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DESCRIPTION vs. STATEMENT OF MEANING

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By the 'description' of an object we mean an account so full and so definite that one to whom the object itself is unfamiliar can nevertheless, given skill and materials, reconstruct it from the verbal formula. Every discriminable part or feature of the object is unambiguously named; there is a one-to-one correlation of symbols and the empirical items symbolised; and the logical order of the specifications is the order of easiest reconstruction. This, then, is what we mean by 'description' in psychology; and the meaning is brought out, clearly enough, by the adjectives—'analytical and abstractive'—which are applied to psychological description in current discussion. Psychological description is analytical, in that the given consciousness or part-consciousness is analysed into its elementary constituents, into sensations, images, attitudes, etc.; it is also abstractive, in that the inseparable attributes of these elements or of their groups (quality, intensity, form of combination, etc.) are specified in the report¹. The objects described may be very different: we may be interested in the variation of some quantitative attribute of a single sensation, or in the temporal course and

¹ Sometimes the 'abstractive' means that psychological analysis is itself abstractive, that the psychological elements or complexes are not real separables; but if this is the point to be made, the current phrase is 'abstractively analytical' rather than 'analytical and abstractive.' At all events, the point does not concern us here.

confluence of a group of processes, or in the cross-section of a total consciousness: in every case, description consists in the unambiguous coupling of every phase or item of our conscious experience with a word, in such wise that a reader of normal mental constitution can reproduce the experience for himself.

It may be doubted whether we have attained to complete description in any department of psychology; it may, indeed, be doubted whether complete description, implying as it does the adequate rendering of the continuous by the discrete, is not in the last resort a contradiction in terms. Fortunately, however, completeness of description is not necessary to scientific advance. When we have carried our analysis and abstraction as far as present methods allow, we can sum up the results in collective terms, and thereafter employ these terms, for descriptive purposes; we can speak, in the given case, of 'feeling of familiarity' or of 'verbal idea,' referring to previous analyses for detailed description. It is not even necessary that these previous analyses agree: two observers may report a 'conscious attitude,' or a 'form of combination,' or a 'feeling of relation,' although they differ widely in their view of the nature and composition of what they observe; and the reports may be of value to a descriptive psychology. This procedure may be continued, until we reach the "conceptual shorthand" of which Pearson speaks²: we are still describing, because we are going on the assumption, expressed or understood, that the road to the ultimate terms of description is always open, that we can work back from our concepts to our point of departure,—practically, to the attitudes and forms and feelings from which we agreed to start, theoretically to the elementary processes and irreducible attributes whose verbal correlates furnish the most nearly 'complete' description of which the science is capable.

Psychological description, however, is never easy; the verbal formulas of the most highly trained observers are likely to be imperfect; every new investigation leads to a new result. Moreover, psychological description is often warped by prepossession; we have a host of terms—secondary criteria, stimulus error, logical reflection, laboratory atmosphere, faculty tradition, pleasure-pain dogma, associationism, sensationalism, intellectualism, and many more—that are used by critics to stigmatize the bias of the observer. Certain forms of prepossession take shape within psychology; certain others

² K. Pearson, *The Grammar of Science*, 1900, 504; cf. E. Mach, *Popular Scientific Lectures*, 1895, 193. etc-

are prior to any psychological observation; the observer is not simply a psychologist, but moves, so to say, in various worlds, of which the psychological is at best only one, and may be one of the less familiar; it is natural, then, that, confronted with a difficult task, he should be tempted to adopt an attitude more habitual than that of psychology, and to offer as psychological description a report which in fact is not psychological at all. The temptation to this shift of attitude is, indeed, exceedingly strong; for the situation in which the psychological observer is placed bears a close resemblance to situations which arise outside of psychology, and which must be met by all of us every day of our lives.

It is difficult, at this point, to keep the discussion at the empirical level; but I shall try, at any rate, to steer clear of epistemological complications. The observer moves, I said, in various worlds. Now it is clear that the world which is most familiar, and to which our response is most direct and certain, is the world in which we were brought up as children; the world of things and people, of boats and trains, of relatives and strangers, of quarrels and reconciliations, of successes and failures. No doubt, this world is modified as we grow older; our attitude to it changes with increase of our scientific knowledge. But it is never identical either with the world of physics or with the world of psychology: for physics deals, not with boats and trains, but with masses and distances and velocities; and psychology deals, not with quarrels and successes, but with emotions and voluntary actions. And the difference between the world of practical life and the world of science is reflected in their languages: for in scientific description, words are labels of facts; in daily intercourse, they are signs of import.

