THE THEORY OF EMOTION.

(II.) The Significance of Emotions.

BY PROFESSOR JOHN DEWEY,

University of Chicago.

In a preceding article[1] I endeavored to show that all the so-called expressions of emotion are to be accounted for not by reference to emotion, but by reference to movements having some use, either as direct survivals or as disturbances of teleological coördinations. I tried to show that, upon this basis, the various principles for explaining emotional attitudes may be reduced to certain obvious and typical *differentiæ* within the teleological movements. In the present paper I wish to reconsider the James-Lange, or discharge, theory of the nature of emotion from the standpoint thus gained; for if all emotions (considered as 'emotional seizures,' *Affect*[2] or 'feel,' as I may term it) are constituted by the reflexion of the teleological attitude, the motor and organic discharges, into consciousness, the same principle which explains the attitude must serve to analyze the emotion.

The fact, if it be a fact, that all 'emotional expression' is a phase of movements teleologically determined, and not a result of pre-existent emotion, is itself a strong argument for the discharge theory. I had occasion to point out in my previous article that the facts brought under the head of 'antithesis' and 'analogous stimuli' are absolutely unaccountable upon the central theory, and are matters of course upon the James theory. But this statement may be further generalized. If every emotional attitude is referred to useful acts, and if the emotion is *not* the reflex of such act, where does

[1] Psychological Review, Nov., 1894.

[2] See this Review, Sept., 1894, p. 523.

it come in, and what is its relation to the attitude? The first half of the hypothesis prevents its being the antecedent of the attitude; the latter half of the hypothesis precludes its being the consequent. If it is said that the emotion is a mere side issue of that central excitation (corresponding to the purpose) which issues in the muscular and organic changes, then we are entitled to ask, *a priori*, for some explanation of its unique appearance at this point, some sort of mechanical or teleological *causa essendi;* and, *a posteriori*, to point out that, as matter of fact, every one now supposes that his emotion, say of anger, does have *some* kind of direct relation to his movements—in fact, common usage compels us to speak of them as movements of anger. I think, then, that logic fairly demands either the surrender of the 'central' theory of emotion or else a refutation of the argument of the preceding paper, and a proof that emotional attitudes are to be explained by reference to emotion, and not by reference to acts.

More positively, this reference to serviceable movement in explanation of emotional attitudes, taken in connection with the hypothesis that the emotional 'feel' is always due to the return wave of this attitude, supplies a positive tool for the analysis of emotion in general and of particular emotions in especial. As indicating the need of a further consideration, it may be pointed out that Mr. James himself lays the main emphasis of his theory upon its ability to account for the *origin* of emotions, and as supplying emotion with a 'physical basis,' not upon the psychological analysis which it might yield of the nature of emotional experience. Indeed, James definitely relegates to the background the question of classification,[1] saying that the question of genesis becomes all-important. But every theory of genesis must become a method of analysis and classification. The discharge theory does, indeed, give the *coup de grace* to the fixed pigeon-hole method of classification, but it opens the door for the genetic classification. In other words, it does for the emotions precisely what the theory of evolution does in biology; it destroys the arbitrary and subjective schemes, based on mere

[1] *Psychology*, Vol. II., p. 454 and p. 485.

possession of likenesses and differences, and points to an objective and dynamic classification based on descent from a given functional activity, gradually differentiated according to the demands of the situation. The general conclusion indicated regarding the nature of emotion is that:

Emotion in its entirety is a mode of behavior which is purposive, or has an intellectual content, and which also reflects itself into feeling or Affects, as the subjective valuation of that which is objectively expressed in the idea or purpose.[1]

This formula, however, is no more than a putting together of James' theory with the revision of Darwin's principles attempted in the last number. If an attitude (of emotion) is the recurrence, in modified form, of some teleological movement, and if the specific differentia of emotional consciousness is the resonance of such attitude, then emotional excitation is the felt process of realization of ideas. The chief interest lies in making this formula more specific.

In the first place, this mode of getting at it relieves Mr. James's statement of the admittedly paradoxical air which has surrounded it. I can but think that Mr. James' critics have largely made their own difficulties, even on the basis of his 'slap-dash' statement that "we feel sorry because we cry, angry because we strike, afraid because we tremble." The very statement brings out the idea of *feeling* sorry, not of *being* sorry. On p. 452 (Vol. II) he expressly refers to his task as "subtracting certain *elements of feeling* from an emotional state supposed to exist *in its fulness*" (italics mine). And in his article in this REVIEW (Sept., 1894), he definitely states that he is speaking of an *Affect*, or emotional seizure. By this I understand him to mean that he is not dealing with

