MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY

I.—SENSE-KNOWLEDGE.¹

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It is characteristic of empirical philosophy, as we have seen, to start from analytical psychology and to talk first of all of sensations regarded, after the manner of the atoms of the physicist, as a manifold of particulars or psychical 'elements'. But no analysis can give a complete account of the whole that it more or less 'dissects'. Moreover, in this case the analysis is itself incomplete. The ultimate distinction in experience is that of the duality of subject and object, and this implies a certain continuity on both sides. The object as little as the subject is resolvable into a disconnected manifold. Throughout all experience there is something there of which the subject is aware, by which it is affected and with which it interacts. The knowledges with which we have now to deal are the knowledges that this objective continuity is said to 'give'.

But a knowledge for epistemology must be expressed in a proposition. We may therefore confine our attention to human statements, provided we can determine with sufficient precision just *how much* of what is stated concerns the object of sensory awareness or 'simple apprehension,' *as such*. This, however, is not altogether an easy matter, since the possibility of making these statements belongs to a standpoint above that to which the statements are to be referred.² "A consistent sensationalism must be speechless" T. H. Green

¹ This article is the third of a series of "Lecture Notes on Philosophy". The writer is hoping to publish others.

² On the difficulty of divesting them of the added implications that speech involves, cf. Meinong, *Ueber die Erfahrungsgrundlagen unseres Wissens*, 1906, pp. 23 f.

has said; and the remark is true and trite enough, if it means that infants and brutes neither abstract nor generalise. But it becomes questionable if we take it to mean that there is no knowledge till the sensory level of experience is passed, no knowledge save thought-knowledge. In that case it would seem that we must either (1) so extend the meaning of thought as to obliterate its essential characteristics or (2) fly in the face of facts, and set the continuity of experience at defiance.¹ There is, however, a third possibility. The contradictory disjunction, 'either . . . or'—valid in the region of abstracts, whence change and development are excluded—is often misleading, as we shall have frequently to notice, when not being but becoming is what concerns us. There may be a continuous progress from sense-knowledge to thought-knowledge, and yet the difference between sense and understanding—when at length the latter is fully developed—may be unmistakable; just as is the difference between the child and the mature man, though the one develops into the other without a break.

EXISTENTIAL PROPOSITIONS.

§ 1. What now are the simplest statements that express only what is sensibly apprehended? They are among those variously named existential, impersonal or subjectless propositions, such as *pluit, es grünt, it gets dark*, and the like. Such statements, when not ignored by logicians altogether, as they usually—and perhaps rightly—were, have been the occasion of much fruitless controversy among them. This failure to achieve a definite decision is, however, very largely consequent on divergent views as to what is meant by logic. Generally it has been held that logic is concerned with 'thought as thought,' to use Hamilton's language, or—more precisely—with thought as a product rather than with thinking as a process. Its ultimate objects were said to be concepts (represented by terms). Terms as the elements of logical form—and so far regarded as 'given' to it—were said to be brought in judgments (expressed in propositions) into various relations. Of these, that called predication (S is P) was regarded as logically fundamental. Now it may fairly be affirmed that—despite many attempts—nobody so far has succeeded in expanding genuinely existential or impersonal propositions into the full predicational form; succeeded, that

¹ But for the study of animal behaviour and of the gradual unfolding of the infant mind, psychology would be more defective as regards 'origins' than it is. On the other hand, but for the prolonged ignorance of the historical method and the neglect of evolution, which lasted till the XIXth century, the plight of the epistemology of sense-knowledge would not be what at present it is.

is to say, in gaining general assent, and not merely in worsting their opponents. In a word the controversy has brought enlightenment rather than definite conviction, leading some to draw a sharper line between epistemology and logic and leading others to merge the two.

Anyhow, once allow that all knowledge is not thought-knowledge concerned with 'relations of ideas' in the phraseology of Locke and Hume—that, on the contrary, some knowledge is just the bare apprehension or awareness of 'matters of fact,' and there is no problem any more. Though sense is speechless, it is not 'senseless'; and we who have sense-knowledge as well as thought-knowledge can surely define knowledge without either denying the one or confounding the two. The characteristics of existential propositions and their epistemological import would doubtless have been recognised and appreciated long ago but for the logical bias that—until the collapse of scholasticism—diverted philosophy from empirical reality to 'dialectical' discussions. Thanks, however, to Hume and especially to Kant, the difference between existential and relational propositions—or thetic and synthetic propositions, as they have also been called—was at length seen to be radical. It will repay us now to consider this difference more in detail.

Whereas Locke still defined all knowledge as predicational—existence being what is predicated in existential propositions—Hume denied that existence is a distinct idea at all. This, no doubt, was going too far.¹ What Hume meant was that an existential proposition was not predicative, implied no 'agreement or disagreement of ideas,' nothing indeed, when sense alone is concerned, but bare awareness—*wahrnehmen*, as the Germans say—of a present 'matter of fact'. Kant in the *Critique of the Pure Reason*, though at one with Hume on the main issue and not improbably influenced by him, treated the question more generally. He took into account not only existential propositions for which immediate awareness sufficed, but also—and in fact chiefly—such as were mediated by inference, as *e.g.*, that God is, that there are atoms. The result was that the radical distinction which he had previously recognised between thetic and synthetic propositions, between A exists and A is B, was so seriously obscured that his commentators have failed to agree.² Of this distinction Kant, in fact, seems to have

¹ Though the simple apprehensions of the sensory level must come first, later reflexion may abstract from these the general 'idea of existence,' which each of them implies. To overlook facts of this order was a common failure of sensationalism. Cf. *Psychological Principles*, p. 86.