I may, perhaps, be permitted to fall back upon an illustration. A half-trained observer, attempting his first bit of serious introspection, will probably report that at first he was 'puzzled,' that he sat for some time in a blank 'perplexity.' He is told forthwith that a report of 'puzzle' or 'perplexity' will not do; the terms are not introspective terms. 'Why?' he asks; 'are they not the name of an emotion?' And then comes the teacher's task of explanation. The word 'puzzle' or 'perplexity,' he points out, gives him the key to the observer's predicament, acquaints him with the import of the situation, enables him to handle it, shows the need of just the kind of comment that he is now beginning; but the word tells him nothing whatsoever of the observer's individual experience, of the particular 'feels' that constituted the per-

plexity in the particular case. It is a word that he perfectly well understands; and this apprehension of its import is not only sufficient, but is also the one thing necessary, for the affairs of everyday life, for social intercourse, for the regulation of behavior. Scientific description, on the other hand, is always an instrument of reconstruction; and as psychological observation is individual observation, the description must also be individual; the reader of the observer's report must be able to reconstitute, to reconstruct, the perplexity which is therein described, precisely as it was lived. The word 'puzzle' is not, then, a descriptive label; it does not attach, without ambiguity, to certain conscious processes in a certain arrangement; if the reader seeks to interpret it descriptively, he finds himself free to invent or imagine processes and arrangement in terms of his own mental constitution; whereas a description would tie him down, item by item and phase by phase, to a specific perplexity whose course and composition might differ, in various ways and to various extents, from what was usual with himself. The distinction is, I hope, plain; it is not worth while to pursue the illustration further. But it may be worth while to formulate again the conclusions to which the illustration leads. These are, first, that the word 'puzzle,' as used by the half-trained observer, is not a psychological term at all; it is a sign of the import of a practical situation; and, secondly, that the very same word 'puzzle' may be used, by a trained observer, as a shorthand expression for observed psychological occurrence; it is then a descriptive term, a label of fact. The ultimate test, in cases of doubt, is the user's ability to expand the term to a descriptive formula, or at least to trace it back in descriptive fashion to the conventional starting-point of the discussion. If the observer has previously analysed perplexity into localised organic and kinaesthetic processes, affective concomitants, verbal ideas, and so forth, then the term may (under the conditions of a particular experiment) be accepted as descriptive; if it has been agreed between experimenter and observer that the 'conscious attitudes' are to be taken for granted, then the report 'attitude of perplexity' may, again, be accepted as descriptive. But the word as employed by our half-trained observer is descriptive neither in fact nor in intention: not in fact,—for there is no guide to descriptive reconstruction; but not, either, in intention,—for the observer shows, by its employment, that he has missed the point of the exercise; he is trying to express the import of the situation rather than its experienced *quale*; he

has not realised the difference between psychologising and behaving.

The attempt to be empirical makes one longwinded; and I have no doubt that exception may be taken to many of my phrases. I am satisfied if the reader has clearly in mind the distinction that I am drawing; and I have tried to exhibit the distinction in a way that is independent of school or system. I turn now to the special subject of this paper: the appearance of description and of what I shall call 'information' in the recent experimental psychology of thought. I know of no English word that may, in this connection, be opposed, naturally and as a matter of course, to the word 'description'; but we may say provisionally that a term like 'perplexity,' when it is not descriptive, conveys information, is *informatory*^{2a}.

I begin—readers of the JOURNAL will not require a preface—with the relevant passages in Dürr's critique of Bühler. In rough translation, they run somewhat as follows:

" I have followed the course of Bühler's investigation, in which I was privileged to take part as observer, with keen interest. And I have been led to a rather curious result, which has altogether changed my ideas of the best method for the conduct of thought-experiments. Again and again, as I was observing for Bühler, I had the impression, though I was not able at the time to formulate it very clearly, that my report was simply a somewhat modified *verbal statement* of the thoughts aroused in me by the experimenter, and that this verbal statement could not properly be regarded as a psychological description of the thoughts. What I mean by this antithesis of 'verbal statement' and 'psychological description' will perhaps become clearer if I suggest that the layman in psychology would be giving introspective reports every time that he exchanged thoughts with a friend, unless there were some difference between verbal expression and psychological description. The introspecting psychologist will not, of course, be satisfied with a bare mention of the content of his thought during the experiment; he will specify the sensations and ideas that may have appeared in the course of his thinking; and he will refer to the content of his thought in such a way as to make it clear that the experience was a thought-experience. He will say: The thought came to me that . . . , or I had the consciousness that . . . , or It occurred to me that . . . , etc. But it is evident that to designate something a thought is not by any means to describe the nature of this thought. No doubt, we increase our stock of psychological knowledge when we learn that mental processes which are neither verbal ideas nor imaginal complexes of any other sort, nor yet feelings, may enter consciousness in relative isolation and independence, and that these processes are fittingly designated thoughts. But we do not owe this

^{2a} I take advantage of my proof-sheets to remark that the above paragraphs have answered, by anticipation, the special question asked by R. P. Angier. *Journ. of Philos.*, etc., ix, 1912, 137- The general subject of introspection must stand over for a later article.

discovery to Bühler's investigation. Bühler's aim is not merely to verify a familiar fact; he means psychologically to describe the thoughts of whose occurrence he was assured before the work began. .