[1] In my *Psychology, e. g.*, p. 19 and pp. 246–249, it is laid down, quite schematically, that feeling is the internalizing of activity or will. There is nothing novel in the doctrine; in a way it goes back to Plato and Aristotle. But what first fixed my especial attention, I believe, upon James' doctrine of emotion was that it furnishes this old idealistic conception of feeling, hitherto blank and unmediated, with a medium of translation into the terms of concrete phenomena. I mention this bit of personal history simply as an offset to those writers who have found Mr. James' conception so tainted with materialism. On the historical side, it may be worth noting that a crude anticipation of James' theory is found in Hegel's Philosophie des Geistes, § 401.

emotion as a concrete whole of experience, but with an abstraction from the actual emotion of that element which gives it its differentia—its feeling *quale*, its 'feel.' As I understand it, he did not conceive himself as dealing with that state which we term 'being angry,' but rather with the peculiar 'feel' which any one has when he is angry, an element which may be intellectually abstracted, but certainly has no existence by itself, or as full-fledged emotion-experience.

What misled Mr. James' critics, I think, was not so much his language, as it was the absence of all attempts on his part to connect the emotional seizure with the other phases of the concrete emotion-experience. What the whole condition of *being* angry, or hopeful or sorry may be, Mr. James nowhere says, nor does he indicate why or how the 'feel' of anger is related to them. Hence the inference either that he is considering the whole emotion-experience in an inadequate way, or else—as Mr. Irons took it—that he is denying the very existence of emotion, reducing it to mere consciousness of bodily change as such. Certainly, even when we have admitted that the emotional differentia, or 'feel', is the reverberation of organic changes following upon the motor response to stimulus, we have still to *place* this 'feel' with reference to the other phases of the concrete emotion-experience. 'Common sense' and psychological sense revolt at the supposed implication that the emotional 'feel' which constitutes so much of the meaning of our lives is a chance arrival, or a chance super-imposition from certain organic changes which happen to be going on. It is this apparently arbitrary isolation which offends.

If, preparatory to attempting such a placing, we put before us the whole concrete emotional experience, we find, I think, that it has two phases beside that of *Affect*, or seizure. (1) It is a disposition, a mode of conduct, a way of behaving. Indeed, it is this practical aspect of emotion which common speech mainly means to refer to in its emotional terms. When we say that John Smith is very resentful at the treatment he has received, or is hopeful of success in business, or regrets that he accepted a nomination for office, we do not simply, or even chiefly, mean that he has a certain 'feel'

occupying his consciousness. We mean he is in a certain practical attitude, has assumed a readiness to act in certain ways. I should not fear a man who had simply the 'feel' of anger, nor should I sympathize with one having simply the 'feel' of grief.[1] Grief means *unwillingness* to resume the normal occupation, practical discouragement, breaking-up of the normal reactions, etc., etc. Just as anger means a tendency to explode in a sudden attack, not a mere state of feeling. We certainly do not deny nor overlook the 'feel' phase, but in ordinary speech the behavior side of emotion is, I think, always uppermost in consciousness. The connotation of emotion is primarily ethical, only secondarily psychical. Hence our insulted feeling when told (as we hastily read it—our interpretation is 'slap-dash' rather than the sentence itself) that we are not angry until we strike, for the sudden readiness to injure another is precisely what we mean by anger. Let the statement read that we do not have the emotional seizure, the 'feel' of anger, till we strike, or clench our fist, or have our blood boil, &c., and the statement not only loses its insultingly paradoxical quality, but (unless my introspection meets a different scene from that of others) is verified by every passing emotion. (2) But the full emotional experience also always has its 'object' or intellectual content. The emotion is always 'about' or 'toward' something; it is 'at' or 'on account of' something, and this prepositional reference is an integral phase of the single pulse of emotion; for emotion, as well as the idea, comes as a whole carrying its distinctions of value within it. The child who ceases to be angry *at* something—were it only the floor at last—but who keeps up his kicking and screaming, has passed over into sheer spasm. It is then no more an emotion of anger than it is one of æsthetic appreciation. Dis-

[1] I take it that this separation of 'feel' from practical attitude is precisely what makes the difference between an emotional and a sentimental experience. The fact that the 'feel' may be largely, though never wholly, simulated, by arousing certain organic excitations apart from the normal practical readiness to behave in a certain way, has played a sufficiently large part in our 'evangelical' religions. The depth, in a way, and the hollowness, in another way, of the subjectively induced religious sentiments seems to me, in itself, a most admirable illustration of the truth of James' main contention.

