The Structural and the Semantic
Subject-Object and Referential-Predicative Asymmetries

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Introduction

Kripke's *Puzzle about Belief* shows how difficult it can be to state what others believe. We can only do so in our language, but our language imposes presuppositions on others that they may not share. Kripke concludes that "the reason lies in the nature of the realm being entered"; that "our normal practices of attributing belief are questionable"; that "the situation of the puzzle seems to lead to a breakdown of our normal practices of attributing belief and even of indirect quotation."

Kaplan concurs, cautioning us about always accepting as legitimate the demand for reports in indirect discourse: since certain expressions have non-translational semantics, we should expect difficulties in making indirect reports of speech and thought involving indexicals, expressives, and other translation-resistant expressions.

There are good and obvious reasons why reporting others' states of mind should be difficult. After all, we don't read minds. I offer here some reflections that suggest, *pace* Kripke and Kaplan, that language may contain more available means for indirect reporting of beliefs than customarily appreciated. What makes our normal practice of attributing beliefs questionable or not always legitimate may pertain, not to a difference of realm being entered, but to our insufficient sensitivity to existing semantic subtleties already at play in our language.

1 Subject-Object Asymmetries in Syntax and Semantics

Subject-object asymmetries are legion in syntax, and have been well-studied. We find subject-object asymmetries in multiple questions:

> I don't remember who$_{SUBJ}$ found what$_{OBJ}$.
> * I don't remember what$_{OBJ}$ who$_{SUBJ}$ found [t_{OBJ}].

Relativizations out of objects, but not subjects, require DO-support:

> What$_{OBJ}$ did John$_{SUBJ}$ find [t_{OBJ}]?
> * What$_{OBJ}$ John$_{SUBJ}$ found [t_{OBJ}]?
> * Who$_{SUBJ}$ did find a hat$_{OBJ}$?
> Who$_{SUBJ}$ found a hat$_{OBJ}$?

That-trace effects occur with subjects but not objects:

> * Who$_{SUBJ}$ do you think that [t_{SUBJ}] found a hat$_{OBJ}$?
> What$_{OBJ}$ do you think that John$_{SUBJ}$ found [t_{OBJ}]?

Parasitic gaps are sanctioned with object, but not with subject, relativization:

> Which article$_{OBJ}$ did John$_{SUBJ}$ file [t_{OB}] without reading [t_{OBJ}]?
> * Who$_{SUBJ}$ filed which article$_{OBJ}$ without reading [t_{OBJ}]?

Such subject-object asymmetries are given structural explanations. In GB theory, the distinctions are expressed in sentence structure, the subject being an external argument, the object an internal argument of the VP, and the above effects are attributed to various violations: subjacency, case filters, *theta*-theory, the Empty Category Principle.

Subject-object asymmetries are also legion in semantics, where they have also been well studied. Klima (1964) remarks on the ambiguity of (1.a) versus the unambiguity of (1.b):

> (1.a)   He required that she marry [no one$_{OBJ}$].
> (1.b)   He required that [no one$_{SUBJ}$] marry her.

Kayne (1981) questions the intelligibility of (2.a) versus the unproblematic (2.b):

> (2.a)   *   In all these years he suggested that [not a single term paper$_{SUBJ}$] be written.
> (2.b)   In all these years he suggested that they write [not a single term paper$_{OBJ}$].

May (1985) notes the distributive readings of (3.a) and (4.a) and their lack in (3.b) and (4.b):

> (3.a)   What$_{OBJ}$ did everyone bring [t_{OBJ}]?
> (3.b)   Who$_{SUBJ}$ brought everything?

> (4.a)   Who(m)$_{OBJ}$ did everyone talk to [t_{OBJ}]?
> (4.b)   Who$_{SUBJ}$ talked to everyone?

Whether well or incompletely understood, these are well-attested phenomena.

2   Subject-Object Metalinguistic Asymmetries

It is a simple rule of logic that from knowledge of P, and knowledge of Q, we can infer knowledge of P&Q. Beliefs, as we know, are more complicated.

