

Certain Verbs Are Syntactically Explicit Quantifiers

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Schlenker (*Mind and Language*, 2006) observes that there are pervasive similarities both in the logical properties of quantification over individuals, world, and times and in the linguistic devices (quantifiers, definite descriptions, pronouns, demonstratives) that pertain to them. Yet their treatment has not been uniform in philosophical logic. In particular, quantification over individuals is typically executed in a syntactically explicit manner, using variables ranging over the whole universe, whereas quantification over times and worlds is typically executed using non-variablebinding operators of a much more limited power, such as the \Box and \Diamond operators of modal logic and Montague's $\hat{\cdot}$, the abstractor over indices of worlds. Ontological symmetry could be achieved if individuals, times, and worlds were treated alike.

Indeed, both in philosophical logic and in linguistics there have been significant precedents for deviation from the typical strategy. Quine (1960) recasts quantification over individuals along the lines of modal propositional logic, and Ben-Shalom (1996) makes the approach linguistically more relevant by presenting the nominal restriction of determiners as the accessibility relation associated with modal operators. From the other end, Groenendijk and Stokhof's (1984) theory of questions is among the first to demonstrate a need to quantify over worlds explicitly. Cresswell (1990), Iatridou (1994), Percus (2000), Schlenker (1999, 2004), Pratt and Francez (2001), Kusumoto (2005), Lechner (2007), and von Stechow (to appear) are among the growing number of authors who have proposed to treat certain cases of time and world quantification in a syntactically explicit manner. The primary diagnostics for explicit quantification include the existence of variable-like pronouns referring to the syntactically represented argument, the fact that the argument is not evaluated with respect to a single index, and the fact that the argument need not be linked to the closest suitable operator.

A related but distinct question is the following: Among the linguistic operators with quantificational content, which ones are explicit quantifiers? The existence of an explicitly quantifiable argument does not make it necessary for all operators pertaining to it to be explicit quantifiers. This paper examines so-called raising verbs in Shupamem (a Grassfield Bantu language), Dutch, and English. Raising verbs are non-agentive verbs whose surface subjects can be thought of as originating in the verb's infinitival complement. Relevant exam-

les in English are aspectual *begin* (as in *The paint began to dry*), *seem*, and *threaten* (as in *The barn threatened to collapse*). I will suggest that scope interaction with an appropriate subject indicates that such verbs are syntactically explicit quantifiers over times and worlds, and moreover ones that acquire scope in the same manner as expressions quantifying over individuals (by “quantifier raising” and “scope reconstruction”). I thus add a new diagnostic for syntactically explicit quantification.