.. " The report shows that real thinking does not move with the wearisome parade march of formal logic. Logical schematism ravel out the close-packed tissue of thoughts. The practised thinker does not laboriously abstract the particular from the universal, but in a single act apprehends the universal and the particular in the universal. These are interesting facts, that may be turned to especially good account for a less dead-and-alive presentation of logic in our text-books. But they contribute nothing to a psychological description, to an analytical or abstractive definition of the experience in which the apprehension of the relations between particular and universal is given. . . .

" The problem of the psychologist is to show the characteristics of all these acts of thought, not by reference to what is apprehended in them, but by demonstration of their proper nature. This question Bühler leaves unanswered."³

Durr's 'verbal statement' is, then, an intimation of the content or object of thought; it corresponds to what I have spoken of above as 'information.' As 'somewhat modified' by psychological environment, it contains a reference of the observer's experience to a general psychological heading, to the category of Thoughts. If our half-trained observer had reported, not simply that he was puzzled, but that he 'felt' puzzled, or had a 'feeling' of perplexity,—and if he used the word 'feeling' in some psychological sense,—then he would have done, at his lower level, precisely what Dürr does in Bühler's investigation. The 'perplexity' is informative, refers to content or import; the 'feeling,' used as a psychological rubric, is, so far as it goes, descriptive. Durr's intimation of content, he gives us to understand, is psychologically irrelevant; the phrases that came before the intimation (*I had the consciousness that . . .*, etc.) are psychological, but they bring us only to the threshold of a true psychological description.

I pass on to von Aster. An experience, von Aster says, may be characterised in two different ways.

This twofold characterisation is explained as follows. On the one hand we are able, in the strict sense of this term, to *describe* the experience, just as we describe objects at large: by comparison, by grouping it with similar experiences, by emphasising particular features. But secondly, the experience may be *communicated* by some special word [or phrase]. Which of these characterisations, now, is the better, the more accurate? Which of them brings the experience nearer to us, gives us the more intimate familiarity with it? [It must be remembered that] every *description* of an experience has, of necessity, some-

3 E. Dürr, Ueber die experimentelle Untersuchung der Denkvorgänge. *Zeits. f. Psychol.*, XLIX, 1908, 315 f., 322, 323. Italics mine.

thing rough, awkward, incomplete, about it: that is why we are glad to exchange it for communication. Over against a conscious attitude or an affective state, description and communication stand to each other in the same relation as description and delineation over against a physical thing. Description names and defines the parts; but the parts, when put together, never yield the whole; while the drawing, and the communicating phrase, give the whole in unitary form. Communication is superior to description, just precisely as the depletion of mental states by the poet is superior to that offered by the psychologist." 4

To quote a passage of this sort is not quite fair to the writer, who works out his position gradually, by means of examples. Since, however, I want him to speak for himself, I venture to translate a few significant sentences,—with the confession that they are torn from particular contexts, and with the recommendation that the article be read as a whole.

(1) "It is not necessary that the observer have any conscious realisation of the difference between description and communication. The problem is, to pin down a certain series of experiences; and communication, if it is characteristic, satisfies the conditions even better than description. That is to say, expression of the communicative kind suits the disposition aroused in the observer by the instructions given, and is therefore accompanied by a very positive 'consciousness' that the task set 'has been satisfactorily performed.'" 5

(2) "Description has always an approximative character, which comes out with especial clearness when the experiences are as difficult to arrest [as they are in the thought-experiments]; communication has, oftentimes, the character of high assurance, of ascertain self-evidence." 6 Even when the report directly 'names' the contents of consciousness, and is therefore properly to be called descriptive, "the verbal expression may carry a direct conscious reference to the imaginal complex, and yet there may be a clear 'consciousness' of the insufficiency of the image: the words mean more than is given in this image." But communication, too, has its difficulties. "Sometimes the reproduction is assured and definite; phrases crop up with the consciousness. That is precisely what the experience 'meant.' At other times the assurance and self-evidence are lacking: I say that the experience contained 'thoughts' which I may 'perhaps' express as follows, or which 'seemed' to take this or that direction. And finally it may happen that I begin with a rough paraphrase of what was 'meant,' and that then the 'right' or 'fitting' expression suddenly suggests itself." 8

4 E. von Aster, Die psychologische Beobachtung und experimentelle Untersuchung von Denkvorgängen. *Zeits. f. Psychol.*, XLIX, 1908, 69. The reader may be reminded that Dürr's critique was read at the Frankfurt Congress in April, 1908; that von Aster's paper, already at that time completed, was published in September of the same year; and that Dürr's article followed in October.

