The paradox of the Liar, "What I am now saying is false," has been the subject of extensive discussion throughout the history of philosophy, but only in the twentieth century has it been refined in the form of the Strengthened Liar: "What I am now saying is either false or neither true nor false." Thus the very acceptance of one kind of solution to the Liar paradox has been seen to involve the construction of new paradoxes -- hardly a desirable situation, when the main alternatives seem to involve the complete rejection of self-reference and the acceptance of rigidly-demarcated levels of language. The Paradox of the Liar, edited by R. L. Martin, is the record of a conference held in Buffalo, New York in 1969 in order to present and discuss recent work on the paradox of the Liar, particularly in its strengthened form, and, it was hoped, to provide some solutions. The book includes the three main papers, given by Van Fraassen, Skyrms, and Martin, together with various comments and replies, some of which themselves amount to substantial papers. It also contains a very witty introductory paper by A. R. Anderson and an excellent introduction by the editor in which the main lines of the succeeding discussion are sketched with admirable clarity and economy. Perhaps the main conclusion to be drawn from the book is that the ghost of the Liar can never completely be laid to rest, but all the participants in the conference make a laudable attempt at showing us why this should be the case.

As one might expect, the central theme is the nature of truth itself, and various refinements and extensions of our normal concept of truth are presented. Pollock, in a very interesting and subtle paper, takes as his starting point the distinction between the predicate use of 'true,' as in "What he said is true," and the operator use, as in "It is true that it is going to rain." The latter use does not give rise to paradoxes, and may be regarded as basic. He argues that the problem of the Strengthened Liar arises from not taking the above distinction seriously enough, and he shows that definitions of the predicate use of 'true' may fail because they cross types, i.e., go from the use of a sentence to the mention of a sentence, in such a way that one can no longer determine whether the Liar sentence has the predicate as defined. As a result, the Liar sentence is meaningless and the Strengthened Liar cannot get off the ground, since if even part of a sentence is meaningless this vitiates the whole. However, he does not wish to rule out type-crossing definitions, and he examines two ways of constructing such
definitions which will allow us to use 'true' as a predicate while avoiding paradoxes. He concludes that we can either retain the principle "'P' is true if and only if P" and have a single truth predicate for meaningful sentences alone, or we can abandon the principle and have a global truth predicate whose range of reference is not limited. In the latter case, the Liar sentence turns out to be false.

Wider, but less plausible extensions of our concept of truth are offered by Kearns and Herzberger. Kearns claims that our concepts of truth and falsity are incorrigibly vague, in the sense that our criteria are inadequate for determining whether they are applicable in every case; and he offers us an open-ended series of stronger concepts of truth, so that if we say of the Liar sentence that it is not true we are saying something other than what it says of itself. Presumably at each level we have a concept which is less vague than the one it embraces, but we will never reach a level at which we have a concept of truth whose criteria of application are fully adequate, and thus we can have no global concept of truth. The main problem with this solution is that the notion of vagueness, and the related notion of a borderline case, are themselves vague. Certainly we can understand these notions in the case of such predicates as 'red' and 'orange,' or 'good' and 'bad.' We recognize that we may be unable to classify the colour of an object, because colours seem to merge into one another, and because our colour concepts are not precise enough to make clear-cut distinctions; we recognize that we may be unable to decide whether a man is good or bad, because he may have both good qualities and bad qualities; but we do not expect those analogies to apply to true and false sentences. Certainly the Liar sentence is problematic, but it seems strange to call it a borderline case. Its problem is not that it falls between the camps of truth and falsity, but that it seems to belong to both camps at once.