gust, terror, gratitude, sulkiness, curiosity—take all the emotions seriatim and see what they would be without the intrinsic reference to idea or object. Even the pathological or objectless emotion is so only to the rational spectator. To the experiencer (if I may venture the term) it subsumes at once its own object as source or aim. This feeling of depression must have its reason; the world is dark and gloomy; no one understands me; I have a dread disease; I have committed the unpardonable sin. This feeling of buoyancy must have its ideal reference; I am a delightful person, or one of the elect or have had a million dollars left me.[1]

It is perhaps at this point that the need of some reconstruction which will enable us to place the phases of an entire emotional experience becomes most urgent. In Mr. James' statement the experience is apparently (apparently, I say; I do not know how much is due to the exigency of discussion which necessitates a seeming isolation) split up into three separate parts: First comes the object or idea which operates only as stimulus; secondly, the mode of behavior taken as discharge of this stimulus; third, the *Affect*, or emotional excitation, as the repercussion of this discharge. No such seriality or separation attaches to the emotion as an experience. Nor does reflective analysis seem to establish this order as the best expression of the emotion as an object of psychological abstraction. We might almost infer from the way Mr. James leaves it that he is here a believer in that atomic or mosaic composition of consciousness which he has so effectively dealt with in the case of intellectual consciousness. However this may be, Mr. James certainly supplies us, in the underlying *motif* of this 'chapter' on emotion, with an adequate instrument of reconstruction. This is the thought that the organic discharge is an *instinctive* reaction, not a response to an idea as such.

Following the lead of this idea, we are easily brought to the conclusion that *the mode of behavior is the primary thing, and that the idea and the emotional excitation are constituted at one and the same time; that, indeed, they represent the tension*

[1] I do not mean, of course, that every 'pathological' emotion creates an intellectual delusion; but it does carry with it a changed intellectual coloring, a different direction of attention.

of stimulus and response within the coördination which makes up the mode of behavior.

It is sheer reflective interpretation to say that the activity in anger is set up by the object, if we by object mean something consciously apprehended as object. This interpretation, if we force it beyond a mere way of speaking into the facts themselves, becomes a case of the psychological fallacy. If my bodily changes of beating heart, trembling and running legs, sinking in stomach, looseness of bowels, etc., follow from and grow out of the conscious recognition, *qua conscious recognition*, of a bear, then I see no way for it but that the bear is already a bear of which we are afraid—our idea must be of the bear as a fearful object. But if (as Mr. James' fundamental idea would imply, however his language may read at times) this reaction is not to the bear as *object*, nor to the *idea* of bear, but simply expresses an instinctive coördination of two organic tendencies, then the case is quite different. It is not the idea of the bear, or the bear as object, but a certain *act of seeing*, which by habit, whether inherited or acquired, sets up other acts. It is the kind of *coördination of acts* which, brought to sensational consciousness, constitutes the bear a fearful or a laughable or an indifferent object. The following sentence, for example, from James (this REVIEW, Vol. I. p. 518) seems to involve a mixture of his own theory with the one which he is engaged in combatting: "Whatever be our reaction on the situation, in the last resort it is an *instinctive reaction* on that one of its elements which strikes us for the time being *as most vitally important.*" The conception of an instinctive reaction is the relevant idea; that of reaction upon an element 'which strikes us as important' the incongruous idea. Does it strike us, *prior* to the reaction, as important? Then, most certainly, it already has emotional worth; the situation is already delightful and to be perpetuated, or terrible and to be fled, or whatever. What does recognition of importance mean aside from the ascription of worth, value—that is, aside from the projection of emotional experience?[1] But I do not think

[1] It seems to me that the application of James' theory of emotion to his theory of attention would give some very interesting results. As it now stands, the theory

James' expression in this and other similar passages is to be taken literally. The reaction is not made on the basis of the apprehension of some quality in the object; it is made on the basis of an organized habit, of an organized coördination of activities, one of which instinctively stimulates the other. The outcome of this coördination of activities constitutes, for the first time, the object with such and such an import—terrible, delightful, etc.—or constitutes an emotion referring to such and such an object. For, we must insist once more, the frightful object and the emotion of fear are two names for the same experience.