5 Ibid., 70; cf. 72.

6 Ibid., 71; the writer is contrasting the attitudes of the observers in Marbe's and Bühler's experiments.

7 Ibid., 72 i.

8 Ibid., 93.

(3) It is sufficiently plain that communication is not description; but the writer adds an emphatic statement of their incongruity.⁹ Since communication, with whatever assurance it may be made, is not of itself a *description* or a direct identification, the question now arises, *What* experiences, then, gave rise to this communication?"⁹ And as we cannot infer experience from communication, so we cannot either infer 'meaning' from description." The mere consideration of the facts of consciousness, the experiences, which accompany the 'intelligent' utterance of a sentence, need tell us nothing at all—at all events, need not inform us completely—of the content of our 'meaning.'¹⁰

(4) As to the nature of communication itself, there can be no doubt that it is an expression of import. The words "Oh, yes,—that is one of those paradoxes of Nietzsche's "communicate a repugnance, an impatience, an indifference; that is, they give the import of a situation which they fail altogether to describe."¹¹ The whole essay might be quoted in support of this conclusion. Here, for instance, is a relevant passage: "What do these observations [of Messer and Buhler] show? On their face, they show nothing more, again, than that experiences were present which the observer communicates by certain verbal expressions, and—to particularise—by expressions regarding the object designated by the [stimulus] word:" it is the import of the stimulus word that is communicated.¹² But we have the writer's direct testimony: "What Dürr here calls 'verbal statement,' " he says, "I call 'communication.' And Dürr's assertion that Buhler's observers took up, not a descriptive, but a communicative attitude, is the more noteworthy, as Dürr was himself one of these observers."¹³

Buhler, in his rejoinder to these criticisms, refuses to identify 'verbal statement' and 'communication.' "Von Aster thinks that his 'communication' is the same thing as what Dürr means; but that can hardly be correct."¹⁴ There is, undoubtedly, this difference: the phrase 'verbal statement' has an intellectualistic ring; the word which I have translated 'communication' carries rather, in the German, an affective reference,—implies a sort of self-revelation or self-betrayal, such as is given by the 'expression' of emotion. I do not think, however, that the difference can be stressed. And I do not think that, on any view, it is essential: it seems to derive simply from a difference of psychological system. In the sphere of Buhler's thoughts, Dürr operates with a 'relational consciousness,' von Aster with affectively toned atti-

⁹ Ibid., 102:

¹⁰ cf. 77-10 Ibid.,

¹¹ 82. ¹¹ Ibid., 65 ff..

¹² Ibid., 85; similar expressions occur, e. g., 86, 90.

¹³ Ibid., 107. The words for 'communicate,' 'communication' are *kundgeben*, *Kundgabe*. I hope, however, that no reader will be satisfied to accept my translations; the terminology of this chapter of psychology is still so unsettled that, in the last resort, recourse must always be had to the original German.

¹⁴ K. Buhler, *Zur Kritik der Denkeexperimente*. *Zeits. f. Psychol.*, LI., 1909, 117 f., and ref. to Ber. d. III. Kongr. f. Psychol.

tudes and with direct impressions of sameness, relation, etc. Dürr, then, naturally speaks of a 'somewhat modified (i.e., grossly psychological) verbal statement,' and von Aster speaks as naturally of '(expressive) communication.' The 'verbal statement' and the 'communication' as such are, I believe, what I have called 'information;' the 'somewhat modified' and the implied 'expressive' give a psychological turn to the information, the former accenting thought, the latter rather accenting feeling. Here, of course, I am interpreting; but the interpretation is nothing more than a generalised reading of the facts; and if doubt remains it must be doubt, not of the rightness of the interpretation, but of its ability to mediate between von Aster and Buhler. 'I am saying, in my own way,' von Aster declares, 'just what Dürr said;' and Buhler replies: 'No, you are saying something else.' I have shown, now, that there is a difference; but I ascribe it solely to the personal standpoint and preoccupation of the critic; it is not, so far as I can see, a difference of criticism.

Meanwhile, it is notorious that the criticism has failed to convince those against whom it was directed; we are still told that there appear in consciousness, from the point of view which reveals perceptions and feelings and ideas, processes that can be named, labelled, described, only as 'Bewusstsein von,' 'Wissen um,' and so forth; we are asked to include thought-elements, relation-elements, awarenences, in our analytical vocabulary. This state of affairs suggested the modification of method which was described by Jacobson in the last volume of the JOURNAL. The observers in certain experiments were asked to separate 'description of process' from 'statements concerning meaning.' The word 'process' is here used in the sense of the German *Erlebnis*; it was thoroughly familiar to the observers; whereas "no definition of 'meaning' was furnished by the experimenter." The instruction ran: "Put direct description of conscious processes outside of parentheses, and statements concerning meanings, objects, stimuli and physiological occurrences inside." I wish to emphasise the fact that the observers were hereby required to put *all* conscious processes (including thoughts and awarenences, if these occurred as processes) in the one report, and to put in the other—not 'meanings' outright, but—*statements concerning meanings*. To have separated, at the outset, 'process' and 'meaning' would have been to beg the question at issue; for 'meaning,' whether passive as 'signification' or active as 'intention,' might appear in

direct experience as a specific form of process. On the other hand, a 'statement concerning meaning' is clearly an informative, not a descriptive statement; its banishment from the introspective record is therefore justified; and its removal should indeed, beside freeing the introspective report from irrelevancies, call attention to *lacunae* in that report itself.

