THE COEFFICIENT OF EXTERNAL REALITY.

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Among the many interesting points raised by recent discussions in *MIND* on the Cognition of Physical Reality is that of what I venture to call the *Coefficient* of External Reality. By coefficient I mean the something which attaches to some presentations in virtue of which we attribute reality to them; while others, not having the coefficient, are discredited. The diametrically opposed solution of this question of coefficient by Mr. Stout on one hand and Dr. Pikler on the other is remarked by the Editor in his review of the latter in No. 61.

The opposite solutions are these—and the opposition runs through the history of opinion on this topic. To one class of writers, the coefficient of the reality of an image is its independence of the will (so Spencer, Stout, the Editor, and innumerable others); to another class, the coefficient is subjection to the will (so Bain, Pikler). And it is hard at first sight to see how such a flat contradiction can arise between such careful thinkers. My own reflexion on the general psychology of belief has led me to a point of view from which I am able to see the probable cause of this apparent difference of opinion.

Suppose we make a distinction between a memory-coefficient of reality and a sensational coefficient: by the latter, meaning the criterion of present sensational reality; and by the former, the something about a memory which leads us to believe it represents a real experience, *i.e.*, is not a mere creature of fancy. A moment's consideration will lead us to see that these two kinds of reality differ in their relation to the will. Certainly, a present sensible reality is not under control of my will; it is independent, and if my coefficient is to be discovered in the relation of the presentation to my voluntary life this must be its expression, and I go over to the class of writers who find the psychological basis of external reality in sensations of resistance. But when we come to enquire into the memory-coefficient, asking the question, what character it is in a memory-image which testifies to its being a memory of reality, the tables seem to be turned. Without stopping to examine other views, I hold that that image is a true memory which we are able *to get again as a sensation* by repeating the series of voluntary muscular sensations which were associated with it in its first experience. In other words, if it represent a real former experience, it will have with it muscular (resistance) associates which will make it possible for me to change it into a sensational experience again *at my will*. The memory-coefficient, therefore, is subjection to will in the sense indicated. If this be true, the answer given to the main question of belief in objective reality will depend upon whether we look at it from the side of present reality or of reality as remembered.

Further, this memory-coefficient of external reality must be carefully distinguished from the coefficient of memory itself; the latter being the feeling that an image has been in consciousness before, *i.e.*, recognition, or sense of familiarity. I may recognise an image as a true memory, but yet not give it objective reality. The difference between recognition or memory-reality and the memory of external reality, is this: the former can be brought up by appropriate associates at will, but these associates and the resulting memory have not the sensational coefficient after we get them; that is, they are not individually independent of the will. While, as is said above, the getting again of a remembered reality in the external world is by a series of sensational (resistance) associates, and the resulting experience when reached is a sensation independent of the will. In Hume's phrase, "an opinion or belief is a lively idea related to or associated with a present *impression*". A true memory, in short, is an image which I can get at will by a train of memory-associates, and which, when got, is further subject to my will; a memory of external reality, on the contrary, is an image which I can get at will by a train of sensational associates, and which, when got, is not subject to my will. Of the two, the former is important for the psychology of belief in general; the latter alone for the theory of belief in external objects.

These three factors in belief appear clearly in this example:—An infant, after certain muscular movements, enjoys the contents of his food-bottle, *i.e.*, sensational coefficient of external reality. Again, his bottle lies beside him, he reproduces his enjoyment by voluntarily repeating the muscular series which before led up to the enjoyment, *i.e.*, memory-coefficient of external reality. Being satisfied and drowsy, the bottle-image comes up in consciousness by association with the memories of the muscular movements, the real movements not being made nor the enjoyment reached, *i.e.*, coefficient of memory. Once more, the bottle-image comes up, he makes the muscular movements, but fails to get the satisfaction, *i.e.*, memory-coefficient is not supported by sensational coefficient, and illusion results.