As Kripke's *Puzzle* shows, Pierre can assent to, and thus be reported disquotationally as believing that P:

> P   Londres$_{SUBJ}$ est jolie.   [*translation*: London is pretty.]

and that Q:

> Q   London$_{SUBJ}$ is not pretty.

while not as believing that P & Q, at least as a belief reported in English:

> P&Q   London$_{SUBJ}$ is pretty and London$_{SUBJ}$ is not pretty.

(Pierre might assent to a report of his belief as that London is not pretty but Londres is. But as Kripke points out, we are hard pressed to identify how this belief would differ in content from the previous, disavowed. We might say that Pierre believes:

$$\exists! x\ (x \ \text{est jolie et } x = \text{Londres})$$
and $$\exists! y\ (y \ \text{is not pretty and } y = \text{London})$$

but it is wholly unclear how these beliefs differ.)

The phenomenon extends to definite descriptions, not just proper names. Thus Pierre can be reported as believing that P:

P   [La ville de Londres]$_{\text{SUBJ}}$ est jolie.   [*translation*: The city of London is pretty.]

and as believing that Q:

Q   [The city of London]$_{\text{SUBJ}}$ is not pretty.

while not as believing that P & Q:

P&Q   [The city of London]$_{\text{SUBJ}}$ is pretty and [the city of London]$_{\text{SUBJ}}$ is not pretty.

This well-known puzzle, about how distinct co-designative names, 'London' and 'Londres', feature in belief, really is a puzzle, and I shall not purport to solve it. A different, complementary, puzzle involves identical differently-designative names. Certain features of this one have not, to my knowledge, been noticed.

I know two people named 'Edward L. Keenan, so I can truthfully say:

(5.a)   I believe that ELK$_{\text{SUBJ}}$ is a linguist at UCLA.
(5.b)   I believe that ELK$_{\text{SUBJ}}$ is a historian at Harvard.

It would be syntactically awkward –some sort of binding violation?—to report my belief as:

(6.a)   *   Adèle believes that ELK$_{\text{SUBJ}}$ is a linguist at UCLA and ELK$_{\text{SUBJ}}$ is a historian at Harvard.

It would be false and/or semantically anomalous to report my beliefs as:

(6.b)   ✘   Adèle believes that ELK$_{\text{SUBJ}}$ is a linguist at UCLA and a historian at Harvard.

It's hardly better to report my belief as:

(6.c)   *   Adèle believes that ELK$_{\text{SUBJ}}$ **are** a linguist at UCLA and a historian at Harvard.

But note the improvement with:

(7.a)   ✓   Adèle believes that a linguist at UCLA and a historian at Harvard are ELK$_{\text{OBJ}}$.

or even better:

(7.b)   ✓   Adèle believes that a linguist at UCLA and a historian at Harvard
are {each/both} ELK$_{OBJ}$.

Now, (7.a) may be ambiguous, between one reading where a single ELK is both a linguist at UCLA and a historian at Harvard –a reading better instantiated by:

(7.c)   Adèle believes that **the** linguist at UCLA and **the** historian at
Harvard are {each/both} ELK$_{OBJ}$,

and another where there are two ELKs.

But interestingly, (7.a) and (7.b) both have a metalinguistic reading that works, where the name 'ELK' stands for a name-type, rather than a referential name token. The metalinguistic reading is *predicative*: the copula is understood as the 'is' of predication—is *an* ELK, or ELK$_x$, in the sense that we can say that there are many Edward*s* in the world; it is not *referential*: the copula is not understood as the 'is' of identity (= ELK).

This metalinguistic effect is predictably missing from (6.b) and (6.c), where 'ELK' appears in a canonically referential position, and, for the same reason, no more available in (6.d):

(6.d)   ✘   Adèle believes that ELK {each/both} **are** a linguist at UCLA and a
historian at Harvard.

The metalinguistic reading from subject position can only be induced with considerable lexical specification:

(6.e)   Adèle believes that **two** ELK**s** {each/both} **are** {respectively} a
linguist at UCLA and a historian at Harvard.

or even with outright metalinguistic intention:

(6.f)   Adèle believes that two persons named 'ELK' {each/both} are
{respectively} a linguist at UCLA and a historian at Harvard.