I do not propose to discuss in detail the results of Jacobson's paper. The general outcome is that there are no 'significations' or 'intentions' to be found among the processes; that "the correlated meanings and processes are two renderings, from different points of view, of one and the same experience;" that 'meanings,' in other words, must always be 'stated,' and cannot be 'described;' and that a report from which the 'statements of meanings' have been removed is not on that account descriptively inadequate. In connection with this general result, however, there were three points in particular which seemed to me to need working out. They are as follows:

(1) "F at first showed occasional uncertainty as to what constituted meaning; and D for some time showed occasional doubt and inconsistency. Eventually, however, the reports of all four observers became practically uniform." How are we to explain this uncertainty, doubt, inconsistency?

(2) "Just as processes flit by on the passing instant, so do meanings change and elude the observer; and the skill in expression of meaning acquired in daily life is comparatively rough and superficial." How, exactly, do meanings "change?" Do they slip into one another, in the manner of dissolving views; do they shift abruptly; do they behave in both these ways? Is there any marked difference between change of process and change of meaning?

(3) "We find that wherever there is meaning there are also processes; and we find that the correlated meanings and processes are two renderings, from different points of view, of one and the same experience." What are these 'points of view?' Jacobson expressly decides to leave this question open. I do not know whether, on the basis of his material, it could have been answered; and if that is the case, I do not know what his own answer would be. What I have to say upon the question is, therefore, said upon my own sole responsibility, and does not commit Jacobson in any manner. I thought it worth while to attempt an empirical characterisation of the two attitudes, or points of view, taken by the observers; and Miss Day and Mr. Foster—the D and F of Jacobson's paper—very kindly put themselves at my disposal

for these observations and for those demanded by (1) and (2) above. Three sorts of experiments were made, with words and sentences as stimuli: in some, the observer gave first a full statement of meaning, followed by a report (as complete as could be managed) of process; in others, this order was reversed; in yet others, the two reports were intermingled, so that description of process and statement of meaning alternated, as they had done in Jacobson's experiments. It was understood that these new experiments were to be performed with the same seriousness and conscientiousness as the old; the observers knew, however, that they would be required, upon the basis of the whole work, to characterise the attitudes aroused by the different instructions. The task was difficult,—how difficult, I did not myself know until I had attempted it; and although we all three realise that the results are imperfect, I must add that they taxed to the utmost the training and goodwill of the observers.

(i) The following are excerpts from the observers' answers to the question as to the reason for their uncertainty and doubt at the beginning of Jacobson's experiments.

Observer D.—There was, as I remember, a general hesitancy at entering upon a new field; I had never before been asked to make the twofold report, and I could not approach the task coolly and with assurance. . . . More important, though, was my uncertainty as to what the instruction really was: no definition of 'meaning' was given. I was inclined to suspect *E* of a bias toward logic, and I had been taught to regard logical reflection as the worst enemy of introspection. On the other hand I knew that in some instances his psychological terminology had differed from that to which I was accustomed. At first, therefore, I was not a little troubled by doubt as to what he meant me to do when he said "State the meaning" of the word or sentence. . . . I suspect that I am naturally rather a 'subjective' observer, and dependent upon instructions; it sometimes requires a decided effort for me to accept a situation passively, without personal reference to *E* and to what he wants me to observe. My uncertainty led me to take up now one attitude and now another. At times, acquiescing as I thought in *E*'s view, I sought for the verbal, dictionary definition (words were then the stimuli); at other times I stubbornly followed my own natural bent, and waited passively for the stimulus to appear meaningful. . . . After a while, I found that the meanings came of themselves, and I gave them as they arose; as *E* made no comment, I assumed that I was thus following instructions, and the experiments became less trying and fatiguing. . . .

Observer F.—At first T had difficulty in placing the parentheses in the report according to rule, because, even with the best phrasing of which T was then capable, the report did not fall clearly into two such divisions. Obscurity, unitariness, swiftness of passage of complexes; the large amount of material to be reported upon before it slipped from memory; lack of command of language, both for direct description and for statement of meanings; these and other practical conditions led me often to use what I should call indirect or indicative description.

So I reported an auditory image 'more as if whispered than as if said in ordinary voice, kinaesthetic images or sensations 'such as I get when standing and bending the right leg,' etc.; and I found it hard to decide, at first, whether these clauses should go inside or outside of parentheses. Later the difference between statement of meaning and indirect description became clearer; but in some early reports there was a mixture of standpoints; 'vague,' applied to an image, for example, meant vague descriptively and also vague logically. . . . Secondly, and more importantly, I was not always sure as to the *extent* of the meaning, whether of the meaning actually present or of the meaning called for by the instructions. I did not know what purpose was implied in the instruction to state meanings. One may, I think,—though I realised this less clearly at the time,—state the meaning of a situation variously according to the purpose which is involved, the basis which is presupposed. There is a narrow meaning with reference to the individual experiment and to myself as observer; there is a wider meaning with reference to the day's work, and the working relations between the experimenter and myself; and there are many other meanings, with reference to yet other aspects of life. I felt that these meanings were different, and I did not know whether some of them were irrelevant or whether I was to think out, to search for, all possible meanings. It is not so much, I believe, that "the skill in expression of meaning acquired in daily life is comparatively rough and superficial" (though this statement is, no doubt, true in a certain measure), as rather that the situations of daily life define their own universe of meaning, supply of themselves a basis for meaning; whereas the instructions in our experiments left this universe undefined. . . . I finally settled down to the narrow, directly experimental, meaning, but I had all through a sort of mental reservation, to the effect that other and wrier meanings might be made out.

