Dr. Prince’s term “coconsciousness” is the least ambiguous expression for what is meant in these discussions that has yet been suggested.

A. H. Pierce.

Smith College.

REVIEWS AND ABSTRACTS OF LITERATURE


This monograph naturally invites comparison most immediately with the utterances of Wundt and Münsterberg under the same title. The results of such comparison can not be simply drawn off, however, in statements of this sort: that Stumpf holds psychology to be inseparable from philosophy; that he denies it a place among the natural sciences; that he makes it the fundamental member of the group of Geisteswissenschaften. The meaning of these propositions is indeterminate apart from the whole scheme, which seems worth presenting in some detail.

The most superficially noticeable thing about it is its rejection of the attempt to put the sciences into a unitary system. Stumpf sets up at the outset a canon of historical responsibility which forbids it. The sciences are—among other things—empirical existences; and neither their relative importance nor their characteristic differences can be done justice by a simple branching tree. It is not the lines of division of actual scientific labor that we are bound to respect—no one transects these more lightly than Professor Stumpf—but we must respect the domains of the sciences themselves, which cross and overlap. History is not wholly other than politics, physics is not purely a science of laws as opposed to particular facts, etc. Stumpf makes use of five independent principles of division.

In no case, however, are sciences divided on the ground of method. Methods and problems, the author observes, are circumstances which depend on and vary with the subject-matters: the ultimate divisions of science will, accordingly, follow the ultimate divisions of Gegenstände, the objects of conceptual experience. (1) The distinction between physical and psychical objects is the ground upon which sciences have “von jeher” been divided as sciences of nature and of spirit, Natur- and Geisteswissenschaften. This division is, indeed, incomplete; there is a series of “neutral sciences,” four in number, not concerned distinctively with either kind of object; but it is well that they should be thrown into just this relief. For Phaenomenologie (the theory of Erscheinungen as they appear), Eidologie (the theory of structure of logical systems and value systems), and the general theory of relations may properly be termed Vorwissenschaften, constituting as they do an organon for every other science (p. 39); whereas metaphysics, the Nachwissenschaft, presupposes and unifies the results of all other sciences. (2) If we distinguish objects as individual and general, and the sciences thereby as sciences of fact
and sciences of law, we provide a place in the former category for history.

(3) To place mathematics we must separate homogeneous from non-homogeneous objects; the homogeneous object, the object of mathematics, being defined as a whole whose parts show only a single kind of difference, and can thus be conceptually substituted for one another by a single type of variation (p. 78). (4) The difference between theoretical and practical science is likewise a difference of object. The distinctive concern of practical science is not with objects that are, but with objects which at once ought to be (the **Werte**, by definition) and are realizable.

(5) The unity of the several sciences which we include in philosophy can be expressed only by a further dichotomy of objects. Philosophy deals with the “most general” objects. But this bond is insufficient apart from the fact that all philosophical disciplines depend upon psychological materials and results. Philosophy is thus to be defined as “the science of the most general laws of the psychical and of reality **überhaupt**.” This definition, which represents philosophy as a **Gesetz-wissenschaft**, is subject to the reservation that the history of philosophy is an integral part of philosophy itself (p. 92). So much for the surface of the scheme.