The metalinguistic reading from subject position is induced by clearly transforming a referential name token (ELK) into a predicative name-type (ELKs), or an outright predicate (persons named 'ELK').

These judgments are fully generalizable.

(8.a)   ✘   Pierre believes that Paderewski$_{SUBJ}$ is a pianist and a politician.
(9.a)   ✘   Pierre believes that London$_{SUBJ}$ is both the pretty city and the ugly
city.

are false (or unattributable to Pierre); but

(8.b)   ✓   Pierre believes that a pianist and a politician are {both, each}
Paderewski$_{OBJ}$.

is true, on the available metalinguistic reading.

The case of 'London/Londres' confirms, negatively, the availability of the metalinguistic reading (only) in object position. For it is not true to say:

(9.b)   ✘   Pierre believes that the pretty city and the ugly city are {both, each}
London$_{OBJ}$.

but it is not true is precisely for metalinguistic reasons: since he thinks of the pretty city under the French name 'Londres' and of the ugly city under the English name 'London,' Pierre lacks (at least for the purpose of this example) the required metalinguistic predicate 'is *a* London' or 'London*s*'.

This feature is not essential to the puzzle however. The same puzzle arises even without different languages. Monolingual Peter could think London is pretty because he saw pictures of it in a book, and that (another) London is ugly as he wanders through it, in which case, on its metalinguistic reading, the belief attribution would be true:

(9.c)   ✓   Peter believes that the pretty city and the ugly city are {both, each} London$_{OBJ}$.

Note that the verb 'to be' is essential to the metalinguistic reading. It is unavailable under the semantically related 'ressembles' or 'is similar to', which induce a referential interpretation:

(10.a)   ✓   Adèle believes that a linguist at UCLA and a historian at Harvard
                                                        are {each/both} ELK.
.b   ✗   {both, each} **resemble** ELK.
.c   ✗   **are** {each/both} **similar to** ELK.
(11.a)   ✓   Pierre believes that a pianist and a politician **are** Paderewski.
.b   ✗   **resemble** Paderewski.
.c   ✗   **are similar to** Paderewski.
(12.a)   ✓   Peter believes that the pretty city and the ugly city **are** London.
.b   ✗   **resemble** London.
.c   ✗   **are similar to** London.

Note that 'is identical to' renders the sentence false, for the same reason, while the 'is' of predication yields true (metalinguistic) belief attributions:

(10.d)   ✗   Adèle believes that a ling. at UCLA and a historian at H
                                                        are {each/both} **identical to** ELK.
.e   ✓   **are** {each/both} *an* ELK.
(11.d)   ✗   Pierre believes that a pianist and a politician
                                                        are identical to Paderewski.
.e   ✓   **are *a*** Paderewski.
(12.d)   ✗   Peter believes that the pretty city and the ugly city
                                                        are identical to London.
.e   ✓   **are *a*** London.

The difference between the 'is' of predication and the 'is' of identity is, of course, the ontological categories that flank the 'is':

'is' of identity: "is *the*" or "is *NP*" $= x$,   for x denoting an *object*
'is' of predication: "is *a*" Fx,   for F denoting a *property*

The reason the 'is' of predication is required to yield true belief attributions in the above cases is because only metalinguistic attributions can be true, and these involve beliefs about properties (being an ELK), not objects (ELK).

Kripke's puzzle is not a puzzle only when it relates a believer to a property (being a Paderewski), rather than an object (Paderewski). The puzzle occurs because Pierre harbours a confusion about the reference of 'Paderewski', and Peter of 'London' (in particular, that there are not two such objects but one). And the difficulty in stating Adèle's belief is the complementary one, precisely that she knows that 'ELK' does have

dual reference. Belief attributions succeed in such cases only when they are about *predication* ('are {both} ELKs'), not *reference* (ELK).