² Unlike Hume, Kant did recognise existence as a distinct concept, which as such, might be a predicate. He insisted, however, that it is

had an inkling even in his first metaphysical essay,¹ and in another written some eight years later he formulated it quite definitely: it is the distinction between absolute and relative 'position,' between cognising or being aware that A is and asserting—A being 'given' or 'postulated' or merely thought—that it is characterised or is to be defined or classed as B.²

never a real predicate. And here difficulties begin, for if 'exists' is not a real predicate must it not be a 'logical,' that is to say, a formal predicate? But again, since this would lead to absurdities such as making existential propositions analytical, must not 'exists' after all be a real predicate? "An accurate determination of the concept of existence might," Kant said, "put an end to this subtle (*grüblerische*) argumentation, were not the illusion of confusing a logical predicate with a real one so incorrigible" (*Critique*, A., p. 598; B., p. 626). Nevertheless such accurate determination would have sufficed, and Kant had it, so to say, under his thumb all the while, as is pointed out in the text above. Instead, however, of eliciting this definition from the facts before him, Kant proceeded further to confuse the issue by describing an existential proposition as after all synthetic, although it predicated no real attributes of the subject. But it was synthetic in a new and unique sense.

To follow Kant's exposition further we must bear in mind that he is dealing with cases where existence is *still* in question. The idea of existence is then presupposed and the existence of the object of inquiry is assumed to be at least possible; for obviously the self-contradictory cannot exist. What happens when at length I assert this existence? I do not, Kant replies, add existence to the object's other attributes: hence there is no real predication, as in the synthetic propositions hitherto recognised: "I only posit the subject by itself with all its attributes, and posit it, moreover, in connexion with my concept as its object (*setze ich . . . nur das Subject an sich selbst mit allen seinen Prädicaten, und zwar den Gegenstand in Beziehung auf meinen Begriff*)"; or in plainer words perhaps, "the object synthetically fulfils or responds to my concept (*kommt zu meinem Begriffe synthetisch hinzu*)". But this is not very lucid after all. The one point which Kant has momentarily forgotten is that at the sensory level of experience this synthesis is impossible: we have then no preliminary idea of existence, nothing but the thesis or positing of the object which awareness involves. Cf. in Kant's *Critique of the Pure Reason* his discussion of the ontological argument, A., pp. 592 ff.; B., pp. 520 ff. As to the disagreement of his commentators, cf. A. Marty, "Ueber subjectlose Sätze, u.s.w.": *Vierteljahrsschr. f. wissenschaftl. Philos.*, Bd. XIX. (1895), pp. 19 ff.

¹ "Principorum primorum Cognitionis Metaphysicæ Nova Dilucidatio," 1755, *Sämmtl. Werke*, Hartenstein's ed. (1867), i., propp. V. and VI., pp. 375 ff. Cf. Caird, *The Critical Philosophy of I. Kant* (1889), i., pp. 107 f., p. 111.

² *Beweisgrund der Dasein Gottes*, 1783, *Werke*, ii., p. 117.

It is regrettable that our English philosophical terminology has no precise equivalent for *thesis*, *positio*, *Setzung*, familiar though we are with their technical use in other languages. We talk freely of hypotheses and suppositions but not so of theses or positions as epistemologically prior to them all. Aristotle attempted to prove that there must be such indemonstrable theses or beginnings of knowledge but made a point of maintaining that what is logically prior is not what is first known by us. For us knowledge begins with sense-particulars, and he describes, in language which psychology might accept to-day, the unbroken advance of experience from these primary data of sense to the thought-knowledge

And so, from the *existential* standpoint, Herbart and his distinguished follower, Drobisch, have represented the categorical proposition as only relative, or conditioned: its predicate pre-supposes but does not as such posit its subject. Similarly Mill maintained that a so-called 'real definition' postulated the existence of the thing defined.¹

To object, as some have done, that this distinction makes all predication problematic or resolves categorical propositions into hypotheticals is only to misunderstand it. A relation always pre-supposes some *fundamentum relationis*; but whereas this may be 'given,' that must be either discerned or inferred or assumed. Neither inherence, or the categorical relation of subject and predicate, nor dependence, or the hypothetical relation of antecedent or consequent, is immediately 'given'. For us a datum, what is 'given,' is ultimately just some 'matter of fact'; and in so far and for so long as such data are all, there is nothing to determine the forms that may be made out of them or the structures that may be based upon them. These may fall within the domain of logic or thought; whereas those are and always remain within what we regard as the distinct and independent domain of being or things. But nobody, it may be urged, can suppose that there is no connexion whatever between these domains. This possible remark seems to call for some further elucidation of the sense in which the distinction in question is radical.