The replies need no interpretative comment. It is interesting, however, to note the difference of type,—a difference which led D to remark, at the conclusion of the experiments/ that statement of meaning is easier than report of process, and F to make an emphatic declaration to the contrary. The task of description, always difficult, is especially difficult for an observer who leans toward the subjective type; and D, when she has once satisfied herself that she clearly understands the demand for meanings, falls back upon their statement with some relief. F, an observer of a somewhat extremely objective type, relies on his training for the report of processes; if he cannot describe everything, he will describe what he can. But the request for meanings puzzles him: *what* meaning shall he state? the perception of a letter? the perception of a letter as stimulus in a thought-experiment?—where shall he draw the line of meaning? So D reports, characteristically, that the meanings 'came of themselves,' while F insists that meanings are always matter of reflection, have to be sought for, to be decided upon. And D is able to use a foregone statement of meaning to help out

her later description of process, while F finds that the prior formulation of meaning tends to drive process out of mind. (2) I quote again from the replies of the two observers.

Observer D.—The meanings in these experiments are perfectly definite and discrete things, distinct from one another. There is no stage of transformation of one meaning into another, but rather a 1-2-3 sequence with a clean-cut division between the individual meanings. There may be difficulty in expressing a given meaning in words, but this is due to unreadiness of language; and a meaning may quickly give place to another meaning, but with practice it can be caught and expressed. Meanings are not transitory in the way that processes are, but are inherently stable; and they are not inherently elusive, as many processes are, but are very get-at-able. They are cut-and-dried, as it were dead things. . . . We can make rough distinctions between groups of processes, but I question whether this is not due, genetically at least, to the fact that the 'group' has been isolated because it had a 'meaning.' There is no gradual development or dying away of a meaning; it is all there at once. A mental complex, on the other hand, as it shows itself to introspection, rises, becomes more or less prominent, dies away; its part-processes and attributes undergo continual change throughout its course.

Observer F.—It is quite true that the meaning of a word or sentence may be different, and logically complete in different stages, at different times. . . . Thus, when the stimulus was the sentence 'What time is it?' the meaning for practical purposes was first present, and then the meaning was realised in more adequate form (in reference to my university work) with the coming up of suitable images. In this sense, then, I agree that meanings may "change and elude the observer." . . . There is also a sort of emphasis within a total meaning; thus the meaning may be emphatically that of 'the letter *d*,' while at the same time there may be a qualification 'on white' or 'on white paper' or 'on a white ground.' If the emphasis shifts, so that the subordinate becomes the principal meaning, there is also, of course, a 'change of meaning.' . . . I have never noticed, however, that meanings overlap or pass into one another; the meaning is, I think, always this or that, at any particular moment. Thus, the word *hide* gave, as report of process, "kinaesthetic sensations as of contraction in shoulder muscles downward in crouching; slight organics in abdomen; then vague visual image of rounded white surface of small extent in front and to the right." The 'then' reads as if there were a sharp break in consciousness; but there was not. On the other hand, the shift of meaning from 'crouch' to 'human skin,' and therewith from verb to substantive, was definite and abrupt. . . .

The difference of type is again apparent. For D, there is no question of 'range of meaning,' of 'logical completeness in different stages;' she assumes, quite as a matter of course, the range set by the requirements of the *Aufgabe*, i.e., by the experimenter; the meaning is hard and fast, without power to contract or expand, and without internal emphasis and subordination. F, on the other hand, reports changes of meaning which at once suggest the logical terms intension and extension. Despite this difference, the observers agree

that change of meaning, unlike change of process, was complete and immediate.

It would, of course, be unwise to generalise these results, though there can be no harm in drawing from them the old lesson that, when we are trying to further psychology, we must be constantly on guard against the irruption of logic. Logical common-sense, *c'est l'ennemi*. If, however, the results are borne out by those of other enquiries, we have a new light cast upon such phrases as "a conflict of meanings," "the meaning of the telegram gradually dawned upon him," etc. During a conflict of meanings, for instance, whatever might be the tangle of contextual processes to be unravelled by introspection, we should have the meanings themselves at any single moment clear-cut and distinct; and the dawn of meaning would not be a gradual and continuous unfolding of meaning, but a step-wise progress involving what I have, perhaps rashly, identified as intension and extension. In both experiences there might be periods of meaninglessness, such as have been found in previous experimental work and have been verified in our own observations; but, if a meaning were present, of whatever logical 'stage of completeness' and of whatever 'range,' that meaning would be self-contained, rounded off, untainted by intermixture of other meanings, replaced by and not dissolving into its successor or alternative.