As illustrating the two coefficients of external reality and their confusion, Dr. Pikler in *MIND*, xv. 396, brings against Mr. Stout's view, that interruptions of regularity determine objective belief, the objection that such interruptions occur in the subjective order but are not, as interruptions and quite involuntary, part in the objective (sensational) order; overlooking the alternative that such images usually bring associates which throw them into the memory-order. And Mr. Stout seems quite right in saying that when there are no such associates they *are* put in the sensational order (*MIND*, xv. 549). In arguing that reality finds its criterion in subjection to the will, I think both Prof. Bain and Dr. Pikler have in mind the memory-coefficient—the question put by Mill:—"What is the difference between think-

ing of a reality and representing to ourselves an imaginary picture?"

What could be clearer evidence that Prof. Bain refers to the possibility of getting reality voluntarily than this quotation:—"Our belief in the externality of the causes of our sensations means that certain actions of ours will *bring the sensations into play or modify them in a known manner*"? Mr. Stout quotes this, and adds (MIND, xv. 33):—"I utterly fail to see how dependence on my own activity can mean the same as dependence on something other than myself"; which simply means that Mr. Stout "utterly fails" to see an essential side of the external-reality problem. Prof. Bain in this quotation is recognising the memory-coefficient, and thus getting a basis for persistence in external objects; and I think Prof. Bain is not open to the charge of having entirely overlooked the sensational coefficient. What Mr. Stout calls Prof. Bain's "obvious paradox" is seen, from what I have already said, not to be a paradox, but a complexity in our belief in objective existence.¹

In Mill there is almost exclusive appeal to the memory-coefficient,² and hence the confusion lurking in his "permanent possibility of sensation". It is perfectly true, as Mr. Stout says, that a possibility is nothing until it is brought to the test of sensation; but it is equally true, as Dr. Pikler says in substance, that a possibility (of getting) sensation may carry belief without such a sensational test. In the former case we ask for the sensational coefficient to the exclusion of the other, and in the latter case we rest on memory to interpret the "possibility" apart from present sensation. In short, Mill's formula may be modified to be true to either coefficient, but not to both; while as it stands it is true to neither, but favours the memory-construction. To express the sensational coefficient, it should read *permanent necessity*³ of certain sensations; and to express the memory-coefficient, it should read *permanent possibility of getting for myself certain sensations*. But for an adequate theory either aspect is insufficient, because it neglects the other.

¹ For Prof. Bain's clear recognition of both aspects, see *Emotions and Will*, 8rd ed., pp. 578-81.

² See especially pp. 284-288 of his *Exam. of Hamilton* (American Edition). The appeal becomes exclusive in Dr. Pikler's book, *The Psychology of the Belief in Objective Existence*.

³ The element of necessity (resistance) in certain sensations must be added to enable Mill to meet the ordinary common-sense argument that (in his words) "all mankind unless they really believed in matter would not have turned aside to save themselves from running against a post" (*loc. cit.* p. 244): for mankind do not turn aside except when the possibility is of a certain kind of sensations. And he fails to meet the objection to his formula (really the same one) that it gives mankind no means of positively avoiding the post, *i.e.*, by voluntarily bringing about other realities.

We might call the sensational coefficient (independence of will) the *primary* criterion of belief in external objects, and the memory-coefficient (voluntary getting of sensations) the *secondary* criterion. And an adequate formula, to do justice to both, would have to run somewhat like this:—Belief in external reality is a *feeling of the necessary character of sensations of resistance and of my ability to get such sensations again at any time.*

I believe, however, that a simpler formula may be suggested: a formula which will hold that belief in general is a feeling attaching exclusively to objectives, its criterion or coefficient being lack of subjection to the will; that belief in external reality is its very earliest exhibition; and that the belief of which subjection to the will is the criterion is a derived feeling anticipatory of sensational confirmation—just as the memory of which it is the accompaniment is derived and referable for its material to the sensational process. But my present object is only to make clear the issue, and to point out the waste of effort that results from failure to distinguish carefully the two points of view. Among recent writers I think no one else does such justice to both sides of the problem as does Lipps.¹

¹ *Grundtatsachen des Seelenlebens*, ch. xvii., particularly pp. 397 ff.