Here, then, is our point of departure in placing the 'feel,' the 'idea,' and the 'mode of behavior' in relation to one another. The idea or object which precedes and stimulates the bodily discharge is in no sense the idea or object (the intellectual content, the 'at' or 'on account of') of the emotion itself. The particular idea, the specific quality or object to which the seizure attaches, is just as much due to the discharge as is the seizure itself. More accurately and definitely, the idea or the object is an abstraction from the activity just as much as is the 'feel' or seizure. We have certain organic activities initiated, say in the eye, stimulating, through organized paths of association in the brain, certain activities of hands, legs, etc., and (through the coördination of these motor activities with the vegetative functions necessary to maintain them) of lungs, heart, vaso-motor system, digestive organs, etc. The 'bear' is, psychologically, just as much a discrimination of certain values, within this total pulse or coördination of action, as is the feeling of 'fear.' The 'bear' is constituted by the excitations of eye and coördinated touch centres, just as the 'terror' is by the disturbances of muscular and glandular systems. The reality, the coördination of these partial activities, is that whole activity which may be described equally well as 'that terrible bear,' or 'Oh, how frightened I am.' It is precisely

'in attention' of preferential selection on the *basis* of interest seems to contradict the theory of emotional value as the *outcome* of preferential selection (that is, specific reaction). But the contradiction is most flagrant in the case of effort, considered, first, as emotion and then as an operation of will.

and identically the same actual concrete experience; and the 'bear,' considered as one experience, and the 'fright,' considered as another, are distinctions introduced in reflection upon this experience, not separate experience. It is the psychological fallacy again if the differences which result from the reflection are carried over into the experience itself. If the fright comes, then the bear is not the bear of that particular experience, is not the object to which the feeling attaches, *except* as the fright comes. Any other supposition is to confuse the abstract bear of science with the concrete (*just this*) bear of experience.

The point may be further illustrated by the objection which Mr. Irons has brought against the James theory. (Mind, 1894, p. 85). "How can one perceptive process of itself suffuse with emotional warmth the cold intellectuality of another?" Note here the assumption of two distinct 'processes', apparently recognizing themselves as distinct, or anyhow somehow marked out as different in themselves. The continued point of Mr. Irons' objection is that Mr. James makes intellectual and emotional 'states', (values) the knowledge of an object and the emotion referred to it, both due to currents from the periphery, and the same kind of current cannot be supposed to induce such radically different things as an intellectual and an emotional process. The objection entirely overlooks the fact that we have but the one organic pulse, the frightful bear, the frightened man, whose reality is the whole concrete coördination of eye—leg—heart, &c., activity, and that the distinction of cold intellectuality and warm emotionality is simply a *functional* distinction within this one whole of action. We take a certain phase which *serves a certain end*, namely, giving us information, and call that intellectual; we take another phase, having another end or value, that of excitement, and call that emotional. But does any one suppose that, *apart from our interpretation of values*, there is one process in itself intellectual, and another process in itself emotional? I cannot even frame an idea of what is meant. I can see that the eye-touch process gives us information mainly, and so we call that intellectual; and that the heart-bowels process gives us the valuation of this informa-

tion in terms of our own inner welfare,—but aside from this distinction of *values* within a concrete whole, through reflection upon it, I can see nothing.

If, then, I may paraphrase Mr. James' phraseology, the statement would read as follows: Our customary analysis, reading over into the experience itself what we find by interpreting it,[1] says we have an idea of the bear as something to be escaped, and so run away. The hypothesis here propounded is that the factors of a coördination (whether due to inherited instinct or to individually acquired habit) begin to operate and we run away; running away, we get the idea of 'running-away-from-bear', or of 'bear-as-thing-to-be-run-from.' I suppose every one would admit that the complete, mature idea came only in and through the act of running, but might hold that an embryonic suggestion of running came before the running. I cannot disprove this position, but everything seems to point the other way. It is more natural to suppose that as the full idea of running away comes in from the full execution, so the vague suggestion comes through the vague starting-up-of the system, mediated by discharge from the centres.

The idea of running away must certainly involve, as part of its content, an excitation of the 'motor-centres' actually concerned in running; it would seem as if this excitation must involve some, however slight, innervation of the peripheral apparatus involved in the act.[2] What ground is there for supposing that the idea comes to consciousness save through the sensorial return of this peripheral excitation? Is there any conceivable statement, either in terms of introspection or of nervous structure, of an idea of movement coming to consciousness absolutely unmediated peripherally? Sensorial consciousness, mediated by the incoming

[1] This is simply circumlocution for 'common-sense.' Common-sense is practical, and when we are practical it is the value of our experience, what we can get out of it or think we can, that appeals to us. The last thing that concerns us is the actual process of experiencing, *qua* process. It might almost be said that the sole difficulty in psychology, upon the introspective side, is to avoid this substitution of a practical interpretation of an experience for the experience itself.