This surface is a fairly consistent product of the theory of knowledge here at work. We are struck by the frequency with which these divisions of science are run back to ultimately “given” differences in cognitive experience. Objects, indeed, are not given, they are results of concept building; but the difference in objects may be traced to ultimate differences in the material for concept building given in experience. The difference between physical and psychical objects, for instance, has its root in a duality in immediate experience, that, namely, between the stuff, the **Erscheinungen** (the primitive phenomena of sense and feeling) and the **psychische Functionen** which have these **Erscheinungen** as their content. In every consciousness, the ultimate stuff of experience and the psychical activity immediately concerned therewith are two disparate, indissoluble, given facts (p. 10). Similarly, the distinction between individual and general objects is taken as given. We observe individuals; we also observe species, universals. With this simple refutation of nominalism goes the possibility of escaping psychologism as well as apriorism. Psychologism is simply the inheritance of the older empiricism. It has no way of treating “ideas,” including the ideas we call norms, except as things of life, having causes, births, temporal careers, and deaths. To the old apriorism ideas were nothing but eternal meanings. To Stumpf and a considerable group of writers, among whom Husserl is the most thoroughgoing, they are neither one thing nor the other precisely; they are observable facts, they are phenomena, they are persistent objects in a world of like universal objects. They are not, indeed, independent phenomena of the Platonic type, for they do not exist except as the contents of psychical functions; whence, however free from genetic psychology logic and ethics may become, it is folly to consider their governing ideas in independence of descriptive psychology. Precisely as in immediate experience psychical function and **Erscheinung**
are given together, so in thinking and willing there are given together the function and its governing idea. Stumpf thus finds himself able to bring logic and the theory of values together under the head of eidology, the science of ideal structures (Gebilde), the "sachlichen Korrelate psychischer Funktionen" (p. 33). So, further, the distinction between terms and relations is a given distinction. Relations are neither terms nor forms of thought: "Die Ähnlichkeit ist nicht ein Vergleichen, das Ganze nicht ein Zusammenfassen." Relations are observed with the terms; they are objects of coordinate rank (p. 37).

This tendency to rest upon irreducible differences in experience is of a piece with the anxiety to avoid presuppositions. The author will not deduce, but report, his system. He consistently objects to the use of such metaphysical criteria as "overindividual" to mark off groups of objects (p. 34). But the comment seems justified that what we are relieved of in metaphysics is made up in the strain imposed upon our eye for the given, and at the further cost that none of our questions are answered. A "phomenon" is a finality about which, when it is reported, nothing more can be said. There is, indeed, an aspect of every object of thought which is unique, and has, therefore, to be taken as given—but this is just the aspect that is worthless for definition. We become empirically perfect and empirically dead at the same moment; there is a certain meaning-blindness which comes of the very stress of the resolve to be utterly objective. And this is true even if we avoid the ironical fate that dogs this type of thought—that of discovering objects where there are none: whence among the students of pure experience there must always be as much diversity of opinion about what is given as among the old apriorists about what is self-evident. It is not impossible that all these dichotomies upon which Professor Stumpf depends are really given; but the only way to make sure of it is to deduce them.

It is fair to say that this necessity is partially recognized. The distinction between physical and psychical objects, for instance, is a matter not only of disparate material, but also of different concept building; and the concept building is different because the problem is different. But clearly all derivation of the peculiar object of a science from its peculiar problem is at the expense of the maxim that sciences are primarily distinguished by their objects. Hence Stumpf, having derived his object, carefully purges from it all trace of the process by which it is found. The problem of physics is the complete causal formulation of the flow of Erscheinungen; to accomplish this it is driven to build concepts from which the quality of the Erscheinungen is eliminated (pp. 12–13). It is led to define a world of objects, self-sufficient, independent of consciousness, a world to which the fact of sensation is accidental, indifferent, unaccountable. The business of physics is with these objects; that is to say, it has nothing to do with sensations. The circumstance that it takes its beginning in and makes its report to sensation plays no part in its procedure. The situation is paradoxical, but if we define science in terms of its object alone there is only one thing to do. Stumpf accordingly repudiates most explicitly that conception of physics which with
Berkeley, Mill, and Mach makes its responsibility to sense experience the core of its definition.

Physics and psychology are thus simply independent. They have even a buffer science between them. For psychology, concerned as it is with the psychical functions solely, not with their contents, has no more than physics to do with sensations as Erscheinungen. The description of sensations and sensation series, the formulation of their purely immanent laws of contrast, harmony, etc., the investigation of the properties of the phenomenal spaces of touch and sight (in no sense identical with the space of geometry, nor with the very different space of physics—pp. 65 ff.), also of phenomenal time—all this volume of scientific labor falls to a neutral science, the Phaenomenologie aforesaid. It is true that the complex sciences of nature, especially of organic nature, make free use of sense qualities in their definitions (p. 19); and that the complex sciences of spirit, i.e., the sciences of society, of the state, of language, religion, and art, defined as sciences of complex psychical functions (p. 21), have to recognize important physical factors in their materials (p. 23); but in each case at the nucleus lies either a psychical or a physical object, and this furnishes differentia enough.