(3) I come, finally, to the empirical characterisation of the two attitudes.

Observer D.—(1) The statement of meaning is much *easier to make* than is the report of process. There was a definite bodily reaction (slight nausea, inhibited breathing) to giving a long and full account of processes, as if to a difficult, laborious, irksome performance. The statement of meaning, on the other hand, came easily, without effort or unpleasant affection. In particular, (a) meanings are definite, and arrange themselves easily in sequence, whereas it is difficult to be sure of the temporal order of processes, (b) The statement of meanings is comparatively simple; there are fewer meanings than processes; a single meaning often corresponds with a large budget of processes. One is therefore sure of the completeness of a statement of meaning, while one often has the uncomfortable feeling that a process-account is scrappy and imperfect, (c) Meanings seem to go naturally into words; the phrasing takes care of itself. One has to be very careful of one's vocabulary in reporting processes.

(2) The two accounts stand in a different relation to each other. The statement of meaning is altogether *independent*, and can be made without any thought of process. I find, however, that even when I am trying to hold strictly to the attitude of reporting processes I am tempted to refer to meanings, in order to make the description complete and chronological; I resist this temptation, as I am sure that the meanings are extraneous to introspection. Where the statement of meaning (as in some of the new experiments) is given first, it offers

itself as a skeleton on which I may reconstruct the process-account; it promises to give shape and organisation to that account; and I cannot help making some use of it.

(3) Besides these differences of degree, there is also a difference in kind. It is the natural, everyday thing to converse in terms of meaning and it is, for me at least, natural to remember in those terms. While, therefore, the introspective attitude is *analytical*, the meaning-attitude is not analytical (or synthetic) at all, but just matter of course; the expression takes place immediately, without hesitation, as if automatically. It would never occur to me that I might analyse or put together a given meaning; a meaning is a unit, complete in itself, which would not exist if broken up in any way. . . . So I do not 'observe' meanings; the word implies a more active attitude than is correct for meanings; I take the meanings as given to me from without. The difference is, I suppose, one of *Aufgabe*; but it is not the contrast of two kinds of *Aufgabe* within a psychology; when I turn to meanings I drop psychology, and fall into the naive, receptive attitude of everyday life.

Observer F.—(1) *Analytical and non-analytical*. During an experiment, certain processes rise into prominence, have a unity of some sort, seem to 'belong together,' then die down gradually and give place to another group of processes; there may be several of these 'conscious presents.' We can analyse the groups or complexes, and find the individual component processes within the unity; we are able to say that now this and now that part-process came or went. On the side of meaning there is no such possibility; the meaning, as opposed to the conscious complex or conscious present, stands as a unit which cannot be analysed; there is no sense in which it can be regarded as 'made up of' constituent meanings. As a meaning for a definite purpose, it stands as individual and irreducible. . . . This 'belonging together' on the side of consciousness, and 'single direction towards an end' on the side of meaning, are what lead us to make paragraphs or breaks in the twofold report.

We can say that a reported meaning is 'partial,' if we compare it, say, with a verbal definition; but this does not mean that the logically complete meaning can be analysed into partial meanings. We can say also that a meaning shows difference of emphasis; but this does not mean, again, that it is made up of two meanings; the subordinate or qualifying aspect is always integral to the meaning as individual.

(2) *Kinetic and static*. Processes move; they begin and grow and end. They have attributes, and the attributes show continuous change. Meanings are static; they do not proceed or grow; they merely are. They do not possess attributes, as processes do. One could arrange meanings on scales, either of internal emphasis or of extent; but one would then be arranging different meanings; the series would be discrete.

Processes may be present simultaneously, and may run parallel in time. I cannot think of a situation in which two meanings were present at once.

Processes, in such formations as the conscious attitudes, run together into condensations; meanings stand as blocks, with rather sharp breaks between them.

(3) *Observed and acknowledged*. I observe mental processes much as I do physical processes; live the experience through, under *Aufgabe*; and then write down a one-to-one report, so far as that is possible. This comes fairly easily, so far as I have the names at command and am familiar with the processes to be named. Meaning, however, is not

a conscious fact any more than it is a physical fact. Meanings and physical things may be represented in consciousness, but they do not form part of consciousness. They cannot, then, be observed, as processes are, but must be thought out. If the superficial, common-sense meaning alone were required, the meaning report would be easy enough; but when an exact statement of meaning is called for, I have to think it out; to go over the experience again and again, asking myself: Did I realise this? To what extent, for what purpose, did I realise it? I then acknowledge the meaning, as something implied, as a reference of my experience to other experiences under a purposive aspect; I do not observe it, as something existing.

In other words, the difficulty of the report of process is the same that one has in physics; one knows, from other experiments or from reading, that certain things may be overlooked, on account of conditions, or that certain things may be read in, on account of bias. The difficulty is itself familiar, and can be met by a fitting variation or repetition of the observations. An exact statement of meaning requires a very different attitude, one of logical reflection, of weighing possibilities, of setting limits; it is easy to say 'I knew' or 'I felt' or 'I wished' thus and thus, in general terms, but it is very hard to work out how well, how fully, I knew; what was the precise content of the wish, etc. The meaning, as I said, is always a matter of implication; I assent to it, or reject it; I do not observe it. When once the meaning has been found, however, one is sure that one has it all,—a rather rare feeling in reports of complex processes.