The mention of formative processes and resulting structures has brought us back to the duality of subject and object.² And here certainly we have a relation and one too: that is, for us at all events, primordial. This duality is, however, a relation dividing the one world of *being* into two correlated or complementary halves. So far it does little to discriminate between the world of being and the world of *ideas*, between existential and logical propositions; for only the former are in any sense explicit at this stage. All that such propositions would state, if they could then be expressed, would be the reception or apprehension of what is 'given' or 'there' or objected, *das Gegen-ständliche* or *Vor-gefunden*, as the Germans say. But the metaphors with which we attempt to describe what is too mysterious—or perhaps too simple and ultimate—for description, are apt to mislead. In

which embraces universal truths. He only did not call them absolute positions: that he left to Kant.

¹ Cf. Herbart, *Lehrbuch der Philosophie*, 5te Auf. (1850), pp. 92 f.; Drobisch, *Neue Darstellung der Logik*, 4te Auf. (1875), pp. 61 f.; J. S. Mill, *A System of Logic*, I., viii., § 5.

² For we hold that it is the subject that 'synthesizes' the 'data,' which, as we say, it has first merely received—its so-called 'sense-data'.

the first place, there is no spatial relation in the case. Again, all that we can be said to 'receive' from the object or that the object can be said to 'give' us, is not what it 'presents'—for this is what it *is*—but the feeling that it occasions. Leaving metaphors aside, there is, however, one difference clear: the relation is not symmetrical. The object's presence determines the subject's activity. The subjective interest which this activity implies has no objective counterpart; but on this the whole development of experience entirely depends. Such development is the psychologist's business, not ours. Suffice it to say that we come ere long to comprehend 'objects of a higher order' that are not *data* for sense but the *producta* of thought widely understood.¹ But this interested activity may fairly be called creative, provided we recognise that what it creates are not *posita* but *superposita*—if the term may be allowed—founded on but not found among bare *posita*.² Herein lies what is radical in the distinction of sense-knowledge and thought-knowledge.

IMPERSONAL PROPOSITIONS.

§ 2. The existential ground proposition *It is*—if we may call it so—which sense-knowledge implies becomes an impersonal proposition, as soon as the bare '*It is*' has become definite, as in '*It rains*' or '*It blows*'. The subject, if subject it may be called, is expressed by the neuter pronoun used as an indefinite nominative. What does this *It* mean? Very often some definite object is indicated or 'understood,' as when we ask *What is that?* In such cases, as the answers shew, we are not dealing with a genuine impersonal. But there is a clear difference, as we shall presently see, between the level of experience to which impersonal propositions go back and the level at which propositions with '*this*' or '*that*' as subject arise, so-called 'demonstrative,' 'deictic' or 'indicative' (Ger. *hinweisende*) propositions. When we say '*It rains*' or '*It blows*,' the obvious meaning is not '*Rain is*' or '*Wind is*'. The '*It*' there seems to refer not to a definite something, now this now that, but rather to the environment.

¹ And activity being determined by interest such *producta* are also *praeposita* in the Stoic sense, are due, that is to say, to what may be called 'subjective selection'. If it be allowable to disregard the context we might here adapt the words of Cicero: "In vita non ea quae primario loco sunt, sed ea, quae secundum locum obtinent, προσηγμένα id est producta nominantur" (*de Finibus*, iii., 16). Cf. *Psychological Principles*, pp. 50, 312, 415 n.

² Cf. Lotze's *Metaphysics*, Eng. trans., bk. III., ch. iii., "On the Mental Act of 'Relation'" (*Von dem beziehenden Vorstellen*). The whole chapter is especially important as bearing on our present topic.

as a whole, within which the change we become aware of occurs.

Now the concept of change pre-supposes some idea of a thing that changes as well as some idea of a cause of the change—either the thing itself or another. But whereas the *apprehension* of change is essential to any experience at all, the conception of change is another and much later attainment. Many, who seem on the whole to accept this interpretation of the impersonal propositions implied in sensory experience, have entangled themselves in needless difficulties and obscured the issue by overlooking this difference.¹ They seem guilty, in fact, of what has been called the psychologist's fallacy. Perhaps it would be fairer to say that all they mean is that whatever is logically implicated is unconsciously involved.² But surely this is bad psychology and assumes a scientifically unwarranted and unworkable use of the notion of potentiality.

The difficulty, as we have already said, lies in the gap between sense-knowledge and thought-knowledge which exists for our exposition, though it is really no gap at all. *State* an item of sense-knowledge and you have done too much—inasmuch as you have transcended it; leave it *unstated* and you want more before you can do anything. To meet this difficulty we have two resources: we might call the one internal or even subjective—provided that term is not misunderstood—and the other we might then call external or objective. In the former, 'working from within' we can historically *retrace* the development of experience, both individual and racial, towards its beginning.³ In the latter we can interpret animal behaviour on the analogy of what we have previously more or less completely verified in our own.

In the first our inquiries end in the twilight of primitive language and child-speech. Only the latter of these admits of any observation. And even here there are difficulties, since for the most part children learn by imitation: the language they acquire is their mother-tongue and

¹ B. Erdmann, for example, who deals with these propositions under the heading of causal judgments (*Logik*, i., 1892, pp. 304 ff.). But what Erdmann emphasizes is their *logical* implications, not—so to say—their *psychological* content (p. 307). What he fails to see, however, is that this psychological content is itself a judgment and is certainly not explicitly a causal judgment. The problem is to determine as precisely as we can the import of this 'psychological judgment,' as Mansel actually called it: As regards this, Erdmann's exposition seems to be a complete *ignoratio elenchi*. Cf. A. Marty, *op. cit.*, xviii., pp. 432 ff.

