicate_{\langle e, \langle i, \langle s, t \rangle \rangle \rangle}$

The same result would obtain if the position occupied by $x_{\langle e \rangle}$ in (20) were occupied by an existential operator over individuals (type $\langle \langle e, t \rangle, \langle \langle e, t \rangle, t \rangle \rangle$). This is why an identity interpretation of the second xNP is impossible inside a small clause.

2.5 Type ⟨i⟩ or type ⟨s⟩ xNP-internal saturation

For the sake of consistency, we continue with the same argument ordering for the xNP:

(21)   **TYPE CLASH**

$$V^0_{\langle \langle i, \langle s, t \rangle \rangle, \langle e, \langle i, \langle s, t \rangle \rangle \rangle \rangle}$$ $SC_{\langle s, t \rangle}$

croire $t_{\langle i \rangle}$ $SC_{\langle i, \langle s, t \rangle \rangle}$

      $subject_{\langle e \rangle}$ $predicate_{\langle e, \langle i, \langle s, t \rangle \rangle \rangle}$

If the time argument slot of the predicate is saturated by an xNP-internal variable, the SC node (now of the type $\langle s, t \rangle$) cannot combine with a propositional attitude verb. The same thing will happen if the world argument slot of the predicate is saturated.[11]

To summarize, under the assumption that an article appears in French [+ sentient] xNPs if at least one of their argument slots is saturated by an internal variable, we can explain

---

[10] The condition on indefinite article insertion proposed in (14) is open with respect to which argument slots trigger predicate marking, which makes it possible for languages to (not) distinguish between them. We will argue that this is in fact what some languages do.

[11] Along with other theories arguing that small clauses are propositions, we now wrongly predict that they can function as matrix clauses. To evade this issue, we stipulate that IP and CP layers are obligatory in matrix clauses.

i. why scalar nouns require an article: unless the degree argument slot of a scalar noun is saturated, the noun cannot combine with its subject

ii. why indefinite articles are disallowed with [- scalar] xNPs in small clauses: saturation of an individual argument slot results in a type clash inside the small clause; if a time or a world argument slot is saturated, the resulting small clause cannot be combined with a propositional attitude verb due to a type clash

However, if this is true, why on Earth do we get indefinite xNPs after the copula, where they do not have to be scalar?

3   Two *be* and why two *be*

It is well-known that apart from the predicative *be*, there exists an identity *be*, which asserts that its two arguments denote the same object. We suggest that the article-variant is an instance of the *equative use* of the copula. Both clearly equative copulas and the copulas with an indefinite post-copular xNP (the article-variant) can be used to answer an identity question and their subject cannot be a third person pronoun in non-embedded contexts (see Coppieters (1975, 1983)):

(22) Qui est Cicéron?
     Who is   Cicero?

   a. Cicéron   (c')est   Marcus Tullius
      Cicero   THIS+is   Marcus Tullius

   b. *Cicéron, il   est Marcus Tullius
      Cicero,   he   is   Marcus Tullius

   c. Cicéron   (c')est   un   orateur
      Cicero   THIS+is   a   orator

   d. *Cicéron, il   est un   orateur
      Cicero,   he   is   un   orator

Also, both the article-variant and identity copulas disallow predicate pronominalization, except when the noun is scalar, as predicted by our approach:

(23) a. Célebre, Cicéron   l'est depuis longtemps
        famous,   Cicero   it+is since long+ago
        Cicero has been famous for a long time.

   b. (*Un) orateur, Cicéron   l'est depuis longtemps
        An orator,   Cicero   it+is since long+ago
        Cicero has been an orator for a long time.

   c. *Marcus Tullius, Cicéron   l'est
        Marcus Tullius, Cicero   it+is

(24)   *(Un) génie,   Cicéron   l'était depuis l'enfance.
         An genius,   Cicéron   it+was   since childhood
         Cicero had been a genius since childhood.

Roy (2001) argues against an existential analysis of indefinite post-copular xNPs on the basis of the fact that unlike other existentially quantified xNPs, they do not:

(1)   undergo inversion,

(2)   scopally interact with negation,

(3)   or allow anaphora in discourse:

(25) Marion est un prof.   Elle/#il ne peut pas voir les copies.
      Marion is a   professor.M She/he *ne* can Neg see the copies
      Marion is a professor. She cannot see the homeworks.