In the case of history, again, Stumpf relies on the motive of a science to determine its object, and then defines the science by the object pure and simple. The contrast between law and fact is ultimate and irreducible (p. 62); a fact is simply a truth which is not necessary. Whether there are any sciences of pure fact depends on whether it is possible for a pure fact to have any value. And that such may be the case the history of historical investigation is called to witness! History is not concerned to deal with every fact, but with the facts regarding the temporal realization of values: these facts are themselves of immediate value. It is not inconceivable that "historical laws" might be formulated—what interferes is not human freedom, but the complexity of the situations—but even were this accomplished these laws would segregate away from a residual mass of fact; and the fact would still be the proper object of the historical spirit. As an "immediate value" is presumably a value for which no reason can be given, our understanding of history remains at this point, that a given interest and a given field of objects have happily met.

It seems to me a distinct merit of this treatise that it shows so clearly the impossibility of bringing unity into our conceptions of science with the object as principle of division. Unless we go at once to the truth, and say that every science has one unique individual object—physics, the material world; history, the spiritual content of time; etc.—if by the objects of a science we mean the unit terms of its various hypotheses, nothing is more certain than that the fields of science overlap. There can be no private property in the small fry of science. We merely escape absurdity by admitting at once that history and economics, acoustics and art, logic and mathematics, have much language of this sort in common, and tend to have more. But this fact seems of itself a sufficient criticism of the theory that the object per se can throw adequate light on the
relations of sciences: if the field of objects is criss-crossed in different
directions it can only be in the interest of different problems. Is it not
time to discard the assumption that, given a field of phenomena, there
are to be recited an invariable set of problems that go with it?

But the reviewer is guilty of some disproportion in giving so exclusive
attention to the first principles of a work in which second principles and
fine observation are the prime movers.

William Ernest Hocking.

Orientation in the White Rat. Harvey Carr and John B. Watson.
Journal of Comparative Neurology and Psychology, January, 1908.
Pp. 27-44.

This study presents the results of experiments on the white rat under
two sets of conditions. First, rats that had learned a labyrinth path were
started at one of three different positions fairly well along in the course
of the maze, and were sometimes headed in the right, sometimes in the
wrong direction; the object being to study their methods of correcting
their orientation and picking up the right path. Secondly, again after
the animals had learned the path, “certain of the runways were either
shortened or lengthened. The disturbing effect of these alterations
upon the rats' conduct and their methods of learning to adjust them­
selves to the new conditions were observed.”

1. In answering the question as to how a rat set down with the
wrong orientation can correct it and take up the labyrinth habit at a
point other than the starting-point, the authors make two assumptio n s:
on the one hand, that kinesthetic data alone may suffice to orient a rat,
and, on the other hand, that if the animal does orient himself by kines­
thetic data, he will require a period of random wandering about before
the proper cue is obtained, longer than would be necessary if orientation
were secured by some “distance sense.” The first assumption is based
upon Dr. Watson’s former experiments on the white rat, in which it was
shown that individuals deprived of sight and smell could learn a maze
as well as normal individuals. Just here, without questioning the main
point at issue, a word of comment may be interpolated. The argument
from defective to normal rats is based, the writers say, upon the sup­
position “that the processes employed as control by the defective rats
are the same as those which would have been employed by them had
they been normal.” This supposition seems to the present reviewer to
be an unsafe one. What the performances of the defective rats show is
that normal rats probably can learn a labyrinth by kinesthetic cues alone;
it does not show that they do depend wholly upon such cues. However,
in the present research the authors need to show merely the possibility
of kinesthetic guidance. The second assumption, that orientation only
after a period of random running about will indicate the use of kin­
esthetic cues, though recognized by the writers as not absolutely self­
evident, may pass as probable.