² Cf. Erdmann, *op. cit.*, p. 309 *fin*.

³ Albeit, as just said, no individual amongst us can *recollect* it.

their spontaneous speech-making does not survive long enough to show what might eventually come of it. Still enough seems known to justify its identification with what is conjectured to have been the earliest form of human speech. Though usually monosyllabic, this is always a sentence, a one-word sentence (*Einwortsatz*, as some German writers say)¹ like the cry Fire! or the command Halt! It is holo-phrastic speech: distinct parts of speech and syntax are a later development. The primordial duality of experience comes out in it, but any further differentiation is minimal. What is expressed is at once subjective attitude and objective situation—*Selbststellung* and *Vorstellung*, as Münsterberg felicitously describes it.² Epistemology is only concerned with the latter.³ What then, it inquires, do we find to be primarily significant in the objective situation?

Turning now to the behaviour of animals we get at once a satisfactory answer to this question: it is some interesting surprise, some change within the environment as a whole, that leads both to the emotional manifestation and to some more or less purposive reaction. When *we* say It rains or It blows, the lower animals may, as we do, seek shelter or avoid exposure. But they at least know nothing of Zeus or Boreas, whom some imagine must be meant by 'It'. Especially will sudden movements attract attention and awaken expectation, of danger it may be, or perhaps of prey.⁴ "It is dangerous," or "It is promising," is how we should sum up such situations, and readiness to flee or to seize would be the subjective attitude assumed. With this the behaviour of dumb animals entirely corresponds. And so, *mutatis mutandis*, of other 'striking' changes of situation. Generally, subjective change in presence of objective change is the least that an experience can imply and what therefore it ultimately means, as we began by supposing. We may, then, now conclude that objective changes are what impersonal propositions always assert.

But how are we to account for this 'It' with which in modern languages genuinely impersonal sentences begin, and to what precisely does this It refer? This seemingly simple

¹ Cf. C. and W. Stern, *Die Kindersprache*, 1907, p. 165.

² *Gründzüge der Psychologie*, i. (1900), p. 50.

³ For psychology, however, the connexion of the two is the starting point in exploring the origin of language. Here the emotional expression which discloses the subjective attitude comes first and the problem is to trace the steps by which it gradually acquires objective significance. Cf. *Psychological Principles*, pp. 287 ff.

⁴ Cf. O. H. Schneider's interesting article, *Zeitschr. f. wissenschaftl., Philos.*, iv. (1878), pp. 377 ff.

question has perplexed philologists and even logicians—those of them at least who have attempted to deal with it. And yet, without reaching any explanation that can be called satisfactory as regards its psychological genesis they accept in the main the interpretation here adopted.¹ We need, however, only to recall the psychological distinction between field and focus of consciousness and most of the mystery besetting the 'It' is dispelled. The objective changes that non-voluntarily divert our attention and so lead to a correlative change in our subjective attitude, are never the whole of which we are aware: beyond them, the 'restricted focus of consciousness,' there extends always this 'indefinite field' or presentational continuum. It is obvious, indeed, that change implies some continuity, or that, as Kant paradoxically put it, only the permanent can change; and the field is the permanent, the foci the variable.²

The mention of continuity once again brings us back to the duality of subject and object; and here again it may be said that some mystery lies. But is there really anything mysterious? At any rate, it may be urged, if there is not, then our knowledge of these factors, subject and object, can be accounted for: granted that we know what we call their changes, how, then, do we know them? We may reply that we know them, or come to know them, through the continuity of their respective changes; and though this is confessedly not the last word on the whole question, it is the

¹ Prantl, for example, says: "Such impersonal propositions one must, in fact, regard as earlier forms (*Vorstufen*) of the completer judgments in which subject and predicate are clearly distinguished (*eine geschiedene Existenz haben*). . . . We ought therefore not to raise the question what that 'It' may be. . . . But if we must at any cost have an answer, the only reasonable one seems to be that the indeterminate universality (*Allgemeinheit*) of the perceivable world is the subject of all these propositions" (*Reformgedanken zur Logik*, Ber. der Münch. Acad. Phil.-hist. Cl. 2, 1875, p. 187). Again, quoting T. S. Vater (*Lehrbuch der allgemeinen Grammatik*, 1895, p. 120), A. Marty remarks: "One frequently hears it maintained by grammarians that our 'It' or its equivalent signifies something that can be merely indicated (*nur Andeutbaren*), something, unknown or mysterious". Similarly Steinthal (*Zeitschr. f. Völkerpsych. und Sprachwissen*, iv., 1886, p. 141): "The impersonal indicates an action as such, the subject of which as mysterious or unknown is merely indicated. Language cannot do else—even in such cases—than assign (*setzen*) a subject for the action; but here it posits (*setzt*) one that we cannot think or should not try to think (*nicht denken soll*).". And again Bergmann (*Reine Logik*, 1879, p. 33) speaks of impersonal propositions as "existential judgments . . . but as at the same time involving the attempt (*der Versuch*) to think the world as the subject and the existing thing as a modification of it". Cf. especially Lotze's *Logik*, 1874, § 49.