Puzzling belief attributions find an outlet in reports from the object, rather than subject, position, as the above subject-object asymmetries reveal. But these subject-object asymmetries are not amenable to structural explanations. The difference between 'is the' and 'is a' is not cashed out in structural or syntactic terms (structurally they are both derived from VP → V + NP), but in semantic (or functional or logical or ontological) terms: the first denotes an object, the second a property.

We tentatively conclude then that, despite appearances, the above facts are not truly subject-object asymmetries after all. The distinction between a subject and an object are expressed in sentence structure, the subject being an external argument, the object an internal argument of the VP. The effective distinction here is not structural but semantic: it is that between a referential and a predicative interpretation of structural positions. It is true that the subject position canonically –in first-order language—receives a referential interpretation, and the object in a VP whose head is the 'is' of predication receives a predicative interpretation. But these are canonical regularities, not explanations, as we show below.

3   Referential-Predicative Expressive Asymmetries

Interestingly (although predictably, given the present analysis), the metalinguistic referential-predicative effects displayed above also appear in derogation inheritance.

Imagine, as per Kaplan (1999), cretinous UC Regents saying:

(13)   "That bastard Kaplan was promoted."

Clearly, (13) carries a presupposition about K, namely that he is a bastard (in the expressive, not the literal, sense).

It is clear that whoever reports the Regents' belief thusly:

(14)   💣 The UC Regents believe [*that bastard* Kaplan]$_{\text{SUBJ}}$ was promoted.

inherits the derogatory presupposition.

The only way to report the Regent's belief without inheriting the derogation is by saying:

(15)   ✓ The UC Regents believe Kaplan *is a bastard*$_{\text{OBJ}}$ who was promoted.

This effect is strikingly robust. While the speaker inherits the derogation (big time!) in the referential:

(16)   💣 The UC Regents believe *the*$_{\text{REF}}$ g-d-d-mned f-ing bastard Kaplan
              was promoted.

the inheritance is cancelled in the predicational:

(17)   ✓ The UC Regents believe that Kaplan is *a*$_{\text{PRED}}$ g-d-d-mned f-ing
              bastard who was promoted.

which acquires a metalinguistic reading.

(17.a)   ✓ UCR stupidly believe that K is *a*$_{\text{PRED}}$ g-d-d-mned f-ing bastard who
              was promoted.

     .b   ✓   UCR just believe, for no reason at all, that K is a g-d-d-mned f-ing bastard who was promoted.

     .c   ✓   Those cretin UCR believe that K is a g-d-d-mned f-ing bastard who was promoted.

The referential-predicative distinction explains judgments of presupposition inheritance in belief reports better than a subject-object asymmetry. The speaker inherits the derogation with a referential NP in both subject and object position:

(18.a)   The UC Regents believe [*that*$_{REF}$ *bastard* Kaplan]$_{SUBJ}$ should not have been promoted.

   .b   The UC Regents believe the Phil Dept should not have promoted [*that*$_{REF}$ *bastard* Kaplan]$_{OBJ}$.

The speaker does not inherit the derogation with a predicative NP in object position:

(19.a)   ✓   The UC Regents believe that Kaplan should not have been promoted for [*being a*$_{PRED}$ *bastard*],

although derogation-inheritance can be induced by discourse-perspective changing elements such as 'basically' and 'such':

(19.b)   The UC Regents believe that Kaplan should not have been promoted for *being basically a bastard*.

   .c   The UC Regents believe that Kaplan should not have been promoted for *being such a bastard*.

The speaker does inherit the derogation of a predicative-*like* NP in subject position:

(19.d)   The UC Regents believe that [*a bastard named* Kaplan] should not have been promoted.

   .e   The UC Regents believe that [*a bastard like* Kaplan] should not have been promoted.

But '*a bastard named Kaplan*' and '*a bastard like Kaplan*' are not truly predicative, but referential NPs, witness:

(20.a)   [A bastard named Kaplan]$_{REF}$ showed up at the Regents' office this morning.

   .b   [A bastard like Kaplan]$_{REF}$ showed up at the Regents' office this morning.

