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PRELIMINARIES TO THE TREATMENT OF GENERALIZED QUANTIFIERS IN SITUATION SEMANTICS

0. INTRODUCTION

This paper is about putting generalized quantifiers into situation semantics. The notions that I use differ somewhat from those of Barwise and Perry (1983), but see Barwise and Cooper (in preparation) for an attempt to integrate some of the notions suggested here in a general theory of situations.

First I will talk about what Barwise and Perry (1983) call 'general NP's', which are the kind of noun phrases which cannot be thought of as referring to an individual. These are noun phrases like every man and no fish. Then I will take up the question of whether we should also use the generalized quantifier analysis for singular NP's like definite and indefinite descriptions. That is something that Barwise and Perry (1983) did not do. They had a different analysis of singular NP's. I will present two reasons why one might want to extend the generalized quantifier analysis throughout, in Montague style. Finally, there is a section at the end about quantifiers and tense, which shows how my way of doing generalized quantifiers will interact with tense, using location in situation semantics.

1. GENERAL NOUN PHRASES

In general noun phrases, determiners like every, no and most are to be regarded as relations (in the situation semantics sense of the term) between properties. Normally, in an extensional theory of generalized quantifiers, they can be regarded as relations between sets. It is natural to think of them as relations between properties in situation semantics. They are constituents of facts in situations, as relations generally are.

Let's consider some background that is needed to understand this basic idea. First I'll take up some situation theory, and then some of the theory of properties.

Facts are important objects in situation theory.
These model theoretic objects come in two flavors in this version. There are those with a location \( l \), a relation \( r \), an appropriate number of arguments, and a polarity value as in (1).

\[
(1) \quad \langle l, r, a_1, \ldots, a_n, i \rangle
\]

The other flavor is exactly the same, except that it does not have a location, as in (2).

\[
(2) \quad \langle r, a_1, \ldots, a_n, 1 \rangle
\]

It is possible to have facts with or without locations. There is an interesting empirical question of whether or not that is right, and exactly which kinds of facts should have locations.

(3) and (4) are examples of facts.

\[
(3) \quad \langle l, \text{kiss}, \text{John}, \text{Mary}, 1 \rangle
\]

\[
(4) \quad \langle l, \text{kiss}, \text{Mary}, \text{John}, 0 \rangle
\]

(3) is the fact of John kissing Mary at location \( l \) and (4) is the fact of Mary not kissing John at that same location.

A quantifier fact will look like (5):

\[
(5) \quad \langle \text{every}, P_1, P_2, 1 \rangle
\]

It will have a determiner relation and its arguments will be two properties. (I have not yet specified what properties are.)

Fact-types are another important notion. They are like facts except that they contain one or more indeterminates. Indeterminates are represented in boldface.

\[
(6) \quad \langle l, \text{kiss}, s, \text{Mary}, 1 \rangle
\]

This has indeterminates over the location and the first argument position (the subject position). This is the type of fact where Mary gets kissed somewhere.

(7) is rather peculiar.

\[
(7) \quad \langle l, \text{kiss}, s, o, i \rangle
\]

I'm not sure exactly where to use it, although I think that it might prove useful in the interpretation of parts of sentences. The location is determinate and the relation is determinate, but the arguments and the