² *Critique*, A., p. 187; B., p. 230 *fin*.

only answer we can make at this stage, and it is perhaps sufficient for the present. But it brings out another ultimate fact—or mystery, as some may prefer to call it. That is the plasticity—by which we mean the progressive differentiation, the retentiveness and the assimilation—characteristic of the development of experience as a whole. When as psychologists we talk of a presentational continuum or psychoplasm,¹ those 'general characteristics' or 'fundamental processes' are the *ratio cognoscendi* of it; while it is the *ratio essendi* of them. It is useless to call one a fact, the other a mystery; for they are both really the same.

Returning once more to the 'It' of impersonal propositions, we may at length conclude that as regards sense-knowledge this It implies nothing more than that continuum. It does not refer to a definite individual such as a deity nor to a rounded and complete whole such as the world. It is not Herbert Spencer's Unknowable—though like it in being 'a necessary datum of consciousness'. What we specially attend to from moment to moment is always but a part of this continuum, is inseparable from it, and afterwards retained within it. In calling these propositions of sense-knowledge 'existential' what we emphasize is the definite 'position' or thesis which they express: in calling them 'impersonal' what we emphasize is their logical incompleteness, their lack of definite synthesis. Genetically, they are inchoate judgments, essential to, but not sufficient for, thought-knowledge. Hence the perplexities we have noticed of those who attempted to deal with them as they are now expressed in language, without deigning to inquire how they came to be. Schleiermacher and Trendelenburg alone seem to have taken their origin into account. As the latter tersely puts it, "we think in predicates"—a pregnant saying which throws light on one stone of stumbling in this controversy, *viz.*, the use of the term 'subjectless propositions'²—propositions, that is to say, only implying the objective continuum which always confronts the experient and explicitly referring only to such of its changes as interest the experient by furthering or hindering his welfare.

Affectivity and activity make up 'the irreducible minimum' of experience on the subjective side and by interaction with the objective side experience becomes a complete whole. Sensory and motor presentations are those which we know

¹ Cf. *Psychological Principles*, ch. ii., § 1, pp. 30 f.; ch. iv., § 2, pp. 75 f.; ch. xvii., § 2, p. 412.

² Cf. Trendelenburg, *Logische Untersuchungen*, 2te Auf. (1882), ii., pp. 208 ff.

first. The latter, as voluntarily determined, we come afterwards to attribute to self; and the former, as non-voluntarily determined, to a not-self. Then the actions are explicitly 'predicates,' have, that is to say, a definite subject: at first they were only implicitly such. In complete accord with this is the grammatical form of impersonal propositions; they are invariably verbs. Slightly amending a sentence of Trendelenburg's we may say: action, "as we still see in impersonal sentences, can be apprehended by itself: but the thing that acts, only through its action. Hence the beginning of speech will lie in verbs, but in such a form that they of themselves constitute a judgment, or rather, the rudiment of a judgment underlying the development of predicates and subjects alike".¹

DEMONSTRATIVE PROPOSITIONS.

§ 3. A great advance is made when such inchoate propositions—positing a 'matter of fact' but indicating no definite subject—lead on, thanks to the plasticity of the continuum, to propositions which do both; when, that is to say, from impersonal propositions with no subject but the continuum, we pass to the demonstrative propositions in which the subject *This* or *That* is not merely objective but is itself a definite object. It would be out of place here to describe in detail the perceptive process by which this restriction is carried so far that we can say, *This is red* or *This is bitter* or even *This is blood* or *This is gall*—carried so far that nouns, adjectival or substantival, come upon the scene. When, however, that is the case, we can proceed to discriminate between *This* and *That*: *This is red, that is white*; or *This is blood, that is snow*; or again *This is bitter, that is sweet*, or *This is gall, that is honey*.

In beginning the exposition of these more advanced knowledges with human statements, statements, that is to say, made at the higher level of thought-knowledge, we have again to remember that such knowledges are possible without thought and without speech.² To understand this advance we must regard such knowledges from the standpoint of the lower knowledges which they presuppose, not from that of the higher to which they lead. The advance, as already remarked, lies in the fact that these propositions are no longer strictly impersonal. And yet they have a certain continuity with impersonal propositions; but whereas those refer to the one universal *It*, these refer to many, which are

¹ *Op. cit.*, pp. 213-215.

² *Cf. above*, p. 257 *fin.*

differentiated within that one and so can be distinguished from each other. These many particular Its, however—this, the it here by me (*hoc*) and that, the it there by you or by him (*istud* or *illud*)—not only differ from each other as subjects in respect of the relations between 'here' and 'there,' etc.—to which we shall return later—but their predicates also differ in another respect to which we may turn at once.

The predicate when expressed in language may be either an adjective or a substantive; and this difference in the end is vast. But which is first? This is a nice question and largely a psychological one. Psychologically it is probably true to say the adjectival is prior to the substantival, for sense-data or simple percepts seem clearly to precede the complexes of these that we may call intuitions of things (German *Ausschauungen*).¹ And epistemologically we may say—*cum grano salis*—that in proportion as the adjectival form predominates the judgment lacks the characteristic of the demonstrative and approximates to a purely impersonal one. This is in keeping with what comparative psychology teaches concerning the development of perception, as we proceed from lower to higher forms of life.