[2] I do not mean that this innervation comes to consciousness as such; on the contrary.

current, is an undoubted fact; it is *vera causa*. Putting the two hypotheses side by side simply as hypotheses, surely the logical advantage of economy and of appeal to *vera causa* is on the side of the theory which conceives the idea of movement in terms of a return of discharge wave, and against that which would make it a purely central affair.[1]

But this is far from being all. I suppose one is fairly entitled now to start from the assumption of a sensory-continuum, the 'big, buzzing, blooming confusion,' out of which particular sensory quales are differentiated. Discrimination, not integration, is the real problem. In a general way we all admit that it is through attention that the distinctions arise, through selective emphasis. Now we may not only rely upon the growing feeling that attention is somehow bound up with motor adjustment and reaction, but we can point to the specific facts of sensorial discrimination which show, that, as a matter of fact, the range and fineness of discrimination run parallel to the apparatus for motor adjustments. We can also show that, in the only case in which there has, as yet, been a serious attempt to work out the details of discrimination, namely, space distinctions, all hands agree that they come through motor adjustments—the question whether 'muscular' or joint surface sensations are primary, having here no importance. Such being the case, how can the particular stimulus which excites the discharge be defined as *this* or *that* object apart from our reaction to it? I do not care to go into the metaphysics of objective qualities, but dealing simply with the psychological recognition of such qualities, what basis or standard for qualitative definiteness can we have, save the consciousness of differences in our own organic response? The bear may be a

[1] There are further logical grounds for expecting acquiescence from those who accept the general standpoint of Mr. James. To say nothing of the insistence upon consciousness as essentially reactive or motor, 'idea' and emotional seizure hang together. Fear-of-bear, bear-as-fearful-object cannot be separated. Besides, when I introspect for my 'fringe' in the stream of thought I always find its particular sensorial basis in shiftings of directions and quantity of breath, and other slight adjustments, just as certainly as I always can pick out the sensorial basis for my emotional seizures. *A priori*, it is difficult to see what the 'fringe' can be save the feeling of the running accompaniment of aborted acts, having their value now only as signs or cues, but originally complete in themselves.

thousand times an individual entity or distinct object metaphysically, if you please; you may even suppose, if you will, that the particular wave-lengths which deflect from the bear, somehow sort themselves out from the wave-lengths coming from all the rest of the environment, and come to the brain as a distinct bundle or package by themselves—but the recognition of just *this* object out of the multitude of possible objects, of just this bundle of vibrations out of all the other bundles, still remains to be accounted for. The predominating motor response supplies the conditions for its objectification, or selection. There is no competing hypothesis of any other machinery even in the field.

We return, then, confirmed, to our belief that the mode of behavior, or coördination of activities, constitutes the ideal content of emotion just as much as it does the *Affect* or 'feel', and that the distinction of these two is not given in the experience itself, but simply in reflection upon the experience. The mode of action constituted by the organic coordination of certain sensori-motor (or ideo-motor) activities, on one side, and of certain vegetative-motor activities on the other, is the reality, and this reality has a value, which, when interpreted, we call intellectual, and a value which, when interpreted we call Affect, or 'feel'. In the terms of our illustration, the mode of behavior carried with it the concept of the bear as a thing to be acted towards in a certain way, and of the 'feel' of our reaction. It is brown and chained—a 'beautiful' object to be looked at. It is soft and fluffy—an 'æsthetic' object to be felt of. It is tame and clumsy—an 'amusing' object to while away time with. It is hungry and angry—and is a 'ferocious' object to be fled. The consciousness of our mode of behavior as affording data for other possible actions constitutes the bear an objective or ideal content. The consciousness of the mode of behavior as something in itself—the looking, petting, running, etc.—constitutes the emotional seizure. In all concrete experience of emotion these two phases are organically united in a single pulse of consciousness.

It follows from this that all emotion, as excitation, involves inhibition. This is not absolute inhibition; it is not

suppression or displacement. It is incidental to the coördination. The two factors of the coördination, the 'exciting stimulus' and the excited response, have to be adjusted, and the period of adjustment required to affect the coördination, marks the inhibition of each required to effect its reconstruction as an integral part of the whole act. Or, since we have recognized that the exciting stimulus does not exist as fact, or object, until constituted such by the coördination in the final act, let us say that the activities needing adjustment, and so partial inhibition, are the kinæsthetic (sensori-motor or ideo-motor) activities which translate themselves into the 'object', and the vegetative-motor activities which constitute the 'reaction' or 'response' to the 'object'.

