A Criticism of Spaulding's "A Defense of Analysis"

Spaulding's purpose, he claims, is to "defend analysis as a method of knowing which discovers entities or parts which are real in quite the same sense as the wholes which are analysed", to use his own words. He explicitly presupposes that all analysis must be in terms of the whole-part relation, which he leaves undefined. Analysis in terms of this is, he says, common to the experimental methods of the natural sciences and to mathematics. Of the various sorts of wholes which can be analysed, he distinguishes aggregates, classes not classes of classes, classes of classes and 'unities'. What analysis is, Spaulding supposes everyone to know, so that, in his words, "an exact and precise logical definition may not be necessary." The view of analysis which he claims to support is one which discovers facts, and does not create them, as he thinks the pragmatist and humanist believe, nor does it falsify them, as he thinks the Absolutist and the mystic believe. Analysis

reveals not only the parts of the analysed object, he says, but the relations between those parts.

Spaulding next discusses such collections as are simple aggregates. He takes on faith the, mathematically faulty earlier view of Bertrand Russell as developed in his 'Principles of Mathematics', which claims that any objects whatever may make an aggregate, neglecting entirely Russell's further development of the theory of types (which had been previously published in the American Journal of Mathematics), which conditions the membership of an aggregate at least in so far that no member of an aggregate may be another aggregate containing within itself another member of the first aggregate. [] his part ~~theory~~ was proved, by the way, by ~~Schro~~ Ernst Schröder in §9 of vol. I of his 'Algebra der Logik', p. 210 where he ~~deals with~~ shows that any aggregate which the logic of classes can deal with must be a 'Reine Mannigfaltigkeit', - an aggregate of the form just defined]. There is no excuse, therefore, for Spaulding's error in this regard, nor that of Russell. The very terms

Schneider

of logic are not mutually independent, ~~for~~ ~~no~~ therefore; the external view of relations cannot be supported by the theory of aggregates, as Spaulding tries to support it. Therefore, unless we have a whole to begin with of such a nature that it is composed of independent terms, any such analysis falsifies it, and can only be justified pragmatically, in so far as it can be justified at all. Now, no amount of evidence can ever convince us completely that we ~~have~~ are dealing with such a whole, since the degree of relative dependence of the terms can only be completely ascertained by a complete observation of their behavior, ~~unless~~ which is impossible.

After this follow two or three dreary chapters in which a confused rehash of Bertrand Russell's rejected views ~~of~~ goes under the alias of 'modern mathematics' or 'modern science.' Of these I have neither the time nor the patience to speak in detail. Suffice it to say that their philosophical value is rendered nil by the repetition of Russell's metaphysical treatment not discarded of mathematical postulates as ultimates. The

groups

V 1. Veblen-Young 8
2. Anomalies 4
3. Congruence 6
4. Parallels 1
5. Continuity 2

O. Veblen 1904.

Cor. K. Points
R. order
R. congruence

Hilbert

K. ~~points~~ spheres Hilbert
R. dyadic

futility of this way of looking at things will become obvious when we remember that, for instance, in plane projective geometry two absolutely analogous and distinct sets of postulates can be given, the one in terms of points, the other in terms of lines. Now, any analysis in terms of the whole-part relation can not give us two final but mutually exclusive sets of parts for the same whole.

Spaulding tries to meet Bergson's criticism of analysis ~~by~~ — that analysis falsifies because it gives us a static representation of an evolving reality — by accusing Bergson himself of using concepts to interpret his world, and by saying that ~~whether~~ these concepts must therfore be adequate to the world with ~~which~~ they deal. However, whether this argument applies to Bergson or not, I do not see why a person may not be willing to accept the situation, and admit that ~~no one~~ his own interpretation of the world is necessarily inadequate, but nevertheless relatively adequate to his immediate needs.

Spaulding distinguishes organic wholes from aggregates by assuming — ~~rationally~~ non-rationally, as he admits — that a whole, while retaining all the properties of its parts unmodified, has certain additional properties of its own. However, this seems, as I shall show, to explain little or nothing.

I agree with Spaulding's ~~conclusion~~ last chapter, that the problem of organization is not generically different in the living and in the non-living, but it seems to me that analysis is incomplete in both, not ~~in neither~~, as he thinks, complete in both.

The whole fallacy of ~~this~~ Spaulding's position comes from the vague and undefined character of the whole-part relation. That one can analyse every system into its parts in some sense is clear, but that one can analyse every system in a unique manner into unanalyzable and independent terms and their relations, and that one loses nothing thereby, are by no means clear, but needs demonstration. And as we have seen, the new Realist is able to prove

this only because he tacitly takes it as one of his premises.

Let us suppose, then, however, that the New Realist has succeeded in analysing a given ~~physical~~ system into (1) its terms, (2) its relations, and (3) those characteristics peculiar to the system. Let a and b be terms in the relation R. If the system is made by simply taking the terms and their relations, 'a is in the relation R to b' would be indistinguishable from 'b is in the relation R to a.' Evidently what we want is not merely the terms and their relations, but the terms in their relations. If, however, we are not able to separate the terms from their relations, or to distinguish them, we have carried out no real analysis. 'a is in the relation R to b' and 'b is in the relation R to a' must be distinguished, then, by the relations which hold between a, R, and b. Let us write 'a is in the relation R to b'; then, as 'a is in the relation R to b' and a, R, and b are

Was I too strenuous?

in the relation S. But unless we have some yet further means of relating S to the other terms and relations, 'a, R, and b are in the relation S' is equivalent to 'b, R, and a are in the relation S', so that we come to be in the same situation in which we were at first. We are thus driven into the inextricable tangle of an infinite regress. The adjunction of the characters peculiar to the system does not help us at all, and indeed serves only to render matters more confused, for they need to be related to the other parts of the system, the resulting complex has its peculiar characters, these characters need to be related to their system in their turn, and so on ad infinitum. The external theory of relations is then an utter failure in dealing with even the most external and superficial of relations. We must recognize that in logic, as elsewhere, ex nihilo nihil fit; if you start with a mere

Take any old geom & find fundament

concepts. What nu. of dis?

Pasch 1882.

Peano 1894

1. Un. of dis 2 Us & rel

1. Pnts.

2. Lin. seg.

3. Motion?

17 first

8 Mot

Pieri

pnts.

tet. rel. R Equid.

at R ?.

1899 Hilbert

K1 pnts ~~grme~~

K2 lns ~~Bray~~

K3 planes 2 valnce

Kern

congruence ~~...~~

... ... distance

unrelated agglomeration of terms and relations, you will end with a more unrelated agglomeration of terms and relations.

To conclude, Spaulding's article seems to me an utter failure. Viewed as a work of mathematics or science it is beneath ~~contempt~~ criticism; Spaulding seems not even to know what a derivative is. Viewed as a work of philosophy it is fallacious and inconclusive. It is an example of a type of paper at once very common and very pernicious; the paper of a man who knows just enough of his subject to blunder plausibly, and not enough to blunder correctly.