Our human perception, or intuition, of things as expressed in language is, of course, for us the nearest, the highest and the clearest. Unfortunately, in consequence of failure to appreciate the historical method or to respect the principle of continuity, epistemology has not merely started from the human level—as it must; but it has tended to assume that this intellectual level is where knowledge itself begins.² It has also ignored the fact—the significance of which language tends to conceal—that demonstrative propositions range between two extremes. At the lower extreme are the adjectival demonstratives with predicates answering to simple percepts or 'sense-data'. They presuppose propositions of the strictly impersonal form, from which they have gradually been *differentiated*: e.g., This (it) is red. At the upper extreme are the substantival demonstratives with predicates answering to complex percepts or intuitions of a thing. They presuppose demonstratives of the adjectival form which have been gradually *integrated*: e.g., This (thing) is a rose.³ Demonstrative propositions at this upper extreme are continuous with the

¹ Cf. Eisler, *Wörterbuch der philos. Begriffe*, 2te Auf., p. 41.

² Even Sigwart has involved himself in some difficulty here in connecting impersonal judgments with what he calls *Benennungsurtheile* (cf. A. Marty in the article already referred to, Bd. xviii., pp. 327 ff.).

³ Cf. on the mutual relation of concept and judgment, *Psychological Principles*, pp. 305 ff.

typical categorical propositions of logic in which both subject and predicate are concepts or terms, as in *This flower is a rose*. But now for logic concepts or terms are what is 'given,' and its first concern is to analyse them with a view to their definition. Of this process Leibniz gave very early what we may regard as a complete account: "Analysis haec est: datus quicumque terminus resolvatur in partes formales, seu ponatur ejus definitio: partes autem hae iterum in partes, seu terminorum definitionis definitio, usque ad partes simplices, seu terminos indefinibiles".¹

To these indefinables or 'simple, not farther analysable elements,' as Sigwart calls them, belong the adjectival predicates of the first form of demonstrative proposition, the primary presentations, that is to say, which in the course of our perceptual experience have been gradually synthesized so that we reach at last demonstrative propositions of the second form. But if we now imagine logical analysis to have completed its work we should find ourselves confronted by a bewildering aggregate—a chaos, we might fairly call it—of isolated elements.² Such an experience there has never been. Yet a situation of that sort is often imagined as that from which experience starts. Many psychologists and epistemologists have, in fact—overstraining the much abused metaphor of matter and form³—regarded sense-data as nothing more than the disconnected 'manifold' that would be reached by a thoroughgoing logical analysis of the concepts which experience only acquires at the intellectual level. What the psychologists overlook is the gradual differentiation of the presentational continuum and the fact that integration and adaptation—which imply meaning—keep pace with this. What the epistemologists overlook is that such perceptual synthesis or integration must precede the logical analysis which they afterwards perform.

We are here brought up against a new problem in which

¹ "De Arte combinatoria," *Leibnitii Opera philosophica omnia*, Erdmann's ed., 1840, p. 23. But it was Descartes who had the signal merit of making thoroughgoing analysis the foundation of scientific method to the great detriment of the 'historical method'. Cf. his *Discourse on Method* and the two posthumous fragments supposed to have been written in connexion with it.

Cf. also Drobisch, *Logik*, p. 17; Sigwart, *Logik*, 2te Auf., 1889, i., § 41, p. 328 f. Sigwart here compares sense-data to the letters of the alphabet: they can only be named but not explained. Hegel had compared them to atoms (*Encycl.*, § 20).

² Schleiermacher actually speaks of intellect as confronted only by 'a chaotic manifold of impressions,' *Dialektik*, § 108, quoted by Vaihinger.

³ This is notoriously the case by Kant. Cf. on this Vaihinger's elaborate *Commentar z. Kant's Kritik*, Bd. II. (1892), pp. 58 ff.

sense-knowledge is regarded primarily from what we may call the objective side. To deal with this problem now will entail a brief digression. It will be best to begin *de novo*, even at the risk of some repetition; for if the question here raised can be satisfactorily solved, its solution will facilitate the consideration of the larger question previously raised; *viz.*, that concerning the dualism of sense-knowledge and thought-knowledge which rationalism has tended to maintain when it has recognised sense-knowledge at all.¹

SENSE-DATA.

§ 4. At the outset it may be well to clear away an obscurity in our current terminology that has led to much confusion. The terms sensation and sense-datum are commonly used as synonyms. Sensation, however, as a psychological term—and one that it might be well to avoid—implies a process involving both subject and object alike. It is, however, only to the objective factor in this process that the term sense-datum applies. This difference comes out when, as often for convenience and yet incorrectly, we speak, for example, of a sensation of red or of bitter. Red and bitter correspond to what is objective in the sensory process, and the inaccuracy lies in confusing this part with the whole. This objective part is the sense-datum. Epistemology then, which is concerned with knowledge not with processes of knowing, has here no direct concern with sensation but only with sense-data. Hence the question now before us is: Are sense-data objects of knowledge? If they are, the continuity between sensibility and understanding, which Kant thought to be possible though it was unknown to us, will become at any rate clearer.

