Russell's Analysis

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1 The basics

Russell's account of *The king of France is bald.* is the conjunction of three claims, an existence claim p a uniqueness claim q, and a baldness claim r. The first two are presupposed and the third asserted (though Russell is not defending a fundamental distnction between presupposed and asserted).

The King of France is bald

$\exists x$	KofF(x)	&	($\forall y$KoF(y) $\rightarrow x = y$)	&	Bald(x)
	Kof exists	&	Kof is unique	&	Kof is bald
	p	&	q	&	r
	Presupposed				Asserted

Now consider:

(a) I like the visitor from Spain.

The Russellian analysis of (a) has the usual three components, each of which has been placed on a separate line of the translation in (b):

a. I like the visitor from Spain.
b. $\exists x[$ visitor(x) & from(x, Spain) &
$\forall y[$(visitor(y) & from(y, Spain)) $\rightarrow (y = x)]$ &
like(j, x)]

The first line is the existence presupposition (there exists an x who is a visitor from Spain); the second is the uniqueness presupposition (x is the only visitor from Spain); and the third is what's asserted. Note that the Noun Phrase *the visitor from Spain* includes the property of being from Spain, so that what belongs on the left hand side of the arrow in the uniqueness presupposition includes both being a visitor and being from Spain (in red!). The following is the wrong translation for the given sentence:

$\exists x[$ visitor(x) & from(x, Spain) &
$\forall y[$visitor(y) $\rightarrow (y = x)]$ &
like(j, x)]

This says there exists an x who's a visitor from Spain, and x is the only visitor. It would be the right translation for *I like the visitor, who's from Spain*.

2 Uniqueness

The uniqueness part of the Russellian analyis:

$$\forall y[(\text{visitor}(y)\ \&\ \text{from}(y, \text{Spain}\,)) \rightarrow (y = x)]$$

This can be paraphrased:

Only x is a visitor from Spain.

To understand the logical representation of *only* you should think of it as a sort of backward *every*:

a. Every dog is a mammal. $\forall x\ \text{dog}(x) \rightarrow \text{mammal}(x)$
b. Every mammal is a dog $\forall x\ \text{mammal}(x) \rightarrow \text{dog}(x)$
c. Only dogs are mammals $\forall x\ \text{mammal}(x) \rightarrow \text{dog}(x)$

Similarly:

a. Only Clark Kent is Superman $\forall y\ \text{Superman}(y) \rightarrow y = \text{ck}$
b. Only x is a visitor from Spain $\forall y\ (\text{visitor}(y)\ \&\ \text{from}(x, \text{Spain})) \rightarrow y = x$