

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY.



I.—A CLASSIFICATION OF FEELINGS.

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I.

OF the various methods of classifying the Feelings that have from time to time been proposed, the majority were originated while the science of psychology was as yet without form and void, and, being therefore out of harmony with the discoveries and developments since attained, they may for the present purpose be disregarded. Recent as is the philosophical work of Sir W. Hamilton, his outline of a classification is wholly obsolete, not more, however, from the advance that has since taken place in our knowledge than from the slight elaboration that he bestowed upon it. Crude as it is, however, his system is remarkable, and in my opinion chiefly meritorious, for the recognition, vague indeed and rather implied than expressed, of the necessity of taking account of circumstances external to the organism in defining and estimating the feelings. Subsequent attempts at classification, including that of Waitz, the intricate and minutely elaborated system of Wundt, and even the more recent effort of Mr. Shadworth H. Hodgson, all appear to me so utterly wanting in the first and most elementary condition of a

classification—the condition, namely, that the groups shall mutually exclude one another—as to carry within themselves their own condemnation.

Adopting, as I do, Mr. H. Spencer's *Principles of Psychology* as a profound and masterly exposition of the origin and nature of the normal mind, I must yet dissent from his classification of feelings, on the same ground as I dissented from his similarly-founded classification of cognitions (MIND XXX. 260) ; and in the former case my disagreement with Mr. Spencer is much more complete and thorough than in the latter. In the classification of cognitions, while dividing the primary groups upon another principle, I was able to accept the degree of representativeness as demarcating the secondary groups from one another ; but in the case of the feelings, this principle appears to me altogether inappropriate as a basis of classifying even the minor clusters. Without denying that the classification of feelings according to their degree of representativeness indicates in a vague and general manner certain real differences of composition, it yet appears to me, not only that the arrangement so made is too vague to be of any real service—not only that it fails to discriminate between widely-unlike feelings and fails to group together feelings that are closely allied—but that it is founded on a basis which totally ignores a fundamental principle of Mr. Spencer's own system of psychology. That the principle of representativeness permeates every feeling and varies in each class of feelings, I freely admit ; but it does not therefore follow that it forms an adequate basis for classification, any more than it follows that the variations in character of the vessels of a tree form an adequate basis of classifying its parts, because they permeate throughout and vary in each part. That Mr. Spencer's groups "are but indefinitely distinguishable" he candidly admits, and this indefiniteness would by no means of itself invalidate his arrangement, if it could be shown that the things he classifies are correspondingly indefinite in their limitation. But are they ? Is the feeling of Anger so indefinitely distinguishable from the feeling of Love ; the feeling of Terror so indefinitely distinguishable from the feeling of Triumph ; the feeling of Blueness from that of Warmth ;—the feeling of Beauty from that of Indignation ;—that they must all be accumulated together within the same class, and no attempt be made to regroup them in minor clusters within the class ? So startling a result may well arouse suspicion that Mr. Spencer's classification is invalid—a suspicion which develops into assurance when the investigation is pressed home, and when the consequences

and implications are brought out in detail. The classification proposed by Mr. Spencer (ii. 514) is as follows :—

“ *Presentative feelings*, ordinarily called sensations, are those mental states in which, instead of regarding a corporeal impression as of this or that kind, or as located here or there, we contemplate it in itself as pleasure or pain : as when inhaling a perfume.

“ *Presentative-representative feelings*, embracing a great part of what we commonly call emotions, are those in which a sensation, or group of sensations, or group of sensations and ideas, arouses a vast aggregation of represented sensations ; partly of individual experience, but chiefly deeper than individual experience, and, consequently, indefinite. The emotion of terror may serve as an example. Along with certain impressions made on the eyes or ears, or both, are recalled into consciousness many of the pains to which such impressions have before been the antecedents ; and when the relation between such impressions and such pains has been habitual in the race, the definite ideas of the pains which individual experience has given, are accompanied by the indefinite pains that result from inherited experience—vague feelings which we may call organic representations.

“ *Representative feelings*, comprehending the ideas of the feelings above classed, when they are called up apart from the appropriate external excitements. The feelings so represented may either be simple ones of the kinds first named, as tastes, colours, sounds, &c. ; or they may be involved ones of the kinds last named. Instances of these are the feelings with which the descriptive poet writes, and which are aroused in the minds of his readers.”

So that, according to this classification, feelings so different as those of Anger, Love, Beauty, Contempt, Perplexity, and Fear—all of them feelings “ in which a sensation or group of sensations, or group of sensations and ideas, arouses a vast aggregation of represented sensations ”—belong to the same class—that of Presentative-representative feelings. Feelings so different as Blueness, Triumph, Saltiness, Hatred and Hardness, if remembered, and not called up by any appropriate external excitement, belong to the same class—that of Representative feelings. But a feeling of Anger arising in the presence of a detested person, and the same feeling arising from the remembrance of him, are classed in separate groups—the one is a Representative feeling, the other is Presentative-representative.

Mr. Spencer finally includes under the head of

“ *Re-representative feelings* . . . those more complex sentient states that are less the direct results of external excitements than the indirect or reflex results of them. The love of property is a feeling of this kind. It is awakened not by the presence of any special object, but by ownable objects at large ; and it is not from the mere presence of such objects, but from a certain ideal relation to them, that it arises. It consists, not of the represented advantages of possessing this or that, but of the represented advantages of possession in general—is not made up of certain concrete representations, but of the abstracts of many concrete representations ; and so is re-representative.”

This group is then a higher group than any of the preceding, and includes feelings of a different class, excluding of course the feelings belonging to the groups below. But the description that Mr. Spencer gives of the constitution of these feelings is exactly applicable to some at least of the feelings in the inferior classes. To guard against any possibility of misrepresenting Mr. Spencer, I will take his own example of the Presentative-representative class—the emotion of Terror—and ask if his description of a Re-representative emotion is not strictly applicable to it.