But here, again, in order to avoid getting on the wrong track it must be noted that this distinction of 'object' and 'response' is one of interpretation, or value, and not a plain matter of course difference in the experiencing. I have already tried to show that the 'object' itself is an organic excitation on the sensori-motor, or, mediately, ideo-motor side, and that it is not *the* peculiar object *of* the emotion until the mode of behavior sets in, and the diffusive wave repercussates in consciousness. But it is equally necessary to recognize that the very distinction between exciting or stimulating sensori-motor activity and excited or responding vegetative-motor activity is teleological and not merely factual. It is because these two activities have to be coördinated in a single act, to accomplish a single end, and have therefore to be so adjusted as to coöperate with each other, that they present themselves as stimulus and response. When we consider one activity, say the sensori-ideo-motor activity, which constructs or constitutes the bear as an 'object', not in itself, but from the standpoint of the final act into which it merges—the stopping to took at the bear and study it scientifically, or enjoy its clumsy movements—that activity takes the form of stimulus. So the vegetative-motor activity, which is, in itself as direct experience, simply the intrinsic organic continuation of the sensori-motor activity, being interpreted again as a reduced factor of, or contribution to, the final outcome, assumes the form of response.

But, I repeat, this distinction of stimulus and response is one of interpretation, and of interpretation from the standpoint of the value of some act considered as an accomplished end.

The positive truth is that the prior and the succeeding parts of an activity are in operation together; that the prior activity beside passing over into the succeeding also persists by itself, and yet that the necessary act cannot be performed until these two activities reinforce each other, or become contributing factors to a unified deed. The period of maximum emotional seizure corresponds to this period of adjustment. If we look at the deflection or reconstruction which either side undergoes during this adjustment, we shall call it inhibition—it is arrest of discharge which the activity would perform, if existing by itself. If we look at the final outcome, the completed adjustment, we have coördination.

I think it must be obvious that this account in no way runs athwart Mr. James' denial of inhibition as a necessary phase of the *Affect* (Psychology, Vol. II., p. 476, note). He there speaks of inhibition as if it could mean only complete suppression—which is no inhibition at all, psychologically, since with suppression or displacement, all tension vanishes. It is, indeed, a question of primary impulsive tendencies, but of these tendencies as conflicting with one another and therefore mutually checking, at least temporarily, one another. Acts, which in past times, have been *complete* activities, now present themselves as contemporaneous phases of one activity. In so far as they were once each complete in itself, there is struggle of each to absorb or negate the other. This must either occur or else there is a readjustment and a new whole, or coördination, appears, they now being contributory factors. The inhibition once worked out, whether by displacement of one or by reconstruction of both contending factors, the *Affect* dies out.

This sort of inhibition the James theory not only permits, but demands—otherwise the whole relation between the exciting stimulus and the instinctive response, which is the nerve of the theory, disappears. If the exciting stimulus does not persist over into the excited response, we get simply a case of habit. The familiar fact that emotion as excite-

ment disappears with definiteness of habit simply means that in so far as one activity serves *simply* as means, or cue, to another and gives way at once to it, there is no basis for conflict and for inhibition. But if the stimulating and the induced activities need to be coördinated together, if they are both means contributing to one and the same end, then the conditions for mere habit are denied, and some struggle, with incidental inhibitory deflection of the immediate activity, sets in. In psychological terms, this tension is always between the activity which constitutes, when interpreted, the object as an intellectual content, and that which constitutes the response or mode of dealing with it. There is the one phase of organic activity which constitutes the bear as object; there is the other which would attack it, or run away from it, or stand one's ground before it. If these two coördinate *without friction*, or if one immediately displaces the other, there is no emotional seizure. If they coexist, both pulling apart as complete in themselves and pulling together as parts of a new whole, there is great emotional excitement.[1] It is this tension which makes it impossible to describe any emotion whatever without using dual terms—one for the *Affect* itself, the other for the object 'at', 'towards,' or 'on account of,' which it is.

We may now connect this analysis with the result of the consideration of the emotional attitudes. The attitude is precisely that which was a complete activity once, but is no longer so. The activity of seizing prey or attacking an enemy, a movement having its meaning in itself, is now reduced or aborted; it is an attitude simply. As an instinctive reaction it is thoroughly ingrained in the system; it represents the actual coördinations of thousands and thousands of

[1] See James, II., 496–497. But more particularly I should apply to the difference between relatively indifferent and emotionally excited consciousness precisely what James says of the difference between habitual and reasoned thinking. (II., p. 366.) "In the former, an entire system of cells vibrating at any one moment discharges in its totality into another system, the order of the discharges tends to be a constant one in time; whilst in the latter a part of the prior system still keeps vibrating in the midst of the subsequent system, and the order . . . has little tendency to fixedness in time." Add to this that it is necessary to perform a unified act—or reconstitute a single, comprehensive system, and the reality (though strictly incidental character) of inhibition appears.