Nevertheless, we shall find, if we have not already found, that we cannot ignore the development of experience as a process save at the risk of prejudging this question. Starting, as logical analysis does, with discrete constructions, for that is what concepts are, then at the end, supposing the end attained, there will be no 'form' or structure left, but only 'matter'—which has no form. If, as Leibniz supposed, there is no end, still for us the final residuum is confused and that is tantamount to its being but matter for us. We may confidently trace the still prevalent assumption that sense-data are but the *material* of knowledge, rather than its rudimentary beginning, to the too exclusive reliance on logical analysis on the part of the rationalistic thinkers of

¹ In Lecture II.

the continent, which has so prejudicially biased psychology. The sensationalism or psychological atomism that still lingers on is partly due to this. Descartes was here followed by Locke, and Locke by Hume and Kant.¹ But this rationalistic procedure is here fundamentally defective just because it starts from thoughts and not from things, therein perpetuating the false method of the ancients already referred to.²

What we want is not logical but real analysis: and for that we have to look to psychology. But it must be a psychology that starts from experience as a continuous process, for which therefore not structure but function is the primary fact. But now in continuous process what is once found essential must be essential always. If the mutual interaction (Kant's *dynamische Gemeinschaft*) of subject and object be the form of experience, then, in no experience, however primitive, can this interaction be lacking. Further, in such a continuous process, whatever are the essential characteristics of its two factors must likewise persist. If this be true, then the term 'matter' can never be appropriate to the object of experience, if by matter is meant the utterly indeterminate and formless; nor the term 'atom' if that is to imply absolute discontinuity.³ Mere being devoid of determination of any

¹ Cf. Locke, *Essay* I., i., "Though the qualities that affect our senses are, in the things themselves, so united and blended that there is no separation, no distance between them: yet it is plain the ideas they produce in the mind enter by the senses simple and unmixed". In § 2, as elsewhere, he calls these simple ideas 'the materials of all our knowledge'. Both positions his later expositions implicitly contradict—especially, his treatment of the idea of existence, which is particularly relevant to the question before us. As to Hume, cf. his *Treatise*, Green and Grose's ed.: "There are not any two impressions that are perfectly inseparable," i., p. 319; "Every perception is distinguishable from another and may be considered as separately existent," p. 495. The fact that Locke began his *Essay* with a polemic against Descartes has long tended to obscure how greatly he was influenced by the Cartesian philosophy. The very method that led Descartes first of all, *more geometrico*, to distinguish and divide to the uttermost, led Locke—notwithstanding his professed intention of following a 'historical, plain method'—to begin by analyzing the entire furniture of our minds into simple separable ideas. The atomic sensationalism of our English psychology is thus after all largely due to the influence of that rationalism which epistemologically is the polar opposite of all that is empirical. Cf. note 1, p. 269; also Prof. Norman Smith's *Studies in the Cartesian Philosophy*, 1902, pp. 181 ff., 248 ff., 260 f.

² In Lecture I.

³ What then about 'matters of fact,' it may be impatiently retorted: are not sense-data matters of fact? And what about the absolute theses or positions that are prior to syntheses or logical propositions? What form have they? This is a possible but superficial quibble suggested by the terminology in use and silenced by its meaning. Matter of fact means what is actual (Ger. *Thatsache*) and positing is the immediate cognisance of such actual existence (Ger. *Dasein*). Both imply some present.

sort may make the beginning for pure thought—as with Hegel; and mere matter as pure potentiality, *i.e.*, as devoid of any actual determination, may be the presupposition of form—as with Aristotle; but concepts of this order plainly transcend experience as actual process. There 'It is' as little suffices to express the objective situation as 'I am' to express the subjective attitude. It is equally plain that a manifold of discontinuous presentations could never yield the sort of continuity that we find in experience. The failure of the Associationist psychology, which is based on that assumption, is evidence of this.¹ There is, of course, room enough for the employment of the metaphor of matter and form in describing experience: it is applicable in a relative sense wherever we find synthesis; all objects of a lower order are matter that is formed into objects of a higher order. But sense-data, which we may regard as in this respect matter of the lowest order, still have form. 'This we may proceed to see.

In the first place, a sense-datum is primarily experienced as a change. Its apprehension is an event in the course of the experient's life; it is impressive because it is interesting, and so along with the apprehension there goes always implicit appreciation.² Thus at any given moment what an experient is aware of is some situation to which it strives to adapt: to describe such a situation as formless is therefore surely a misnomer, for obviously a change cannot be indefinite, least of all when it entails interaction—an adjustment of changes, that is to say. Moreover, if we regard experience as a continuous process, there is never a time while it lasts, when the subject is confronted either by a bewildering *embarras des richesses* or by an overwhelming sea of troubles, such that any subjective selection is impossible. If at the outset we were pelted by an aggregate of disconnected presentations such as Kant imagined, no matter what forms of intuition or of thought might 'lie ready in the mind,' all would be unavailing. In point of fact, however, the range of a given subject's experience only advances *pari passu* with its assimilation and integration of previous differentiations of its continuous objective environment. Surely then the sense-data of which it is aware—and no others count—are severally knowledges, and collectively constitute its objective experience; for how else could this experience advance?³ True,

determination within experience: the one term referring to its being there, the other to the subject's consciousness of it.