When a child enters a dark room alone, is it not a fact that the terror which it feels is “awakened not by the presence of any special object but by terrifying objects at large”? Is it not true that “it is not from the mere presence of such objects, but from a certain ideal relation [of accessibility] to them that” the terror arises? Does not the terror consist, not of the represented injury inflicted by this or that, but of the represented feelings of injury in general; is it not made up, not of certain concrete representations, but of the abstracts of many concrete representations; and is it not so re-representative? If this is a true description of the constitution of the feeling of terror, and it is difficult to perceive a flaw in it, what becomes of the distinction drawn by Mr. Spencer between feelings of the Presentative-representative class, and those which are Re-representative? And if, on the other hand, it is not a correct description, yet it must be acknowledged to be so close an approximation, that a classification whose primary groups are divided by such subtle differences is for practical purposes unworkable. While, therefore, as already admitted, the principle of representation, in common with the quality of pleasure or pain, does no doubt indicate an actual element which pervades every class of feeling and varies in each, yet the classification founded on it fails at every point at which it is brought to the test; and this collapse of the classification is sufficient proof of the inadequacy of the principle on which it is founded.

The impracticable character of Mr. Spencer’s classification of feelings seems to me, however, to be the most cogent evidence of the truth and of the value of his system of psychology; for it demonstrates that when that system is departed from, not even Mr. Spencer himself can succeed in constructing a stable edifice on any other foundation. The classification that he has raised with such care is built upon sand, and falls to pieces before the first gust of criticism. It is true that his classification of feelings, unlike his classi-

fication of cognitions, is not opposed to any definite statement that he has made with regard to them; but this is because he gives no direct exposition of the nature of feeling. He does not specifically state of Feeling, as he states of Intelligence, that it is a feature in, or a portion of, the correspondence between the organism and its environment. He does, however, allege that "the several grades of mind and its component faculties are phases in the correspondence and factors of the correspondence," and again he speaks of "all mental phenomena" as incidents in the correspondence—expressions which must be held to include feelings. Apart however from any formal admission, no one who is familiar with Mr. Spencer's *Principles of Psychology* can doubt for a moment that Feeling as well as Intelligence is to be considered as "a phase in, or a factor of, the correspondence" between the organism and its environment. If Feeling and Thought grow from a common root and are inseparably involved, as Mr. Spencer shows them to be; and if in their development they become more and more closely interconnected, until at last they are well-nigh indistinguishable, as may be maintained; and if Intelligence, one of these two co-ordinate factors, is expressible in terms of the correspondence between the organism and its environment, then Feeling, the other co-ordinate factor, *must* be similarly expressible. If Life in general, and if Mental Life in particular, can be expressed in terms of the correspondence, then, since the whole includes the part, each and every factor of Mental Life can be so expressed. That one such factor can be so expressed, Mr. Spencer argues at great length and with irresistible force. That the other factor can be similarly expressed is my contention.

Mr. Spencer's treatment of this subject is the more remarkable, since Prof. Bain had already published an arrangement of feelings, in which, without any acceptance of Mr. Spencer's views, he yet formally takes account of external circumstances, not indeed in a definition or enunciation of feeling, but as determining the arrangement of feelings. So that we have this remarkable state of things—that Mr. Spencer, the chief exponent of a Realism, which, if "transfigured," is rather more than less stringent and widely applicable than the old Realism, classifies feelings from a standpoint mainly subjective; while Prof. Bain, who repudiates Mr. Spencer's system, is driven by stress of logical emergency to adopt in practice his fundamental principle, and to arrange the feelings with reference to the external circumstances with which they correspond.

While the merit of abandoning the subjective standpoint and of classifying the feelings with some reference to external circumstances, belongs unquestionably to Prof. Bain, yet he admits these circumstances not so much as a fundamental factor of classification as for incidental and collateral purposes, and his classification makes no attempt at detailed completeness. With his customary philosophical candour, Prof. Bain admits the imperfection of his arrangement, and goes on to express the opinion that the difficulty of expounding the Emotions in a strict order of sequence is permanent and insuperable. "Begin where we will," he says, "as we can only take one source at a time, we must anticipate what is to follow. The only thing to be done is to recognise the fact, and also its consequence, namely, that there is no one absolutely preferable arrangement." In so far as this conclusion refers to an arrangement in serial order, it is no doubt necessary and inevitable. But what is the obvious implication? That since a serial arrangement is impossible therefore no arrangement is possible? Surely not. Two generations ago, the same permanent and insuperable difficulty was experienced, by the botanists and by the zoologists of that day, in the serial arrangement of vegetable and animal forms. So long as they stood still and kicked against the pricks, so long did science stand still with them, and when the impracticable character of such an arrangement was recognised and admitted, the first step was taken in the circumvention of the difficulty and towards a classification, non-serial indeed, but based upon fundamental likeness and differences, and in accordance with genealogical affinities. And similarly we may hope, nay, we may sanguinely expect, that the recognition, thus formally declared by Prof. Bain, of the impossibility of arranging the feelings in linear sequence, heralds the abandonment of all attempt at such an arrangement, and the construction of a classification according to those fundamental properties which they have acquired from the source and in the process of their development. That such a classification alone can express the true relations of the feelings to one another, is demonstrated by reason and enforced by analogy; and that our knowledge is ripe for the attempt is sufficiently indicated by Prof. Bain's declaration.