The property (1) is simply due to the fact that identity sentences require the subject to be less salient than the post-copular xNP. The property (2) can be argued not to hold because the post-copular xNP can always be interpreted as a specific indefinite. Finally, the property (3) is in fact attested with identity statements, once we remove the issue of discourse salience from the picture:

(26) Charles d'Eon was Lia de Beaumont. #She/#he became famous.

(26) is weird because for most people neither of these two differently gendered names has sufficient discourse salience to warrant the use of the pronoun of the corresponding gender. On the other hand, (25) requires the feminine pronoun because in this context, *Marion* is more salient than *un professeur*. The same manipulation can be done with an identity statement:

(27) Dana International used to be Yaron Cohen. Even then she/#he dreamed of a
      music career.

Granted, human language is not suited to sex change, but gender conflict has nothing to do with identity copulas. We conclude that indefinite post-copular xNPs can be treated as involving the identity *be*.

4   Temporal and modal (in)dependence

Under the standard assumption that *be* can be a raising verb with a small clause complement, we readily explain why the bare xNPs in (3) and (4), repeated below, must have time- and world-dependent readings. Likewise, we can explain why the indefinite xNPs in these examples can be time- and world-independent.

(3)   <u>Scenario</u>: At a fund-raising event all former or current governors must identify
      themselves. What about Bush?

      a.   #Bush est gouverneur.   false
           Bush is governor.

      b.   Bush est un gouverneur.   true
           Bush is a governor.

(4)   Harry Potter est (un) magicien.
      Harry Potter is a   wizard

4.1   The article-variant

With the identity *be,* both xNPs are arguments of the verb. Since in argument xNPs, the time and world of evaluation can be independent of those of the verb (Farkas (1993),

Percus (2000)), the time- and world-independent readings of indefinite xNPs in (3) and (4) follow. In our system this is handled as follows.

The presence of the article indicates saturation of an xNP-internal argument slot. Once an $\langle i \rangle$ or an $\langle s \rangle$ xNP-internal argument slot is saturated (which is required for time- and world-independent readings), we obtain a type-clash inside the small clause (see section 2.5) and therefore only the identity *be* can be used:

(21)

$$
\begin{array}{c}
\textbf{TYPE CLASH} \\
V^0{}_{\langle\langle i, \langle s, t\rangle\rangle, \langle e, \langle i, \langle s, t\rangle\rangle\rangle\rangle} \qquad SC_{\langle s, t\rangle} \\
\textit{croire} \qquad t_1 \qquad SC'{}_{\langle i, \langle s, t\rangle\rangle} \\
\text{subject}_{\langle e\rangle} \qquad \text{predicate}_{\langle e, \langle i, \langle s, t\rangle\rangle\rangle}
\end{array}
$$
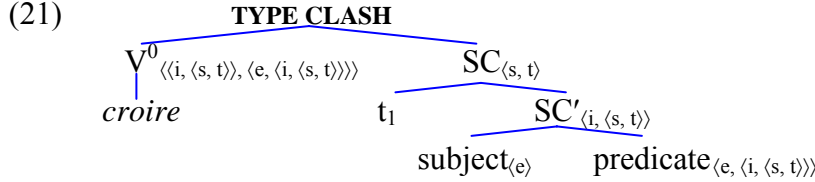
To be compatible with the identity *be*, the post-copular xNP has to be existentially quantified (cf. Pereltsvaig (2001) for Russian) and then to scope out.

(28) ⟦ Bush est un gouverneur ⟧ = at t_0, $\exists x$ [x is a governor at t_1 and Bush = x]

(29) ⟦ Harry Potter est un magicien ⟧ = in w_0 $\exists x$ [x is a magician in w_1 and HP = x]

The free time and world variables receive their values from the contextual assignment function. The most salient readings are $t_1 = t_0$ (i.e. utterance time) and $w_1 = w_@$ (i.e. the real world), but other times and worlds are also possible:

(30) Victor Hugo est un   poète.
      Victor Hugo is   a   poet
      Victor Hugo is a poet.

In (30), t_1 is the lifetime of Victor Hugo.

