XI

ON CARNAP'S ANALYSIS OF STATEMENTS OF ASSERTION AND BELIEF

ALONZO CHurch

For statements such as (1) Seneca said that man is a rational animal and (A) Columbus believed the world to be round, the most obvious analysis makes them statements about certain abstract entities which we shall call 'propositions' (though this is not the same as Carnap's use of the term), namely the proposition that man is a rational animal and the proposition that the world is round; and these propositions are taken as having been respectively the object of an assertion by Seneca and the object of a belief by Columbus. We shall not discuss this obvious analysis here except to admit that it threatens difficulties and complications of its own, which appear as soon as the attempt is made to formulate systematically the syntax of a language in which statements like (1) and (A) are possible. But our purpose is to point out what we believe may be an insuperable objection against alternative analyses that undertake to do away with propositions in favour of such more concrete things as sentences.

As attempts which have been or might be made to analyse (1) in terms of sentences we cite: (2) Seneca wrote the words 'Man is a rational animal'; (3) Seneca wrote the words 'Rationale enim animal est homo'; (4) Seneca wrote words whose translation from Latin into English is 'Man is a rational animal'; (5) Seneca wrote words whose translation from some language S into English is 'Man is a rational animal'; (6) There is a language S' such that Seneca wrote as sentence of S' words whose translation from S' into English is 'Man is a rational animal'. In each case, 'wrote' is to be understood in the sense, 'wrote with assertive intent'. And to simplify the discussion, we ignore the existence of spoken languages, and treat all languages as written.

Of these proposed analyses of (1), we must reject (2) on the ground that it is no doubt false although (1) is true. And each of (3)–(6), though having the same truth-value as (1), must be rejected on the ground that it does not convey the same information as (1). Thus (1) conveys the content of what Seneca said without revealing his actual words, while (3) reproduces Seneca's words without saying what meaning was attached to them. In (4) the crucial information is omitted (without which (1) is not even a consequence) that Seneca intended his words as a Latin sentence, rather than as a sentence of some other language in which conceivably the identical words 'Rationale enim animal est homo' might have some quite different meaning. To (5) the objection is the same as to (4), and indeed if we take 'language' in the abstract sense of Carnap's 'semantical system' (so that it is not part of the concept of a language that a language must have been used in historical fact by some human kindred or tribe), then (5) is L-equivalent merely to the statement that Seneca once wrote something.

(5) and (6) are closely similar to the analysis of belief statements which is offered by Carnap as 'Meaning and Necessity', and although he does not say so explicitly it seems clear that Carnap must have intended also such an analysis as this for statements of assertion. However, (6) is likewise unacceptable as an analysis of (1). For it is not even possible to infer (1) as a consequence of (6), on logical grounds alone—but only by making use of the item of factual information, not contained in (6), that 'Man is a rational animal' means in English that man is a rational animal.

Following a suggestion of Langford, we may bring out more sharply the inadequacy of (6) as an analysis of (1) by translating into another language, say German, and observing that the two translated statements would obviously convey different meanings to a German (whom we may suppose to have no knowledge of English). The German translation of (1) is (1') 'Seneca hat gesagt, der Mensch ein vernunftiges Tier sei'. In translating (6), of course 'English' must be translated as 'Englisch' (not as 'Deutsch') and 'Man is a rational animal' must be translated as 'Man ist ein vernunftiges Tier' (not as 'Der Mensch ist ein vernunftiges Tier').

Replacing the use of translation (as it appears in (6)) by the stronger requirement of intensional isomorphism, Carnap would analyse the belief statement (A) as follows: (B) There is a sentence S, in a semantical system S' such that (a) S is intensionally isomorphic to 'The world is round' and (b) Columbus was disposed to an affirmative response to S. However, intensional isomorphism, as appears from Carnap's definition of it, is a relation between ordered pairs consisting each of a sentence and a semantical system. Hence (B) must be rewritten as: (C) There is a sentence S, in a semantical system S' such that (a) S is, as sentence of S', intensionally...
isomorphic to 'The world is round' as English sentence and (b) Columbus was disposed to an affirmative response to $S_1$ as sentence of $S$.

For the analysis of (1), the analogue of (C) would seem to be: (7) There is a sentence $S_1$ in a semantical system $S$ such that (a) $S_1$, as sentence of $S$, is intentionally isomorphic to 'Man is a rational animal' as English sentence and (b) Seneca wrote $S_1$ as sentence of $S$.

Again Langford's device of translation makes evident the untenability of (C) as an analysis of (A), and of (7) as an analysis of (1).

II

The foregoing assumes that the word 'English' in English and the word 'Englisch' in German have a sense which includes a reference to matters of pragmatics (in the sense of Morris and Carnap)—something like, e.g., 'the language which was current in Great Britain and the United States in A.D. 1949.'

As an alternative we might consider taking the sense of these words to be something like 'the language for which such and such semantical rules hold', a sufficient list of rules being given to ensure that there is only one language satisfying the description. The objection would then be less immediate that (1) is not a logical consequence of (6) or (7), and it is possible that it would disappear.

In order to meet the latter alternative without discussing in detail the list of semantical rules which would be required, we may modify as follows the objection to (7) as an analysis of (1). Analogous to the proposal, for English, to analyse (1) as (7), we have, for German, the proposition to analyse (1') as (7') Es gibt einen Satz $S_1$ auf einem semantischen System $S_1$, so dass (a) $S_1$, als Satz von $S$' intendational isomorph zu 'Der Mensch ist ein vernünftiges Tier' als deutscher Satz ist, und (b) Seneca $S_1$, als Satz von $S$ geschrieben hat. Because of the exact parallelism between them, the two proposals stand or fall together. Yet (7') in German and (7) in English are not in any acceptable sense translations of each other. In particular, they are not intentionally isomorphic. And if we consider the English sentence (a) John believes that Seneca said that man is a rational animal and its German translation (a'), we see that the sentences to which we are led as supposed analyses of (a) and (a') may even have opposite truth-values in their respective languages; for John, though knowing the semantical rules of both English and German, may nevertheless fail to draw certain of their logical (or other) consequences.