From what has been said it will be already apparent, that the classification of feelings that is here proposed, is founded, not on any distinctions between the qualities of feelings as subjectively viewed—an aspect to which belong such distinctions as those between Appetites, Desires, and Affections

(Reid); as that between the Subsidiary Faculties and the Elaborative Faculty (Sir W. Hamilton); that between Sensual Feeling and Intellectual Feeling (Kant); that between Harmony and Conflict (Herbart); that between Formal Feelings and Qualitative Feelings (Waitz); those between Affections, Moods, and Passions (Wundt); those between Direct, Reflective, and Imaginative Emotions (Hodgson); and it may be added, that between Representative and Re-representative Feelings;—but is based, like the classification of Cognitions previously proposed, on variations of the correspondence between the organism and its environment; of which correspondence Feeling is a cardinal factor.

The term Feeling, like the term Cognition and several other terms used in psychology, is used in two distinct senses. It is used to express a process, and also to express the result of that process. Just as Cognition may mean either the process or act of cognising or the state of mind remaining on the completion of this act, so may Feeling be understood either as the process of feeling or the state of mind resulting from the process. It is in the latter sense that the term will be most used here, and the context will show clearly when the other meaning is implied.

Expressed in terms of the correspondence, the process of Feeling is the correspondence of states in the organism with interactions between the organism and the environment; and the states so corresponding are the individual Feelings. The correctness of this expression I must ask the reader to take upon trust for the present. If he will accept it provisionally for the sake of convenience, I shall hope eventually to secure his permanent adhesion, but the arguments and evidence necessary to establish it are far too extensive to be introduced parenthetically in this place, and will require separate treatment. Evidence that the expression is imperfect will arise at once, but the same evidence will indicate the qualifications that must be attached to it, and when they are added it will be found, I believe, to cover the facts with as much accuracy as our language admits of.

If Feeling is the state in the organism which corresponds with an interaction between the organism and the environment, then Feeling must vary as this interaction varies, and it must be possible to obtain a classification of feelings from a classification of the actions.

If we take this principle as a basis of classification and apply it to Feeling as a whole, planes of cleavage start to view, separating the mass into divisions and subdivisions that appear so coherent internally, and so clearly demarcated

externally, as to present a strong *prima facie* claim for consideration.

Now, what is the most fundamental division that can be made among interactions in general, as occurring between two agents? Manifestly that according to the way they are begun. Such an action may be begun by one agent, or by the other, or by both together; and manifestly the way in which it was begun will affect and modify the whole of the remainder of the action. An interaction between the organism and the environment may be initiated by the environment, or by the organism, or simultaneously by both, and the corresponding feelings will fall naturally into three great orders. Feelings of the first order have their root in the sensation of Touch, and its extension Pressure, which corresponds with the most fundamental action of the environment on the organism—the action of mechanical contact. Feelings of the second order have their root in the sensation of Effort, which corresponds with muscular movement—the fundamental form of all actions of the organism on the environment. Feelings of the third order have their root in Resistance, which is manifestly a combination of the other two. While therefore this feeling, as it partakes of the nature of the other two, approaches nearer to both of them than either of them does to the other, yet, inasmuch as it is compound, it differs more widely from them both than they do from each other. What is the nature of this difference? A feeling of Touch and a feeling of Effort do not necessarily combine into a feeling of Resistance when experienced together, as may be seen when the touch refers to one part of the organism and the effort to another. What then is it that the sensation of Resistance corresponds with? It is the *relation* that the two factors in the interaction bear to one another—the relation of the muscular strain to the pressure, or in subjective terms, the sensation of Resistance is the relation of the sensation of Effort to that of Touch or Pressure. But a relation between two feelings is a cognition. Ought we not then to speak of Resistance not as a feeling but as a cognition, seeing that it is a relation between feelings, and corresponds with a relation—that of co-existence between extension and body—in the environment? Whether we so regard it depends entirely upon the aspect from which we look at it. Undoubtedly the state of mind called Resistance is a relation between two feelings, and is therefore, from one aspect, a cognition; but, as Mr. Spencer points out with great clearness, a relation between feelings is *itself a kind of feeling*—the momentary feeling accompanying the

transition from one conspicuous feeling to an adjacent conspicuous feeling, and therefore imperatively demands a place in a classification of feelings. The fact that the scheme here set forth necessitates an inclusion of cognitions in the classification of the feelings, so far from militating against it, is actually evidence in its favour. The great difference between feelings and relations between feelings when subjectively viewed is the duration; and I have already shown how, as cognitions become more and more complex, they become more prolonged, so that while every cognition is in one aspect a feeling, this aspect becomes more and more conspicuous as cognition becomes developed. Hence there is the more reason for indicating the position that such feelings occupy at the root of the classification.

The way in which an interaction is initiated, as it is a necessary element in all interactions whatever, is *a fortiori* a necessary element in all interactions between the organism and its environment; and every group of interactions that is constituted on any other principle must necessarily be susceptible of division according to the way it is begun. There is, however, a set of divisions of very different character, which, although they are applicable only to the special group of interactions with which we are now concerned—those between the organism and its environment—are based on a principle that, in reference to these interactions, is of primary importance. They are based on the principle of Evolution.

To announce to a botanist or a zoologist that the classification of plants or of animals ought to conform to their genealogical kinships, and therefore to harmonise with and illustrate the principle of Evolution, would be as idle and superfluous as to persuade an astronomer of the truth of the law of Gravitation. The matter has passed out of the region of discussion. It has become an accepted doctrine—a truism. The great majority of modern psychologists admit that the human organism has come into existence and reached its present condition by a similar process of evolution, and that by this process has originated and developed not only the physical organism but the mind also. Those who admit the development of mind by evolution, should therefore not need, any more than the botanist or the zoologist, a laboured demonstration that the states resulting from this process should be classified in accordance with it. For those who do not admit that the principle of evolution applies to mental phenomena, this paper is not intended. It does not appeal to them; it has no claim to their con-

sideration. But those who do admit the application of evolution to this region of being are committed beforehand to an approval of the basis of my classification. That the details or even the grosser structure are correctly worked out is not claimed, is perhaps not even probable; but it is claimed that evolutionists are logically bound to accept the principle of the classification, and that the burden of disproof lies with those who reject it.