Herzberger extends our notion of truth by arguing that a distinction ought to be drawn between security, or correspondence to reality, on the one hand, and the satisfaction of presuppositions on the other, and that one ought to say that a sentence is true only if it satisfies both these conditions. He spells out the consequences of the separation of truth from security in an elaborate formal system which involves three values, two kinds of connectives ('internal' and 'external'), and the use of a new operator ('the Bochvar-Frege horizontal'). He shows how one can construct a language L which can record the truth-value of its own sentences, and another language L+ which can also record that some sentences have no truth-value, but he argues that one cannot construct a language which can express the whole of its own semantic theory. In his languages it turns out that logical principles are secure, but their instances are not necessarily
true; and he suggests that the semantic presuppositions of our language may themselves be secure rather than true. There are three features of this very interesting series of suggestions that worry me. In the first place, and most importantly, the notion of security itself needs far more explication than Herzberger gives. In the second place, L+ has some undesirable logical features, such as the non-transitivity of consequence. In the third place, Herzberger's use of Buridan is misleading. He ascribes the distinction between security and the satisfaction of presuppositions to Buridan in his discussion of insolubilia; yet in the passage of Buridan which he quotes, Buridan is discussing not insolubilia, but such sentences as "No proposition is negative." Buridan's puzzlement in the face of this sentence was caused by his assumption that a propositio was an occurrent sentence, and he solved his problem by distinguishing between "signifying that things are as they are" and "being true," where truth was a property just of occurrent sentences. The notion of a presupposition is not used here; nor does he seem to use it in his later discussion of genuine paradoxes of the Liar type.

Herzberger's paper raises another issue which is of some importance when one considers the paradox of the Liar: that is, how far is the development and study of formal languages of any importance? Pollock, Kearns and Martin all emphasize the point that the paradox arises in ordinary language, and that it involves ordinary language concepts, such as truth. Moreover, any satisfactory solution to the paradox, or any account of how it arises, must relate to the nature of the language we speak. That they are right can, I think, be demonstrated by a close look at two of the other papers in the book. Van Fraassen, who begins with a brief sketch of the notions of presupposition and supervaluation that he developed in earlier papers, devotes the substantive part of his paper to variants of a formalized language in which some paradoxes can be generated, though the non-truth of a certain kind of infinite paradox cannot be expressed. While what he does is impressive, it does not seem to shed new light upon the pathology of the Liar in ordinary language; nor does it add to the solutions he had offered earlier to the effect that both the Liar and the Strengthened Liar sentences lack a truth-value, and that the claim that assertions of truth are always themselves either true or false is mistaken. Skyrms in his paper departs even further from ordinary language than does Van Fraassen. Building on his earlier solution to the Liar paradox which involved restrictions on the substitutivity of identity, he sketches out a possible quantificational system with weakened Universal Specification. In particular, he discusses various ways of barring the Strengthened Liar sentence, such as restricting relettering, modifying the theory of identity, or introducing a special rule about bound variables.
occurring both within and without quotation marks in conjunction with semantic predicates. These matters carry us some distance from the problem of how to handle the semantics of English, or any other natural language.

The most plausible paper in the book is that by the editor, R. L. Martin. Martin does indeed set up a modest formalized language, but he does not lose himself in its intricacies, for he clearly views it as an aid to exposition rather than an end in itself. Nor does he set out to refurbish our notion of truth. Instead, he develops the notion of a predicate's range of applicability in such a way that certain sentences can be ruled out as semantically deviant on the grounds that their subject cannot be shown to belong to the range of applicability of the predicate. In the case of the Liar sentence, 'This very sentence' can only be shown to belong to the range of applicability of the predicate 'false' if the sentence is first shown not to be semantically deviant, yet the sentence can only be shown not to be semantically deviant if the subject is shown to belong to the range of applicability of the predicate. After some debate with Donnellan, Martin deals with the Strengthened Liar sentence by arguing that if the same term appears in each disjunct and if one disjunct lacks a truth-value, then so does the whole disjunction. In his formalized language no open atomic sentence can be satisfied by exactly the set of non-true expressions, and this, he claims, captures our intuition that exclusion negation cuts across category lines. We can say that a sentence is without a truth-value, and hence is neither true nor false, but we cannot say that a sentence is not true in the sense that it is either false or without a truth-value. "False" must appear with its category mate, "true."

The Paradox of the Liar is not always an easy book to read, partly because the authors have a tendency to make elliptical references to earlier work of their own and of the other participants in the conference, but it must nevertheless be strongly recommended. Not only does it give a thought-provoking and comprehensive treatment of the subject in its present condition, but it offers tantalizing hints of possible future developments.