ancestors; it tends to start into action, therefore, whenever its associated stimulus occurs. But the very fact that it is now reduced to an attitude or tendency, the very fact that it is now *relatively* easy to learn to control the instinctive blind reaction when we are stimulated in a certain way, shows that the primary activity is inhibited; it no longer exists as a whole by itself, but simply as a coördinated phase, or a contributory means, in a larger activity. There is no reason to suppose that the original activity of attack or seizure was emotional, or had any *quale* attached to it such as we now term 'anger'. The animal or our ancestor so far as it was given up without restraint to the full activity undoubtedly had a feeling of activity; but just because the activity was undivided, it was not 'emotion'; it was not 'at', or 'towards' an object held in tension against itself. This division could come in only when there was a need of coördinating the activity which corresponded to the perception and that which corresponded to the fighting, as means to an activity which was neither perceiving nor fighting. The animal growling and lashing its tail as it *waits* to fight may have an emotional consciousness, but even here, there may be, for all we know, simply a unified consciousness, a complete concentration on the act of maintaining that posture, the act of waiting being the *adequate* response to the given stimulus. Certainly,[1] so far as I can trust my own introspection, whenever my anger or any strong emotion has

[1] I have no intention here of constructing, *a priori*, the animal consciousness. I use this merely as hypothetical illustration; *if* unification of activity, then no emotion; *if* emotion, then tension of intellectual recognition on one side and consideration of how to behave towards object recognized on the other. I must add, however, that such interpretations as Darwin's umbrella case (in his *Descent of Man*), as illustrating a rude sense of the supernatural, seem to me most unwarrantably anthropomorphic. Surely, the only straightforward interpretation is, there was interruption of a reaction which had started to discharge, and that such a change in stimulus suddenly set up another discharge totally at cross-purposes with the first, thus disintegrating the animal's coördinations for a moment. Unless the animal recognizes or objectifies the familiar reaction, and recognizes also the unexpected reaction in such a way that there tension arises between the two, there can be no *emotion* in the animal, but simply a shock of interrupted activity—the sort of fit which James speaks of, Vol. II, 420. It may well be that the feeling of the supernatural in man, however, *is* precisely the feeling of such tension—instead of there being an idea of the supernatural, and then an associated feeling of terror towards it.

gained complete possession of me, the peculiar *Affect quale* has disappeared. I remember well a youthful fight, with the emotions of irritation and anger before, and of partial fear and partial pride afterwards, but as to the intervening period of the fight nothing but a strangely vivid perception of the other boy's face as the hypnotizing focus of all my muscular activities. On the other side, my most intense and vengeful feelings of anger are associated with cases where my whole body was so sat on as to prevent the normal reaction. Every one knows how the smart and burn of the feeling of injustice increases with the feeling of impotency; it is, for example, when strikes are beginning to fail that violence from anger or revenge, as distinct from sheer criminality, sets in. It is a common-place that the busy philanthropist has no occasion to feel the extreme emotion of pathos which the spectator or reader of literature feels. Cases might be multiplied ad libitum.

It is then in the reduction of activities once performed for their own sake, to attitudes now useful simply as supplying a contributory, a reinforcing or checking factor, in some more comprehensive activity, that we have all the conditions for high emotional disturbance. The tendency to large diffusive waves of discharge is present, and the inhibition of this outgoing activity through some perception or idea is also present. The need of somehow reaching an adjustment of these two sides is urgent. The attitude stands for a recapitulation of thousands of acts formerly done, ends formerly reached; the perception or idea stands for multitudes of acts which may be done, ends which may be acted upon. But the immediate and present need is to get this attitude of anger which reflects the former act of seizing into some connection with the act of getting-even or of moral control, or whatever the idea may be. The conflict and competition, with incidental inhibition and deflection, is the disturbance of the emotional seizure.

Upon this basis, the apparent strangeness or absurdity in the fact that a mere organic repercussation should have such tremendous values in consciousness disappears. This organic return of the discharge wave stands for the entire effort of

the organism to adjust its formed habits or coördinations of the past to present necessities as made known in perception or idea. The emotion is, *psychologically, the adjustment or tension of habit and ideal*, and the organic changes in the body are the literal working out, in concrete terms, of the struggle of adjustment. We may recall once more the three main phases presented in this adjustment as now giving us the basis of the classification of the emotions. There may be a failure to adjust the vegetative-motor function, the habit, to the sensori-(or ideo-) motor; there may be the effort, or there may be the success. The effort, moreover, also has a double form according as the attempt is in the main so to use the formed reactions as to avoid or exclude the idea or object, setting up another in its place, or to incorporate and assimilate it—*e. g.*, terror and anger, dread and hope, regret and complacency, etc.[1]

I shall not carry out this classification; but further suggest that, in my judgment, we now have the means for discriminating emotion as *Gefuhlston*, as emotional disturbance, or *Affect* (with which we have been dealing so far) and as interest.