In the classification of animals and plants, the primary divisions are marked out by differences in some fundamental attribute—by the mode of germination in the one case, and by the presence or absence of organs of profound importance, as limbs, bloodvessels, and nervous system, in the other. The division of the primary into secondary groups follows the variation of some attribute of the primary group that is not only of secondary importance, but is, or may be wholly wanting in the other primary groups. The phanerogamic plants, for instance, are divided according as their seed possesses one or more cotyledons—organs that have no existence outside this group. The dicotyledonous plants are classified according to the number of their petals—organs that no other kind of plants possess. The sub-orders of the leguminosæ are determined by variations in the characters of the pod—a form of fruit that is confined to this order. And the classification of animals proceeds in the same way. The inference is obvious. If the feelings have come into existence by the same process of evolution to which plants and animals owe their origin, and if the classification of the latter, following the lines of this process, exhibits certain characters, then it may be expected that the classification of the former, following the same process, will exhibit similar characters. When it is found that the mode of classifying the feelings that is here proposed does exhibit a well-marked similarity to the accepted mode of classifying animals and plants, it may be claimed as an additional indication that the principle on which it is founded is correct.

It may be objected that we have now got two principles of classification, one according to the way the interaction is begun, the other according to its position in the evolutionary scale, and that these two principles are so widely different that the lines of division that they regulate cannot possibly coincide with or even approximate to each other; and this must be admitted, but it does not invalidate the classification. A classification which follows the course of evolution is often and very aptly compared to the structure of a tree. It may be said that a tree forms a solid diagram of such a classifica-

tion—a diagram in three dimensions. The most general and least differentiated forms are represented by the stem of the tree, and the more elaborate and special forms by the successively diminishing branches. Such a diagram represents accurately the classification of feelings according to the principle of evolution. The other principle of division—that according to the way in which the action is begun—runs, as I have said, through every branch of feeling that is constituted on any other principle, but it does not necessarily destroy the other mode of classification. It may be represented on our diagram by the difference between the bark and the wood—a difference that is perceptible no less in the extremest branches than in the trunk, a difference that permeates throughout and yet leaves the other method of division absolutely unaffected. The analogy may be stretched much further without breaking. For just as the arborescent form is peculiar to the tree, so the division of interactions according to the principle of evolution is peculiar to the interactions between organisms and their environments; and as the division between cortex and interior is common to the tree and all other bodies that are acted on from without, so the division between interactions that are internally initiated and those that are externally initiated is common to all interactions whatever. The parallel may be carried even further. The description of the tree is not completed by the consideration of the parts that are above ground only. There yet remains the root, a part that ramifies in a different direction and in a different manner, and is not open to direct observation. Similarly there is a body of feelings—those constituting the Cœnæsthesia, or the Visceral or Organic Sensations—which correspond with interactions occurring within the organism, and these interactions are not open to direct observation, are connected with the other interactions and are yet distinct from them, and are divisible upon a different method.

There is yet a third general principle in accordance with which feelings may be divided. This is the directness or indirectness of their correspondence with interaction, and, in the latter case, the degree of remoteness from direct correspondence. Feelings which correspond directly with an interaction between the organism and its environment are termed Sensations; those which correspond indirectly are termed Emotions; and when the remoteness from direct correspondence is great, the feeling is in some cases termed a Sentiment. When the correspondence is indirect it would usually be correct to say that the feeling corresponds with a

relation between the organism and the environment, and this mode of expression will often be used hereafter, but it must be borne in mind that the relation is always a relation of interaction, past, future, or possible, and that it is this element of activity that alone arouses feeling. The feelings of cognition, for instance, which have already been referred to, may properly be regarded as the state in the organism which corresponds with the relation between two such interactions.

Considered in the light of the principle of Evolution, there are two classes of interactions between the organism and the environment which stand out pre-eminently before all others in their importance and in their antiquity. These are the interactions which primarily affect the conservation of the organism, and those which primarily affect the perpetuation of the race. Of course every interaction between the organism and the environment must necessarily affect to some extent, however slightly, its conservation, and must affect in some degree, however remote, its ability or tendency to perpetuate the race; but we speak here of interactions only as they primarily subserve or oppose these two great ends. Compared with the interactions that affect these two great and primordial ends all others are but of yesterday, although even the following group dates from a period long prior to that at which the race attained to the dignity of humanity. There is little doubt that, long before our ancestors had reached the organisation and status of Man, they lived gregariously, so that for a period which may not include a large section of the whole life of the race, but which is intrinsically very great, each individual organism has been subject, as a member of a community, to a number of interactions affecting the common welfare; of which some are concerned with the environment of the community, and others are concerned with the community itself, regarded as a special (the social) environment of the individual. From interactions that concern the welfare of the organism in common with that of other individuals to those that concern other individuals only is not a long step; and through this class of interactions we pass to those that are neither conservative nor destructive, a somewhat heterogeneous group, comprising all the residue of interactions that are not included in previous classes. Finally there is a class of feelings—the feelings of Cognition—which correspond with a relation between interactions. Classed upon this method, the main groups of feeling will therefore be six in number,

corresponding with the main classes of interactions with the environment of which the organism is capable, *viz.* :—

- CLASS I. Those which primarily affect the conservation of the organism ;
- CLASS II. Those which primarily affect the perpetuation of the race ;
- CLASS III. Those which primarily affect the common welfare ;
- CLASS IV. Those which primarily affect the welfare of others ;
- CLASS V. Those which are neither conservative nor destructive ; and
- CLASS VI. Feelings corresponding with relations between interactions.