(4) *Definite and indefinite.* I have already said that to 'find' a meaning, with any exactness, one must circumscribe one's task; meanings widen out in increasing circles. My own restriction of meaning to 'such meaning as expresses strictly and directly these particular processes' came well toward the end of Jacobson's experiments, and only after I had tried, for some time, to state exactly other and various ranges of 'meaning at large.' With processes the task is quite definite; one is to describe all that are there, or one is to restrict oneself (by instruction) to some group or phase.—

I may summarise by saying that the psychological *Aufgabe* in these experiments was to observe, analytically, a given continuum of processes. The other, and what I should call the logical *Aufgabe*, was to state the meanings which reflection found implicit in certain (practically important) moments of the continuum.

It is clear, I think, that these observers, when asked for an empirical characterisation of the attitudes, sought — as, indeed, how should they not seek?—to psychologise their answers; the empiricism to which they appealed would, naturally, be that of psychology. The result is an attempt to differentiate, in terms of introspection, two attitudes—the one of which lies beyond the scope of introspection. T find it, then, all the more significant that both observers expressly give up the appeal to psychology; D makes the meaning-attitude a non-scientific, everyday matter, and F refers it to logic. But, in point of fact, the appeal to psychology breaks down from the start. Ease and difficulty, analysis and non-analysis, stationariness and elusiveness, definiteness and indefiniteness, all

these antitheses may be found within psychology itself. Their use in the reports, however, plainly transcends psychology. What, for instance, does D mean to contrast under the rubric of ease and difficulty? Not a psychological difficulty and a psychological ease; but rather psychological difficulty in general and a certain non-psychological ease, the facility of ordinary conversation. F, too, does not need to be informed that there are psychological formations, *e.g.*, perceptions, of a relatively static character; when he contrasts 'kinetic' with 'static' he has in mind general psychological elusiveness and general logical stability. And what holds of these, holds also of the other oppositions which appear in the reports.

The reader of the reports themselves will note—and may make the fact a ground of objection—that nothing is said of the carriage of the *Aufgabe* in the fore-period. Here, if anywhere, it might be supposed, a psychological difference between the two attitudes should appear. There is, however, a sufficient reason for its absence. In all psychological experiments of this kind, the *Aufgabe*, as I have remarked in another place, is couched in informatory terms; the observer is 'informed' that he is to introspect; and, responding to the informatory attitude of the experimenter, makes no effort to translate the instruction into terms of description.¹⁵ That is the natural course of events. But let an effort be made to introspect the contents of the fore-period: what have we gained? We simply get, over again, the distinction with which we are familiar from the main period, the distinction of 'report of process' and 'statement of meaning.' The appeal to the fore-period is therefore unavailing.

In conclusion, it may be pointed out that the two observers, in spite of their typical difference, come to substantially the same result as regards the sphere to which the stated meanings belong. D, who takes them the less seriously, tells us that they are the meanings of our daily life and conversation; F, that they are logical meanings. I need not argue that there is no contradiction; but I may remind the reader that Messer, in seeking to discriminate the psychology from the logic of thought, finds a half-way house in "the attitude which we assume in intercourse with our fellow-men."¹⁶

¹⁵ *Thought-processes*, 1909, 268.

¹⁶ A. Messer, *Empfindung und Denken*, 1908, 163 ff. "Es wird sich empfehlen, sozusagen stufenweise zum Standpunkt der Logik emporzusteigen. Am zweckmässigsten werden wir wohl den Ausgang nehmen von dem Verhalten, das wir im Verkehr mit unseren Mitmenschen zu deren Denken einnehmen."

Summary.— It has been recognised, in recent studies of the processes of thought, that the observers' reports contain material of different kinds: introspective description, and information or communication. There is, however, no general agreement as regards (1) the line of division between the two modes of report, (2) the nature of the conscious processes underlying 'information,' or (3) the attitude which finds expression in 'information.'

E. Jacobson (this JOURNAL, XXII, 1911, 553 ff.) requires his observers to distinguish between 'description of process' and 'statement of meaning.' He thus secures (1) a line of division in their reports. He finds (2) that there are no specific 'meaning processes' underlying the statements of meaning.

On the basis of new experiments, I have sought (3) to characterise the attitudes implied in, or demanded by, the two modes of report; the one attitude turns out to be that of descriptive psychology, the other that of logic or of logical common sense. The latter attitude I take to be essentially the same as that involved in Durr's 'verbal statement' and von Aster's 'communication.'

Certain facts brought out in the course of these experiments indicate that there is a rich field for introspective study in the consciousnesses underlying 'conflict of meanings,' 'the gradual dawning of a meaning,' 'misunderstanding,' 'the inability to make oneself understood,' and so forth.