ABSTRACT. In this paper we argue that the interpretation of discourse involves primarily the selection of semantic models, rather than their construction, as is suggested in a number of recent proposals (e.g., Stenning, 1977; Reichman, 1978). We begin with a modified version of a logical framework developed by van Fraassen (1971) (based on Tarski (1936)) and specifically augment it to allow for relativized quantification (Cushing, 1976) and a dynamic reading of satisfaction rules (Cushing, 1977). We then argue that a selection account of discourse interpretation falls right out of the relativized rule, along with an explanation for at least some “conventional implicatures” (Karttunen and Peters, 1979).

1. MODELS AND SATISFACTION

1.1 Given a semantic representation language $\mathcal{L}$ containing predicate constants and individual constants and variables, an interpretation $I$ of $\mathcal{L}$ is a triple $< D, R, \{f\}>$, where $D$ is a set of individuals, the domain of $I$; $R$ is a function, the interpretation function of $I$, that assigns members of $D$ to individual constants in $\mathcal{L}$ and sets of lists of members of $D$ to predicates in $\mathcal{L}$, the length of a list being equal to the number of arguments in the predicate to which it corresponds; and $\{f\}$ is a set of functions, the assignment functions of $I$, that assign members of $D$ to variables in $\mathcal{L}$. A model $M$ for $\mathcal{L}$ is a pair $< D, R >$, an interpretation of $\mathcal{L}$ without its assignment functions. Since “a factual situation comprises a set of individuals bearing certain relations to each other,” such “a situation can be represented by a relational structure $< D, R_1, \ldots, R_i, \ldots >$, where $D$ is the set of individuals in question and $R_1, \ldots, R_i, \ldots$ certain relations on $D$,” i.e., sets of lists of members of $D$ (van Fraassen, 1971, 107). Models thus serve intuitively to relate formulas in $\mathcal{L}$ to the factual situations they are intended to describe by mapping their constants into $D$ and $\{ R_1, \ldots, R_i, \ldots \}$. The “variable” character of the symbols assigned values by an $f$ relative to those interpreted by $R$ is reflected in the fact that a set of $(f)$s corresponds to a fixed $< D, R >$ to comprise an interpretation $I$.

1.2 The distinction between $R$ and $f$ gives us two different levels on which the satisfaction of formulas can be defined, i.e., on which formulas in $\mathcal{L}$ can be

---

said to be true or false under $I$. First we define satisfaction relative to an assignment of values to variables, by giving rules like (1)–(6), where "$M \models (A) [f]$" is read as "$f$ satisfies $A$ in $M$ or $M$ satisfies $A$ given $f$. Given these rules, we can define "$A \supset B$", read if $A$ then $B$, as "$\neg (B \& \neg A)$", and we can define "$(\exists x)x", read there are, as "$\neg (\forall x) \neg "". Second, we define satisfaction by a model, by saying that $M$ satisfies $A$, written "$M \models (A)$", if $M \models (A) [f]$ for whatever assignments $f$ for $M$ are like $f$ except perhaps (i.e., at most) at $x$;  

2. SIMPLE AND RELATIVIZED QUANTIFICATION

Rule (5) evaluates simple quantifications like (7), which represent the meanings expressed by sentences like (8), for which

(7) $$(\forall x)A$$

$x = "x" and $A = (9)$, while (6) evaluates relativized quantifications like (10), which represent the meanings expressed by sentences like

(10) $$(\forall x)(B; A)$$

(11), for which $x$ and $A$ are as for (8) and $B = (12)$. In general,