CLASS I.—The first great group of feelings, including *those that correspond with interactions that primarily subserve or oppose the conservation of the organism*, subdivides into two secondary groups, characterised by the way in which the interaction begins. One of the Sub-classes of feelings corresponds with actions that are initiated by the environment, the other corresponds with actions that are initiated by the organism. Each of the secondary groups thus formed is again divided according to the third of the principles already set forth—the directness or indirectness of the correspondence—into two tertiary groups, which we may term Orders. So that of the first great class of feelings four well characterised divisions present themselves for examination. These we may now take in detail, *seriatim*.

Sub-class I. *Feelings that correspond with interactions primarily affecting the conservation of the organism which are initiated by the environment.*

Order I. *The correspondence is direct.*

When thermal undulations impinge upon the surface of the organism ; when a body comes in contact with the skin ; when a chemical change takes place in a mucous membrane ; when sonorous undulations strike upon the tympanum, or etherial undulations on the retina,—in such cases a feeling arises which corresponds directly in duration, in intensity and in volume with the action of the environment on the organism, and such feelings are termed Sensations. Sensations are to a large extent unconditional. If the action takes place the feeling necessarily arises, the bodily structure being supposed normal. The action taking place on what is physiologically the surface of the organism, there is a minimum of opportunity for the introduction of the intellectual element, intelligence arising only when the correspondence between the organism and the environment begins to extend in space. Whatever part cognition plays in the process is therefore subordinate. Feelings of this simple character can exist in the absence of almost every trace of cognition, and where cognition exists, it is in every case secondary to the feeling. These relations to cognition hold

true when the feeling is represented as well as when it is presented. In the next order of feelings, in which the correspondence is indirect, we shall find that cognition rises into a position of much greater importance.

Environmentally-initiated Sensations are classified according to the nature of the agent by which they are aroused, as follows :—

TABLE I.

CLASS I. Sub-class I. Order I.

Self-conservative Environmentally-initiated Sensations.

The agent is		
Thermal vibration	{ of plus quantity, or more ample than that in the organism	} Warmth.
	{ of minus quantity, or less ample than that in the organism	} Cold.
Mechanical force	{ of inappreciable magnitude	} Touch.
	{ of appreciable magnitude	} Pressure.
Chemical rearrangement	{ on the surface	} Smell.
	{ within the surface	} Taste.
Aerial undulation	{ irregular	} Noise.
	{ rhythmical	} Sound.
Etherial undulation	{ of which variations in amplitude correspond with variations in	} Light.
	{ of which variations in rapidity correspond with variations in	} Colour.

Little comment is, I think, required upon the above table. Objection may be taken to the expression "inappreciable magnitude" as applied to the mechanical agent with which the feeling of Touch corresponds, for it may be said that if the touch is felt, the force is *ipso facto* appreciated; but I know not how otherwise to express the fact that the feeling of Touch proper depends upon mere contact—upon the application of a force so small as to be virtually unmeasurable. If this term were substituted, an analogous objection might still be offered, for it might be said that the force exerted, for instance by the friction of a hair upon the skin, could be measured by a sufficiently delicate apparatus. The distinction that I have drawn between the action that provokes Taste and that which provokes Smell is not a recognised distinction, but from the following considerations it appears valid. That the processes that give rise to Taste and Smell are closely similar, if not the same, is indicated by the familiar fact that when smell is lost taste is greatly

diminished. Smell arises much more rapidly than taste. Unless the sapid substance is unusually pungent or in strong solution, there is not usually any feeling of taste until it has been for some moments in the mouth. Often there is a very distinct interval before taste begins. It is difficult to see any adequate cause for this delay other than the necessity of the sapid substance to penetrate through a certain thickness of tissue before it can reach the nerves of taste; and this penetration or soaking of course requires time. No such delay occurs in the case of smell. In children, in whom the mucous membrane of the mouth is thinner than it is in adults, the feeling of taste arises much more readily, but no such difference exists in the case of smell. The pure tastes—of sweetness, sourness, and bitterness, depend on the action of crystallisable substances, that is, of substances whose distinguishing physical property is the readiness with which they pass through organic membranes. No such peculiarity characterises the bodies that elicit the sense of smell.

Order II. *The correspondence is indirect.*

The second order of environmentally-initiated feelings is that in which the state in the organism which we call feeling corresponds, not with the actual operation of an agent upon the surface of the organism, but with the relation which some circumstance in the environment bears to the organism. The action of the environment on the organism with which the feeling indirectly corresponds being not actual, but removed to a distance in time and space, there can arise in the organism no state answering to such action except by the extension of the correspondence in time and space, and this correspondence is intelligence. If the agent is not directly acting upon the organism, but the feeling corresponds with the relation in which the agent stands to the organism, then for the feeling to arise this relation must first be known. As far as concerns any effect upon the organism, an unperceived relation is nothing. Hence, of feelings of this order cognition forms a part; a subordinate part indeed, but one of integral and even antecedent necessity. So far from being, like feelings of the previous order, unconditional, they are absolutely conditional on a previous process of cognition. A difference in the subjective aspect of the two orders of feelings is also important. The Sensations that have been considered have no inherent quality of pleasurable or painfulness. Each may be pleasurable under some circumstances, painful under others. The quality of the feeling, when it exists, corres-

ponds not with the nature of the action, but with its degree. A small increase of warmth or coldness is not necessarily either pleasurable or painful. When the degree of change becomes considerable, some degree of pleasure or pain commonly accompanies it. When the change is great there is always pain. The same is true of pressure, of light, and of sound. A small degree of either of these actions is not necessarily either pleasurable or painful. A great increase in the amount of any of these actions is always painful. But in the feelings now to be considered, termed Emotions, the pleasurable or painful quality is not dependent upon the amount of the action, for direct action there is none. The quality of the feeling depends upon an attribute of the circumstance with which the feeling corresponds; and when this attribute is present, however trifling the amount of the feeling, it has a definite quality. When the circumstance is noxious, the corresponding feeling is painful. When the circumstance is beneficent the feeling is pleasurable. It is evident, therefore, that the quality of the circumstance supplies us with a means of dividing into subordinate groups the present class of feelings. Previous, however, to this classification according to the quality of the circumstance, a more important division has to be made depending on its nature. The circumstance in the environment which elicits the feeling may be either a state or a process—either an agent or an event,—and the feelings aroused exhibit a corresponding variation.