4.2   The bare variant

Since the world and the time argument slots of the xNP are not saturated (or *un(e)* would have been inserted), the predicate will necessarily be evaluated with respect to the worlds and times introduced by the attitude verb, i.e. necessarily receive a dependent interpretation:

(31)

$$
\begin{array}{c}
VP_{\langle e, \langle i, \langle s, t\rangle\rangle\rangle} \\
V^0{}_{\langle\langle i, \langle s, t\rangle\rangle, \langle i, \langle s, t\rangle\rangle\rangle} \qquad SC_{\langle i, \langle s, t\rangle\rangle} \\
\textit{être} \qquad \text{subject}_{\langle e\rangle} \quad \text{predicate}_{\langle e, \langle i, \langle s, t\rangle\rangle\rangle}
\end{array}
$$
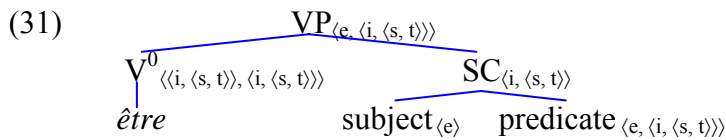
(32) ⟦être⟧ PRED = $\lambda p \in D_{\langle i, \langle s, t\rangle\rangle}$. p

The copula here is vacuous, as usually assumed for the predicative *be*.

4.3 Embedding

Under an intensional verb, three scopal options are theoretically available for the post-copular xNP. The entire DP may be interpreted *de re* or *de dicto*, or the NP alone may be interpreted *de re*:

(33) W. believes that Roman Polanski was a Roman emperor.

    a.   DP *de re*: W. saw a portrait and erroneously believed that it represented Nero. In fact it was Roman Polanski.

    b.   NP *de re*: W. saw a group of portraits and erroneously believed that one of them was Roman Polanski. In fact these portraits represent Roman emperors.

    c.   *de dicto*: W. believes that Roman Polanski lived in ancient Rome, wore a toga, etc.

(33a) is an identity reading: there was a Roman emperor such that W. identified Roman Polanski with him. The post-copular xNP is then not a predicate.

(33b), where the NP restrictor should be read *de re*, is marginally possible, in a scenario where we don't know whether W. identifies the portraits as those of Roman emperors. Both it and the previous reading (33a) are readily available for argument DPs (Farkas (1993), Percus (2000)).

(33c) represents the most expected reading of the predicate, and this is the only reading that a bare post-copular xNP can have in French.

(34) a.   W.   croit   que Roman Polanski était un empereur.   ✓(33a, b, c)
        W.   believes that Roman Polanski was a   emperor

    b.   W.   croit   que Roman Polanski était empereur.   *(33a, b), ✓(33c)
        W.   believes that Roman Polanski was emperor

A total *de re* reading is unavailable in (34b) because predicates simply can't have *de re* readings. Consider once again the lexical entry for *believe/croire*:

(15) $[\![croire]\!] = \lambda f \in D_{\langle i, \langle s, t \rangle\rangle} . \lambda x \in D_e . \lambda t_1 \in D_i . \lambda w_1 \in D_s$. for all possible worlds compatible with what x believes in w_1 at the time t_1, $f(w)(t_1) = 1$

A *de re* reading of the predicate is possible iff its world argument slot is saturated by an xNP-internal variable of the type $\langle s \rangle$ that takes its reference from a higher clause:

(35) In all worlds w compatible with what W. believes in w_0 at UT, emperor (Roman Polanski) $(w_0) = 1$ at $t_1 < $ UT

To obtain the reading above, the world argument slot of *empereur* must be filled by an xNP-internal world variable, which can take as its reference the actual world w_0. But we have argued that when such a variable is inserted, an article must be inserted as well! Therefore, *de re* readings are impossible with bare post-copular xNPs.[12]

---

[12] The post-copular bare xNP cannot have the partial *de re* reading (33b) either. The reason is that if we raise the NP restrictor (i.e. the whole xNP), its trace would have the same type as the raised predicate,

5   Summary

We have argued that post-copular xNP-marking in French (presence vs. absence of the indefinite article) reflects the saturation of an xNP-internal argument of the post-copular [+ sentient] xNP.

- A.   when the xNP is scalar, the article is obligatory

- B.   when the xNP is not scalar, the indefinite article results in ungrammaticality unless…

- C.   …the identity *be* is used with indefinite xNPs

As a result, we can now formally deal with the indefinite/bare alternation in unmodified post-copular xNPs in French.