¹ Cf. *Psychological Principles*, pp. 75 f., 192 f., p. 412.

² *Ibid.*, pp. 387 f.

³ *Ibid.*, p. 143 *fn.*, p. 411 *init.*, p. 414 f.

these sense-data are indefinables for logic; but unless they were from the first determinate for experience, they would never become recognisable, perceptible. But inasmuch as this is what happens whenever they are interesting, they must have form: we cannot regard them either as pure matter or as absolutely atomic—concepts altogether incompatible with experience.

In the second place, when we have advanced to the thought level, we find on comparing our sense-data that—though severally indefinable—they nevertheless have characteristics. And these characteristics, though really inseparable, are still distinguishable, yielding, in fact, certain categories of which they are the prime source, *viz.*, intensity, quality, extensity and protensity. Thought discerns these characteristics but it does not constitute them: they are always there, and determine the subject's reaction.¹ Surely here again then we have evidence that sense-data are objects of knowledge.

These 'categories of sensation,' as v. Hartmann expressly called them,² were also, in fact, recognised as such by Kant, though forced almost beyond recognition into the Procrustean bed of what he was pleased to describe as 'the architectonic of pure³ reason'. In conformity with his 'schematized categories' he formulated certain principles which were to determine the application of these to experience.⁴ The second group of these principles, concerned with the categories of *quality*, he called 'Anticipations of Perception'. In place of three such 'anticipations'—answering to the three categories of quality—he gives, however, but one, and in that, as formulated in the *Critique* itself, he refers only to the intensity which every real sensation must possess. In the *Prolegomena* (§ 24), however, 'intrinsic quality' (*eigentliche Qualität*) is also mentioned as if admitting of anticipation. Again, among certain manuscript annotations, referred by their editor to the period when the critical philosophy was in process of incubation, there is a note to the effect that "in all knowledges the object has both matter and form, that is to say quality".⁵ And, finally, in his exposition of the schemata—in an otherwise very obscure passage—he connects intensity

¹ Cf. *Psychological Principles*, pp. 247 f., 254.

² Cf. his *Kategorienlehre*, 1896: *Die Kategorien der Empfindung*, pp. 1-104.

³ *Critique*, A., p. 832; B., p. 860. Cf. on this an important little book by E. Adickes, *Kant's Systematik*, u.s.w. 1887, and especially in connexion with the present context, pp. 49 ff.

⁴ *Critique*, A., pp. 158 ff.; B., pp. 197 ff.

⁵ *Reflexionen Kants zur Kritik der reinen Vernunft*, edited by B. Erdmann, 1884, p. 173.

with the transcendental *matter* of all objects as things *per se*: this constitutes their reality (*Sachheit*).¹ The long and short of all this seems to be the admission of intensity and quality as sensory categories.² The first group of principles pertains to the categories of *quantity* and is entitled 'Axioms of Intuition'. Here again but one axiom is announced in place of three, and that one refers to space and time as *quanta*. Its purport is that "all objects of experience are intuited as spatial and temporal magnitudes": this may be a fact, but it is no axiom. Its intention was to 'make pure mathematics in their full precision'—though independent of objects of experience—'still applicable' to them. And that may be true, but only provided that extensity and protensity are of themselves original characteristics of sense-data: otherwise what basis for 'application' is there? Kant's two stems of knowledge here come inconveniently to the fore. "It is the mistake of a falsely guided reason," he urged, "to imagine that one can separate the objects of the senses from the formal conditions of our sensibility"—which he himself assumed to be independent of them. The converse mistake is the real one, and of that he was guilty himself when he began by separating extensity and protensity from sensations, or rather by losing sight of them altogether, basing his *Critique* on an impossible dualism of pure form and pure matter. A more thorough psychological analysis at the outset would have saved him from that mistake; as it is, in these so-called axioms of intuition he unconsciously testifies to a truth he had failed to see before.³ Thus imbedded within the formal structure of Kant's system we find *sensory* categories: what changes they may necessitate in it, when they are fairly unearthed, remains to be seen. Meanwhile we note that they are (1) intrinsic quality and (2) quantitative continuity, as (a) extensive, (b) protensive, and (c) intensive, or real, *i.e.*, the matter that answers to quality as the differentiating form.

¹ *Critique*, A., p. 143; B., p. 182.

² In his table of categories, it will be remembered, quality refers to the so-called logical quality of judgment (as being affirmative, negative, or 'limitative'). *A propos* of this Professor Riehl pertinently remarks: "It is utterly unintelligible what the so-called quality of a judgment has to do with sensation" (*Der philosophische Kritizismus*, 2nd ed., i. (1908), p. 542 *fin.*). Here we have one more proof that Kant could not really escape the recognition of sensory categories.

³ Cf. *Psychological Principles*, etc., ch. v., § 2, pp. 105-107. Cf. also Stumpf, *Ursprung der Raumvorstellung*, 1873, pp. 10 ff., a work which I ought to have mentioned in writing my *P.P.* Stumpf's '*psychologische Theile*' correspond to what are there referred to as 'characteristics of sensations'.

(To be continued.)