TABLE II.

CLASS I. Sub-class I. Order II.

Self-conservative Environmentally-initiated Emotions.

The feeling corresponds with the relation to the organism of	{	an Agent in the environment which is cognised as	{	actively noxious	Antagonistic Feelings. Feelings of Repugnance. Kindly Feelings.
			{	passively noxious	
				beneficent	
	{	an Event in the environment which is cognised as	{	noxious	Grievous Feelings.
			{	beneficent	Joyous Feelings.

The Antagonistic feelings and the feelings of Repugnance, which have a close affinity, might be grouped together under the name of Antipathetic feelings.

The first of the five groups thus arrived at is the large and important genus of Antagonistic feelings. The feelings belonging to this genus are more numerous, more strongly and distinctly characterised, than those of any other group

of corresponding value, and the reason is not far to see. If the feelings correspond with the interactions between the organism and its environment, and if they have come into existence by a slow process of evolution extending from the dawn of life down to the present time, then the largest and most important group of feelings will be that which corresponds with that group of interactions which in the history of the race have been most numerous and most important. To which interactions this description applies there can scarcely be two opinions. Man, like every other organism, has arrived at his present state of development by the survival of the fittest in a ceaseless struggle for existence that has been in progress for countless myriads of years. During all this incalculable time the circumstance that has been most potent in shaping his organisation, has been the pruning and moulding influence of the adverse conditions against which he has had to struggle; in other words the action of noxious agents in the environment. From this consideration we might predict that the group of feelings corresponding with the action of such agents must be the most important group of the environmentally-initiated Emotions, and when we find that it is so, we may fairly regard the fact as tending to corroborate the naturalness of the classification.

The most fundamental division that can be made of agents of this class refers, it is manifest, to the magnitude of their power with respect to that of the organism. No quality of a noxious agent can be of such importance, or exert so much influence on the state of the organism produced by its proximity, as the relative powers of this agent and of the organism. Since, as has already been pointed out, in feelings of this class the agent is not actually acting upon the organism, but is separated from it by an interval in time and space, it is clear that not only must cognition of the agent precede the occurrence of any feeling, not only must cognition of its noxiousness precede the occurrence of any Antagonistic feeling, but a cognition of the relative power of the agent is also necessary before a feeling of any definiteness can exist. Furthermore, just as the quality of the feeling as Antagonistic depends, not upon the attribute of the agent as it actually exists, but upon its attribute as cognised—a cognition which may be widely discrepant from the truth; so the sub-group, or sub-genus of antagonisms into which the feeling will fall will depend, not on the actual relation which the power of the agent bears to that of the organism, but on the relation that is cognised. To take an

example: the feeling of Terror which, I say, arises on the cognition of the accessibility of the organism to a noxious agent of overwhelming power, will not arise unless the accessibility is cognised, nor unless the noxiousness is cognised. But this is not all. Cognition of these relations will determine the arousal of some Antagonistic feeling, but for this feeling to assume the gravity of Terror a further cognition must be added. The power of the agent must be cognised as overwhelming. The concurrence of these three cognitions is a necessary prerequisite to the feeling of Terror. To descend still further into particulars, and to take a case the most unfavourable to the doctrine here advanced: A woman goes into a paroxysm of terror at the sight of a mouse. How are the conditions satisfied in such a case? That the cognition of accessibility is a condition of the feeling is seen in the fact that if the mouse is encaged terror is not felt; or if felt, the chance that "it may get out" is assigned as a reason. That the mouse is believed to be noxious, and that in a high degree, is sufficiently evident. Doubtless, cross-examination might not elicit any precise form of injury to be feared, that is to say, the cognition is not necessarily definite, but its vagueness is sufficiently compensated by its strength, which no amount of argument can overcome. So far the conditions are satisfied, but is the power of the mouse cognised as overwhelming? If not, the scheme falls to the ground; and at first sight it seems very difficult to say that it is. Of course, as far as mere mechanical strength is concerned the supposition cannot be entertained, the comparison is absurd. But the word "power," as used here, includes far more than this. It means capacity of doing injury, which includes the element of unavoidableness. However overwhelming may be the mere mechanical strength of the agent, yet if it is easily escaped, its capability of inflicting injury is limited; and on the other hand, the agent may be weak to insignificance in mere mechanical strength, and yet have other sources of power which render it in the highest degree formidable. Such an agent is a venomous snake; and when it is remembered that the terror inspired by such an agent will be greater the less the means of defence, the smaller the opportunity of escape, and the more rapid the movements of the snake, it becomes apparent that the power spoken of is not necessarily mechanical energy but power to injure, and includes as part of that power the element of unpreventableness or inescapableness. The whole of the qualities may be summed up as degree of noxiousness. Now let us return to the case of the mouse, and observe that,

while its power of inflicting harm, should it gain access to the organism, is cognised very indefinitely but still very vividly as considerable, the astonishing rapidity of its movements proves it to possess a power of gaining access to the beholder which is far beyond her ability to prevent or avoid; and thus the degree of noxiousness, which may be regarded as the product of these two factors, is maintained at a very high estimate by the magnitude of the one factor, notwithstanding the moderate value to be attached to the other. As thus defined, the power of the agent is cognised as overwhelming compared with that of the organism, and the doctrine holds good.