6   Towards an explanation

Our analysis correctly captures the fact that bare predicates and indefinite xNPs do not have the same distribution (small clauses) and are interpreted differently with respect to time and world dependence. But it doesn't explain why some meanings ("capacity", "social function") occur with bare predicates while others ("important characteristic", "defining property", "identification") require an indefinite xNP. It also has nothing to say about the more "temporary" perception of Instrumental-marked Russian predicates (which we take to largely correspond to bare xNPs in French) vs. Nominative-marked xNPs (see Jakobson (1936/1971), Wierzbicka (1980), Bailyn and Rubin (1991), Geist (1998, 1999), Pereltsvaig (2001), Matushansky and Spector (2003), etc.), or about coercion in (5):

(5′)   Julie était génie.   ok if *genius* is understood as an occupation or social function
        Julie was   genius
        Julie was a genius.

We believe that the answer lies in the fact that "capacity" readings are more temporary. Informally speaking, properties can be viewed as accidental (stage-level) or substantive (defining, individual-level). Intuitively, the latter are achieved with xNPs as a result of temporal independence of the xNP (whose precise semantics is still to be determined). Such temporal independence, technically realized as saturation of the ⟨i⟩ argument slot, causes a type clash inside the small clause (section 2.5), and therefore, the only way of expressing individual-level readings is via the identity copula.

6.1   [± sentient]?

We can now offer a deeper insight into the contrast between [+ sentient] and [- sentient] nouns. If the latter may not have stage-level readings for pragmatic reasons (after all, inanimate objects rarely possess accidental properties), we will never find them as bare

---

which would ensure a "reconstructed" interpretation. On the other hand, if we were to saturate the world argument slot of the NP restrictor in situ by a world pronoun coindexed with some higher possible world variable, the predicate would be unable to combine with the predicative *be* due to a type clash of the familiar nature.

nominal predicates. The problem with such a simplistic view is that of course adjectival predicates denoting accidental properties are allowed with inanimate subjects.

On the other hand, the lack of bare variants with (sub-)kind predicates such as *child* or *cat* can be linked to the same general issue. Intuitively, such nouns must always be individual-level and therefore must pattern with [- sentient] predicates.

6.2 Coercion of the indefinite predicate in small clauses

An indefinite xNP is allowed in small clauses on the condition of receiving a particular interpretation (Kupferman (1979), p. 141, as cited by Boone (1987)):

(36) Après avoir effectué cette opération, Max est devenu un médecin.   Boone (1987)

This interpretation is that of "a typical doctor", "a real doctor" – a meaning shift typical of scalarity coercion (P → "having properties stereotypically associated with being P"), which takes place when a non-scalar predicate appears in a scalar context (Matushansky (2002b)):[13]

(37) a.   My cook is more French than Napoleon.
      b.   You are such a linguist!

What's important here is that the predicate is shifted towards a meaning in which it has a degree argument slot, whose saturation is obligatory for interpretability. The indefinite article then must be inserted by hypothesis (14).

7   Questions for future research

We believe that the distribution of Nominative/Instrumental predicate case marking in Russian is governed by the same principle as indefinite article insertion in French and may in fact be the same as in the dialect (iii) discussed on p. 4. The difference between French dialect (ii) examined here and Russian lies in the status of the [degree] argument slot: in Russian, the saturation of this argument slot is not marked and therefore scalar xNPs behave like non-scalar ones (see Matushansky and Spector (2003) for an extended discussion).

One question to ask here is whether the [degree] opposition the only one. Can there be languages that only mark saturation of the world argument slot and if yes, can such cases be distinguished from marking the time argument saturation?

7.1   Adjectives vs. nouns

Under the assumption that argument slots of a predicate can be saturated by an internal variable of the appropriate type, why does this never happen with adjectives? This issue is actually composed of two separate facts: (1) Why does article insertion never happen

---

[13] This coercion is probably responsible for what we called the dialect (i) on p. 4 (Pollock (1983)), allowing indefinite predicates in small clauses for all nouns.

with adjectives? (2) Why aren't adjectival predicates *ever* temporally or referentially independent?

The answer to these questions should also account for the fact that French [± sentient] (sub-kind) nouns can have an interpretation with which they can appear bare in small clauses and with degree modifiers (e.g. *très femme* 'very womanly').

7.2   Contribution of modification

The role of modification in predicate marking (de Swart, et al. (2004)) is still obscure to us. We hope to be able to use the proposal made by McNally and Boleda Torrent (2004) with respect to the kind argument position in nouns to argue that argument saturation is at play here as well.