Interest is the feeling which arises with the completed coördination. Let the tension solve itself by successive displacements in time, *i. e.*, means assuming a purely serial form in which one stimulates the next, and we get the indifference of routine. But let the various means succeed in organizing themselves into a simultaneous comprehensive whole of action, and we have interest. All interest, *qua* interest, it would follow from this, is qualitatively alike, being differentiated simply by the idea to which it attaches. And expe-

[1] Because of the tension, however, these cannot be set over against each other absolutely. All terror, till it passes into pathological fright, involves anger, and anger some fear, etc. All moral experience is only too full of the subtle and deceiving ways in which regret (condemnation) and complacency (self-approbation) run into each other. There is the Pharisee who can maintain his sense of his own goodness only by tension with his thought of evil; or who can make his depth of remorse material for self-gratulation. And there is the sentimental selfish character which disguises its own disgrace from itself by emotional recognitions of the beauty of goodness, and of its own misfortunes in not being able, in the past, to satisfy this ideal. I have never known other such touching tributes to goodness as can proceed from the sentimental egoist, when he gets into 'trouble,' as he euphemistically terms it.

rience seems to verify this inference. Interest is undisturbed action, absorbing action, unified action, and all interests, *as interests*, are equally interesting. The collection of postage stamps is as absorbing, if it *is* absorbing or an interest, as the discovery of double-stars; and the figuring of indefinite columns of statistics as the discovery of the nature of sympathy. Nor is this a pathological principle, as it might seem to be were we to instance merely fads or hobbies. The multiplicity of deeds which demand doing in this world is too great to be numbered; that principle which secures that if only full or organic activity go into each end, each act shall equally satisfy in its time and place, is the highest ethical principle; it is the statement of the only religious emotional experience which really seems worth while—the sense of the validity of all necessary doing. I cannot dwell upon this matter of interest, but I suggest the case of purely scientific interest as crucial. On one side, it seems wholly unemotional, so free from all disturbance or excitation may it become; on the other, it represents a culmination of absorption, of concentrated attention. How this apparent paradox is to be dealt with save on the supposition that emotion (as *Affect*) is the feeling of tension in action, while interest is the feeling of a complex of relevant activity unified in a single channel of discharge, I do not see.

As for the *Gefühlston*, I shall only state the conclusion that would seem to follow from a thorough-going application of the principle already laid down. I do not know that this complete application is advisable, much less necessary, but I share somewhat in the feeling of Mr. Baldwin as expressed in the Nov. number (p. 617) of this REVIEW, that there is a presumption that a unitary principle holds all the way through.[1] At all events, those who have followed me so far may like to see how the hypothesis already propounded might conceivably apply to the case of, say, delight in certain tones,

[1] It hardly seems fair, though, to charge Mr. James with inconsistency because he declines to force his theory beyond the limits of the facts upon which he feels himself to have a sure hold. Surely we may admire this reserve, even if we cannot imitate it, instead of virtually accusing him of giving away his whole case by admitting, hypothetically, the existence of facts whose explanation would require an opposite principle.

colors or tastes, while those who do not accept the hypothesis will hardly be shocked at one absurdity the more.

The suggestion, then, is that the *Gefuhlston* represents the complete consolidation of a large number of achieved ends into the organic habit or coördination. It is interest read backwards. That represents the complete identification of the habits with a certain end or aim. The tone of sense-feeling represents the reaction, the incorporate identification, of the successful ends into the working habit. It is not, as I have hitherto indicated, habit as habit which becomes feelingless; it is only the habit which serves as mere means, or serial stimulus. That a given coördination should assume into itself the value of all associated coördinations is a fact of every day experience. Our eye-consciousness takes up into itself the value of countless motor and touch experiences; our ear takes up the value of motor and visual experiences, &c. There is no apparent reason why this vicarious assumption should not become so organically registered—*pace* Weissman—as to become hereditary; and become more and more functionally incorporated into structure.

To sum up:—Certain movements, formerly useful in themselves, become reduced to tendencies to action, to attitudes. As such they serve, when instinctively aroused into action, as means for realizing ends. But so far as there is difficulty in adjusting the organic activity represented by the attitude with that which stands for the idea or end, there is temporary struggle and partial inhibition. This is reported as *Affect*, or emotional seizure. Let the coördination be effected in one act, instead of in a successive series of mutually exclusive stimuli, and we have interest. Let such coördinations become thoroughly habitual and hereditary, and we have *Gefuhlston*.