Take another instance of the feeling of Terror—the feeling experienced by a child on entering a dark room. There is nothing in the room that can harm the child—no agent in the environment to arouse the feeling. Can the formula be said to apply to such a case? Assuredly it can. True, the room is in reality empty of ought but harmless furniture, but it is peopled thick with terrible things by the child's imagination; and it is the agent that is cognised, not the agent that actually exists, that arouses the feeling. Moreover the child's accessibility to the agents is cognised as a maximum. It cannot see, but it imagines itself as seen, and in comparison with its own helplessness to avoid its unseen foes, their power is conceived as overwhelming.

The relative power of the noxious agent to inflict injury, in comparison with that of the organism to avoid it or to nullify it by counteraction, is of course not precisely measurable. Nor is precise measurement any condition of the feeling. Between agents that, in comparison with the organism are overwhelmingly powerful, and those whose power is by the same standard insignificant, there is an infinite number of degrees, and although the power of any given agent can never be precisely estimated, it is assigned to some more or less definite position in the scale, and the feeling that it arouses occupies a corresponding position. The scale may be broadly divided into five regions. There are agents whose power to inflict harm is cognised as approximately equal to the power of the organism to avoid or counteract them. Above these are those agents whose power is cognised as superior to that of the organism; which again admit of division according as the superiority of their power is cognised as moderate or as altogether overwhelming. Below the middle point of the scale are those agents whose power is cognised as inferior to that of the organism, and these again are redivided according as they are moderately inferior or insignificant. With these five degrees of difference

in the comparative power of the noxious agent correspond five groups of Antagonistic feelings.

The inferior groups and individual feelings are marked off from one another by minor differences in the nature of the interaction : by the presence or absence of counteraction on the part of the organism, by the form which this counteraction takes, and by its success or failure ; each of these differences in the interaction between the organism and its environment being paralleled by a corresponding difference in the feeling aroused. The detailed classification of the Antagonistic feelings is given in the annexed Table.

If the names of the feelings enumerated in the last column of this table are read in the order there given from above downward, it is at once evident that this is not the order of their affinity. The feelings of Terror and Fear which are so closely allied that they differ in degree only, are separated by feelings so widely different from either of them as Resignation, Desperation and Hope. Similarly the feelings of Revenge and Resentment, which have manifestly a close kinship are separated by feelings so alien from them as Patience and Suspicion. Stubbornness and Sulkiness are widely separated by the intervention of feelings so unlike them as those of Rage, Triumph, and Apprehension. It would be easy to bring these allied feelings together by shuffling the cards a little. If we transpose the second and third columns, and make the primary divisions according to the nature of the reaction and the secondary divisions according to the relative power of the agent, we bring together Terror and Fear, and follow them immediately by Hate, Annoyance and Contempt. Similarly, Resignation, Patience and Meekness would form a separate well-characterised group ; and other groups as natural would follow. But on the other hand by this arrangement Terror would be separated from Despair, Hate from Anger and Revenge, Annoyance from Vexation, and other closely allied feelings would have to be placed far asunder. From this it would appear that the classification here proposed is open to the same objection as those that I have rejected—of grouping together things that are widely unlike, and separating widely those that are closely allied. If my aim were to arrange the feelings serially, this objection would of course be valid, and the classification futile ; but I have already declared that this is not my aim. So far from it, indeed, I hold that, as Mr. Spencer asserts of the arrangement of animal forms, “such relations cannot be represented in space of two dimensions [even] ; but only in space of three dimensions”. In a diagram such as that afforded by the table, the serial

The feeling corresponds
with the relation to
the organism of an
Agent in the envi-
ronment which is
cognised as actively
noxious

TABLE III.			
CLASS I. Sub-class I. Order II. Genus 1: The Feelings of Antagonism.			
The feeling corresponds with the relation to the organism of an Agent in the envi- ronment which is cognised as actively noxious	and of overwhelm- ing power	{ and does not elicit counteraction. { and elicits counteraction { which is incipient. { which is voluntarily suppressed. { which becomes actual { and is successful. { and is unsuccessful. { but the cognition is uncertain.	Terror. Desperation. Resignation. Triumphant Exultation. Despair. Hope.
	and of superior power	{ and does not elicit counteraction. { and elicits counteraction { which is incipient. { which is voluntarily suppressed. { which becomes actual { and takes a passive form. { and is successful. { and is unsuccessful. { but the cognition is uncertain.	Fear. Courage. Patience. Stubbornness. Triumph. Defeat. Apprehension.
	and of approxi- mately equal power	{ and does not elicit counteraction. { and elicits counteraction { which is incipient. { which is delayed. { which is voluntarily suppressed. { and takes a passive form. { & of moderate intensity. { and extreme. { and is successful. { and is unsuccessful. { but the cognition is uncertain.	Hate. Anger. Revenge. Patience. Sulkiness. Rage. Fury. Victory. Mortification. Suspicion.
	and of inferior power	{ and does not elicit counteraction. { and elicits counteraction { which is incipient. { which is delayed. { which is voluntarily checked. { and is successful. { which becomes actual { and is unsuccessful.	Annoyance. Vexation. Resentment. Meekness. "Satisfaction of Success." Mortification. Contempt. Scorn.
	and of insignifi- cant power	{ and does not elicit counteraction. { and elicits counteraction.	

arrangement distorts and dislocates the actual relations of the feelings somewhat as Mercator's projection distorts the relations of land and water on the surface of the earth. Mercator's projection seeks to represent on a plane surface the relations existing on a curved surface,—to reproduce in a diagram of two dimensions relations existing in space of two dimensions; yet how imperfect is the result! Judge, then, of the possibility of representing in space of one dimension relations that require three dimensions for their true exposition.

