A NEW SEMANTICAL APPROACH TO THE LOGIC OF PREFERENCE

ABSTRACT. A possible world semantics for preference is developed. The remainder operator (\(_1\)) is used to give precision to the notion that two states of the world are as similar as possible, given a specified difference between them. A general structure is introduced for preference relations between states of affairs, and three types of such preference relations are defined. It is argued that one of them, "actual preference", corresponds closely to the concept of preference in informal discourse. Its logical properties are studied and shown to be plausible.

1. INTRODUCTION

Modern preference logic was pioneered by Halldén (1957). His approach is syntactical in the sense that, although he provided a decision procedure (pp. 64–89), the acceptability of different axioms is the heuristic basis on which his system is built. von Wright's (1963) approach is syntactical in the same sense. Other syntactical treatments of preferences have been provided by Åqvist (1963), Chisholm and Sosa (1966a, b; cf. Chisholm 1975), Martin (1962), Bengt Hansson (1968) and Quinn (1976).

Rescher (1967) provided an account of preferences in the framework of a possible world semantics, where a real number was assigned to each world, representing its value. Possible world semantics for preference have also been developed by Åqvist (1968), Cresswell (1971), von Wright (1972), von Dalen (1974), von Kutschera (1975) and Trapp (1985). Kanger (1968) and Danielsson (1968) have developed semantical structures for preference that are based on value assignments to states of affairs, without the mediation of value assignments to possible worlds.

2. THE SCOPE OF THE PRESENT STUDY

To prefer is "to like better" (Oxford English Dictionary). To say that a person prefers \( x \) to \( y \) (from a certain point of view) means the same as to say that this person considers \( x \) to be better than \( y \) (from the
same point of view). Preference, in other words, is subjective better-ness. Thus, although there are differences in the usage of the two words (von Wright, 1963, pp. 13-15), they will be taken to refer to the same basic concept.

In ordinary English, “better” and “worse” do not have exactly opposite meanings. The former word is typically used “in cases where one of the alternatives under consideration is comparatively acceptable” (Halldén 1957, p. 13), whereas “worse” is mostly used when this is not the case (cf. von Wright 1963, p. 10). The word “preferable” seems to cover both cases (Chisholm and Sosa 1966a, p. 244). However, in accordance with a long-standing philosophical tradition, “better” will be used in a technical sense that also includes the cases when ordinary language would have “y is worse than x” rather than “x is better than y”. “Worse is the converse of better, and any verbal idiosyncrasies must be disregarded” (Brogan 1919, p. 97).

A statement about preference may be either conditional (“if x, then y is better than z”) or unconditional (“y is better than z”). The present study will deal only with unconditional preferences. (On conditional preferences, see von Wright 1963, p. 32; Lee 1984, p. 131; von Kutschera 1975, p. 198.)

Further, like most studies of the logic of preference, the present study will deal only with such preferences that have states of affairs as their objects. This can be done without a substantial loss of generality, since “all preferences can be understood in terms of preference among states of affairs or possible circumstances. A preference for bourbon, for example, may be a general preference that one drink bourbon instead of drinking scotch” (Lee 1984, pp. 129-30. Cf. von Wright 1963, p. 12; von Wright 1972, pp. 143-44; Trapp 1985, p. 303).

3. INFORMAL ASSUMPTIONS

In most cases of informal discourse about preferences, complete comparability between alternatives does not hold. I am sure that I prefer myself winning $5000 in a lottery to myself winning $50 in that same lottery. I am also sure that I prefer my friend Bob being promoted on his job to him staying in the same position. However, I may not at all know which I prefer, myself winning $5000 or Bob being promoted.