References

Bailyn, J. and E. J. Rubin (1991). The Unification of Instrumental Case Assignment in Russian. In: A. Toribio and W. Harbert, eds., *Cornell Working Papers in Linguistics* 9. Ithaca, NY: Department of Modern Languages and Linguistics, Cornell University, pp. 99-126.

Bolinger, D. (1972). *Degree Words*. The Hague: Mouton.

Boone, A. (1987). Les Constructions *Il Est Linguiste*/*C'est Un Linguiste*. *Langue Française* 75, pp. 94-106.

Chierchia, G. (1998). Reference to Kinds across Languages. *Natural Language Semantics* 6, pp. 339-405.

Coppieters, R. (1975). The Opposition *Il* and *Ce* and the Place of the Adjective in French. *Harvard Studies in Syntax and Semantics* 1, pp. 221-280.

Coppieters, R. (1983). Descriptions and Attitudes: The Problem of Reference to Individuals. *Studies in Language* 6, pp. 1-22.

Delsing, L.-O. (1993). The Internal Structure of Noun Phrases in the Scandinavian Languages. Ph.D. thesis, University of Lund.

Farkas, D. (1993). *Modal Anchoring and NP Scope*. Linguistics Research Center, UC Santa Cruz.

García, A. and J. Luis Méndez (2000). On Modal Nature of Attributive Nominal Constructions. Paper presented at *ConSOLE 9*, Lund.

Geist, L. (1998). *Kopulaverben Und Prädikativkonstruktionen: Ein Deutsch-Russischer Vergleich*. MA thesis, Humboldt Universität zu Berlin.

Geist, L. (1999). Kopula *Byt'* (Sein) Eine Funktionale Und/Oder Eine Lexikalische Kategorie? *ZAS Papers in Linguistics* 14, pp. 1-39.

Heim, I. (1985). Notes on Comparatives and Related Matters. Ms., University of Texas, Austin.

Jakobson, R. (1936/1971). Beitrag Zur Allgemeinen Kasuslehre. Gesamtbedeutungen Der Russischen Kasus. In: *Selected Writings* 2. The Hague: Mouton, pp. 23-71.

Klein, E. (1980). A Semantics for Positive and Comparative Adjectives. *Linguistics and Philosophy* 4/1, pp. 1-45.

Kupferman, L. (1979). Les Constructions *Il Est Un Médecin/C'est Un Médecin*: Essai De Solution. *Cahiers linguistiques* 9, pp. 131-164.

Lewis, D. (1979). Scorekeeping in a Language Game. *Journal of Philosophical Logic* 8, pp. 339-359.

Longobardi, G. (1994). Reference and Proper Names. *Linguistic Inquiry* 25/4, pp. 609-665.

Matushansky, O. (2002a). A Beauty of a Construction. In: L. Mikkelsen and C. Potts, eds., *Proceedings of WCCFL 21*. Somerville, MA: Cascadilla Press, pp. 264-277.

Matushansky, O. (2002b). Movement of Degree/Degree of Movement. Ph.D. thesis, MIT. Cambridge MA: MITWPL.

Matushansky, O. (2002c). Tipping the Scales: The Syntax of Scalarity in the Complement of *Seem*. *Syntax* 5/3, pp. 219-276.

Matushansky, O. and B. Spector (2003). To Be (a) Human. Paper presented at *Journées scientifiques Sémantique et Modélisation*, Paris.

McNally, L. and G. Boleda Torrent (2004). Relational Adjectives as Properties of Kinds. In: P. Cabredo-Hofherr and O. Bonami, eds., *Empirical Issues in Formal Syntax and Semantics 5*. Available at http://www.cssp.cnrs.fr/eiss5.

Percus, O. (2000). Constraints on Some Other Variables in Syntax. *Natural Language Semantics* 8, pp. 173-229.

Pereltsvaig, A. (2001). On the Nature of Intra-Clausal Relations: A Study of Copular Sentences in Russian and Italian. Ph.D. thesis, McGill.

Pollock, J.-Y. (1983). Sur Quelques Propriétés Des Phrases Copulatives En Français. *Langue Française* 58, pp. 89-125.

Roy, I. (2001). Predicate Nominals in French. Ms., USC.

de Swart, H., Y. Winter and J. Zwarts (2004). The Interpretation of Bare Predicate Nominals in Dutch. Ms., UiL OTS/Technion.

Wierzbicka, A. (1980). *The Case for Surface Case*. Ann Arbor, MI: Karoma.