The speaker does not inherit the derogation of a truly predicative NP in subject position:

(19.f)   ✓   The UC Regents believe that [*a/any bastard named* Kaplan]$_{PRED}$ should never be promoted.

The facts here too are robust. The speaker inherits the derogation with referential NPs in:

(21.a)   💣 John wonders *which*$_{REF}$ nigger/redneck/floozie was it who was not promoted .

.b   💣 John thinks it was *the*$_{REF}$ tall nigger/redneck/floozie who was not promoted.

.c   💣 Mary believes that *that*$_{REF}$ floozie who bewitched her husband should never be promoted.

The speaker does not inherit the derogation with predicative NPs:

(22.a)   ✓ John wonders whether it was *a*$_{PRED}$ nigger[1]/redneck/floozie who was not promoted.

.b   ✓ Mary believes that it was *a*$_{PRED}$ floozie who bewitched her husband.

4   Referential-Predicative Presuppositional Asymmetries

The "projection problem," so-called by Kartunen and Peters, is the problem of how to compute the presuppositions of a complex sentence. K & P propose a cumulative model, where the presuppositions of each clause add up to constitute the presuppositions of the whole sentence. This model is defective, as shown briefly below.

The standard presupposition in the sentence:

(23)   Keenan will come to the conference too.

is that:

23-**PRSP**   Someone other than Keenan will come to the conference.

But if we embed (23) into a logically complex sentence, the presupposition of the whole sentence changes. The presupposition of the sentence:

(24)   If Keenan$_{REF}$ will come to the conference, Kaplan will come too.

is that:

24-**PRSP**   Kaplan is not Keenan.[2]

Here, 'too' is anaphoric on the previous clause. The presupposition differs depending on whether the anaphoric clause contains a referential or a predicative expression. The sentence:

(25)   If *the*$_{REF}$ semanticist from UCLA comes to the conference, Kaplan will come too.

presupposes:

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[1]   Some (David Kaplan, Jennifer Hornsby) think words like 'nigger' are "useless" because they can never be used without derogation. Supporters of this view will of course find the speaker derogatory in (22.a) –but this will not be a case of presupposition inheritance of the sort discussed here, but a direct case of using a derogatory word. I disagree with the view of "essentially useless" words, even as it refers to 'nigger', witness John Lennon's moving and non-derogatory: "Woman is the nigger of the world."

[2]   This insight is due to Saul Kripke (Kripke Conference, Barcelona Dec 2005).

> 25-**PRSP**   Kaplan is not the semanticist from UCLA.

whereas the sentence:

> (26)   If a_{PRED} semanticist from UCLA comes to the conference, Kaplan will come too.

does not carry that presupposition.

The referential-predicative distinction accounts also for the following presuppositions or lack thereof. The sentence:

> (27)   If Kaplan comes to the conference, the_{REF} semanticist from UCLA will come too.

presupposes:

> 27-**PRSP**   Kaplan is not the semanticist from UCLA.

whereas the sentence:

> (28)   If Keenan comes to the conference, a_{PRED} semanticist from UCLA will come too.

does not carry that presupposition.

Conclusion

A semantic picture, attributable to Aristotle, Mill, and direct reference theorists, conceives of the logical structure of sentences in terms of reference –the subject of the sentence functioning to denote an object—and predication –the predicate functioning to ascribe a property to that object. Frege brought attention to puzzling dimensions of that view, concluding that proper names themselves had not only a reference, but a predicative sense (while Russell did away with reference altogether). (Correcting Russell,) Donnellan showed that not just proper names but definite descriptions had both a referential use and a predicative (attributive) use.

The understanding of logical structure in terms of semantic function has by and large been ejected from linguistic theorizing, replaced in GB by structural, syntactic, analyses (although categorial grammars retain some of this understanding through rules of functional application.)

The foregoing facts suggest that the referential-predicative distinction is psychologically real. A closer look at how this distinction operates deeply in our linguistic judgments may shed some light on subtleties affecting belief attributions.

All of which is respectfully and lovingly submitted in honour of a true teacher and friend.

Acknowledgements

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