

CHAPTER XVI

ON THE EXISTENCE OF RELATIONS

We cannot choose to do without them, without seeking to choose, since choice is action, and involves, for instance, the aforesaid difference between affirming and denying that we mean to do thus and thus. (449)

JOSIAH ROYCE

In concluding the foregoing remarks, I must explain one more general consideration. This concerns an extremely profound structural psycho-logical discovery, made by Prof. Royce,¹ which underlies any and all semantic problems of human 'mentality'. Royce, although a 'philosopher', was a lover of mathematics and was much interested in the problems of *order*. He was trying to reformulate 'logic' in terms of order. We had already encountered the inherent circularity in the structure of human knowledge, which admittedly is semantically disconcerting if not faced boldly. But, when recognized, this circularity is not only not vicious, but even adds to the interest and beauty of life and makes science more interesting. Besides, the structure of human knowledge is such that there are activities of man which are not only circular but also 'absolute', or 'necessary'. Whatever we do, we cannot get away from them—a fact of serious semantic importance. Except from Royce and a few of his students, these problems have as yet received little attention.

Royce shows that there are certain activities which we reinstate and verify through the very fact of attempting to assume that these forms of activity do not exist, or that these laws are not valid. If any one attempts to say that there are no classes whatsoever in his world, he thereby inevitably classifies. If any one denies the existence of relations, and, in particular, a semantic relation between affirmation and denial, or affirms that 'yes' and 'no' have *one* meaning, in that breath he affirms and denies. He makes a difference between 'yes' and 'no', and emphatically asserts relational equivalence even in denying the difference between 'yes' and 'no'. To use Royce's own remarkable words: 'In brief, whatever actions are such, whatever types of action are such, whatever results of activity, whatever conceptual constructions are such, that the very act of getting rid of them, or of thinking them away, logically implies their presence, are known to us indeed both empirically and pragmatically (since we note their presence and learn of them through action); but they are also absolute. And any account which succeeds in telling what they are has absolute truth. Such truth is a "construction"'

or “creation”, for activity determines its nature. It is “found”, for we observe it when we act.’

We see that we have definite semantic guides in this enquiry. One guide to follow is these unescapable characteristics of the structure of human knowledge, which Royce called ‘absolute’, but which I prefer to call ‘necessary’. The other guide leads us to avoid ‘impossible’ or absurd statements, or statements which have no ‘logical existence’; which, in the rough, means statements which abuse symbolism and produce noises, instead of symbols. As we have already seen, both guides have sound *neurological* justification, to be expressed in terms of *order* and *circularity*, terms uniquely fit structurally to speak about processes, stages of processes, orders of abstractions, . Obviously, our task of formulating a theory of sanity can proceed along these structural and semantic lines. It should be noticed that mathematics, considered as a form of human behaviour, and ‘mental’ illnesses, also considered as definitely human behaviour, have yielded their share for our structural guidance.

Although many a scientist has instinctively proceeded in the way indicated, yet the instinctive successful procedure of an isolated scientist is usually not capable of being transmitted to others. It is his personal benefit. Only a *methodological structural* formulation of such private routes to semantic success can become a *public* fact, to be analysed, criticized, improved, and transmitted or rejected.

It must be noticed that terms like ‘chance’ or ‘law’ are fundamentally connected with discussions of determinism versus indeterminism, and so involve problems in connection with ‘necessary’ semantic processes. In the example about the probability of the M-event, it was shown how a ‘chance’ event on one level may become a ‘law’ on another. The structural *possibility* of such transformations is very interesting and of basic semantic importance. For scientific purposes, we must accept ∞ -valued determinism on the scientific level as *it is the test of structure*; but this has nothing to do with the *apparent*, mostly two-valued indeterminism in our daily lives. To solve a number of equations, we must have as many equations as we have unknowns. If we have fewer equations than unknowns, we do not get definite values; our unknowns are still undetermined. The origin of ‘indeterminism’ is similar; we lack knowledge; the number of equations is less than the number of unknowns. Hence, it is impossible to discover determined values in all cases. This gives an appearance of two-valued indeterminism, but with the increase of our knowledge, or with additional equations, the unknown may be determined. Determinism is a more fundamental point of view than indeterminism; in it we find a *test for structure*. It is also a more general point

of view, in which indeterminism is only a particular case and does not allow of the structural test. In a science of man, in a \bar{A} -system, we must start with the more fundamental and general. Accordingly, we have to accept ∞ -valued determinism, which, in 1933, becomes the broad scientific point of view. The unnecessary semantic war between the advocates of the different points of view has been unduly bitter and necessarily futile.

As words are not the things we speak about, and the only link is structural, the 'human mind' must require linguistic structural ∞ -valued determinism as a condition of rationality. As soon as we find that any linguistic issues are not deterministic, it is an unmistakable sign that the language or the 'logic' we are using is not similar in structure to the empirical world and so should be changed.

This statement seems to be general. In application to the new quantum mechanics, special problem, it would appear that the old macroscopic language of 'space', 'time', is not similar to the sub-microscopic structure and should, therefore, be changed. Perhaps the electrodynamic language, instead of the macro-mechanistic, would fare better.