A fairly adequate concept of the inter-relations of the Antagonistic feelings may, however, be gained, if we conform to the necessary conditions. Let us imagine the most general of the relations that govern the classification of these feelings—the degree of noxiousness or the relative power of the noxious agent—to be represented by a solid stem; and let us suppose this stem to have five nodes, corresponding with the five relations that the cognised power of the noxious agent may bear to that of the organism; the node at the top representing those in which the power of the agent is insignificant and the node at the bottom those in which its power is overwhelming. At each of these nodes the corresponding group of feelings enumerated in the table may be represented as arranged round the stem in what is known to botanists as a whorl; each feeling being represented by a projection, separated from its adjoining fellows by a notch, which will be deeper or shallower according as the difference is more or less pronounced. Now, since there is no abrupt division between those agents that are approximately equal in power to the organism and those that are superior and inferior, nor is there any demarcation between these two groups and those which lie above and below them respectively, it follows that, to make the diagram correspond, we must imagine the projections that we have placed at the nodes to be extended up and down the stem as continuous buttresses, uniting the feeling placed at a node with the allied feelings at the nodes above and below on the same meridian of the stem. The notches will now become grooves and the stem a fluted column. Lastly, since those feelings which relate to an agent of greater power are of greater magnitude than those which relate to an agent of lesser power, they should be represented on our solid diagram by the greater size of the projections which correspond with them. The fluted column will thus become a fluted cone. At the base of the cone a great protuberance will represent the feeling of Terror, which is bounded by, and in some part continuous

with, the feelings of Desperation on the one side and of Despair on the other. When we follow this protuberance upward toward the apex of the cone, we find that it gradually merges into Fear, while its neighbours similarly graduate, the one into Courage, the other into Defeat. Followed still higher, Fear narrows first into Hatred, then through Dislike into Annoyance; Courage becomes first Anger and then Vexation; and Defeat becomes modified into Mortification of various degrees. If, instead of noticing the connexions among the feelings, we pay attention to the divisions between them, we find additional evidence that this solid diagram truly represents their relations to one another. For if the buttresses are large and prominent at the base and diminish towards the apex, it is but stating the same fact in another way to say that the divisions between them at the base are deep, and become more and more shallow as they run upwards, until at the apex they disappear. And if we turn from the diagram to the feelings whose relations it represents, we find that the differences between them have a corresponding disposition. Between the Despair that attends a failure to counteract the action of a noxious agent whose power is cognised as overwhelming, and the Triumphant Exultation that follows an unexpected success, the interval is as great as can possibly exist between feelings of the same genus. Between the Triumph that attends success over an agent previously cognised as superior, and the wretchedness of Defeat that attends failure of the counteraction, not only is the difference less than in the previous case, but other things being equal, it is less in exact proportion as the power of the agent is cognised as less overwhelming. When the agent is approximately equal in power the gap between the feeling aroused by success and that aroused by non-success, though still very considerable, is manifestly less. As the agent becomes less and less powerful, the interval between the two sets of feelings aroused by success and by non-success diminishes more and more, until as the agent becomes insignificant the feelings subside into a dead level of indifference. Again, the feeling of abject Terror that accompanies the absence of all effort to resist an overwhelmingly powerful enemy differs very widely from the feeling of Desperation that accompanies the strenuous effort to resist. Between Fear, the homologue of Terror, and Courage, the homologue of Desperation, the interval, though still great, is not so great. When we rise to the next "whorl" of feelings, in which the relative powers of the agent and the organism are cognised as approximately equal, the corresponding feelings of Hate and Anger are

still less widely different, and are shown to be so by the comparative ease with which the transition is made from the one to the other. In the succeeding group the feeling of Annoyance which accompanies passivity and that of Vexation which goes with active counteraction are so little different that the terms are often used interchangeably; and when the agent is insignificant the two feelings coalesce into the single state Contempt: of which Scorn is properly only the outward expression.

From these considerations it will, I think, appear that the similarity between the feelings of Hate, Anger, Revenge and Rage in the third group, and between those of Annoyance, Vexation and Resentment in the fourth, so far from telling against the validity of a classification in which they are differently described, actually tells in its favour. Furthermore, I trust that a claim has been made out, not only for the recognition of the Antagonistic feelings as a natural and well-characterised group, but also for the validity and correctness of some such internal structure of the group as that which I have proposed; an arrangement which displays the lateral and cross relations of the various feelings in the group as well as their more obvious kinships.

It will be seen that in the classification proposed each feeling has not only assigned to it a position, but also has its nature stated and defined. In doing so, as in all cases in which terms are taken from the vernacular and applied to the purposes of science, the meaning of the terms at the same time that it is rendered precise is necessarily somewhat altered. It is probable that in some cases a term has been used to connote a feeling not quite the same as that to which it is applied in common use. I can only say that I have tried to bring the expressions as nearly as possible into harmony with what appeared to be the commonly received meaning of the term used; and that, when I have thrust into a definite mould a term which as commonly used has but a hazy significance, I must ask the reader to accept the connotation that I attach to it so long as he is estimating the validity of the classification. Those terms which have in common use a distinct and well-defined meaning that is generally recognised, impose on me the burden of showing that the exposition that I have given of their character is in accordance with this usage. This duty I hope to discharge hereafter, but as it will involve an examination of the feelings one by one, which would not only be out of place in a Classification, but would treble the length of this communication, it must for the present be postponed.

(To be continued.)